

LUCAS COUNTY



SOLID WASTE MANAGEMENT DISTRICT

2018 – 2032

ADOPTED SOLID WASTE MANAGEMENT
PLAN UPDATE

November 2, 2017

Prepared by:



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Section i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	Lucas County Solid Waste Management District
Member Counties	Lucas County
Coordinator’s Name (main contact)	Christopher F. Pizza
Job Title	Solid Waste District Manager
Street Address	1011 Matzinger Road
City, State, Zip Code	Toledo, Ohio 43612
Phone	419-213-2230
Fax	419-213-2201
E-mail address	cpizza@co.lucas.oh.us
Webpage	www.co.lucas.oh.us/index.aspx?NID=749

Table i-2. Members of the Policy Committee/Board of Trustees

Member Name	Representing
Lucas County	
Pete Gerken - Chairman	County Commissioners
Bill Franklin	Municipal Corporations
Vacant	Townships
Eric Zgodzinski	Health District
Susan Raszka	Generators
Allison Moyer	Citizens
Mathew Franchetti - Vice Chairman	Public

Table i-3. Chairperson of the Policy Committee or Board of Trustees

Name	Matthew J. Franchetti
Street Address	University of Toledo, Nitschke Hall, Room 4006G
City, State, Zip Code	Toledo, Ohio 43606
Phone	419-530-8051
Fax	419-530-8206
E-mail address	matthew.franchetti@utoledo.edu

Table i-4. Board of County Commissioners/Board of Directors

Commissioner Name	County	Chairperson/President
Pete Gerken	Lucas	✓
Carol Contrada		
Tina Skeldon Wozniak		

Technical Advisory Committee

The District did not establish a technical advisory committee (TAC) for the preparation of this *Plan Update*.

CHAPTER 1. INTRODUCTION

A. Brief Introduction to Solid Waste Planning in Ohio

In 1988, Ohio faced a combination of solid waste management problems, including rapidly declining disposal capacity at existing landfills, increasing quantities of waste being generated and disposed, environmental problems at many existing solid waste disposal facilities, and increasing quantities of waste being imported into Ohio from other states. These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio's outdated solid waste regulatory program and established a comprehensive solid waste planning process.

There are three overriding purposes of this planning process: to reduce the amount of waste Ohioans generate and dispose of; to ensure that Ohio has adequate capacity at landfills to dispose of its waste; and to reduce Ohio's reliance on landfills.

B. Requirements of County and Joint Solid Waste Management Districts

1. Structure

Because of H.B. 592, each of the 88 counties in Ohio must be a member of a solid waste management district (SWMD). A SWMD is formed by county commissioners. A board of county commissioners has the option of forming a single county SWMD or joining with the board(s) of county commissioners from one or more other counties to form a multi county SWMD. Ohio currently has 52 SWMDs. Of these, 37 are single county SWMDs and 15 are multi county SWMDs.¹

A SWMD is governed by two bodies. The first is the board of directors which consists of the county commissioners from all counties in the SWMD. The second is a policy committee. The policy committee is responsible for developing a solid waste management plan for the SWMD. The board of directors is responsible for implementing the policy committee's solid waste management plan.²

¹Counties have the option of forming either a SWMD or a regional solid waste management authority (Authority). The majority of planning districts in Ohio are SWMDs, and Ohio EPA generally uses "solid waste management district", or "SWMD", to refer to both SWMDs and Authorities.

²In the case of an Authority, it is a board of trustees that prepares, adopts, and submits the solid waste management plan. Whereas a SWMD has two governing bodies, a policy committee and board of directors, an Authority has one governing body, the board of trustees. The board of trustees performs all of the duties of a SWMD's board of directors and policy committee.

2. Solid Waste Management Plan

In its solid waste management plan, the policy committee must, among other things, demonstrate that the SWMD will have access to at least 10 years of landfill capacity to manage all of the SWMD's solid wastes that will be disposed. The solid waste management plan must also show how the SWMD will meet the waste reduction and recycling goals established in Ohio's state solid waste management plan and present a budget for implementing the solid waste management plan.

Solid waste management plans must contain the information and data prescribed in Ohio Revised Code (ORC) 3734.53, Ohio Administrative Code (OAC) Rule 3745-27-90. Ohio EPA prescribes the format that details the information that is provided and the manner in which that information is presented. This format is very similar in concept to a permit application for a solid waste landfill.

The policy committee begins by preparing a draft of the solid waste management plan. After completing the draft version, the policy committee submits the draft to Ohio EPA. Ohio EPA reviews the draft and provides the policy committee with comments. After revising the draft to address Ohio EPA's comments, the policy committee makes the plan available to the public for comment, holds a public hearing, and revises the plan as necessary to address the public's comments.

Next, the policy committee ratifies the plan. Ratification is the process that the policy committee must follow to give the SWMD's communities the opportunity to approve or reject the draft plan. Once the plan is ratified, the policy committee submits the ratified plan to Ohio EPA for review and approval or disapproval. From start to finish, preparing a solid waste management plan can take up to 33 months.

The policy committee is required to submit periodic updates to its solid waste management plan to Ohio EPA. How often the policy committee must update its plan depends upon the number of years in the planning period. For an approved plan that covers a planning period of between 10 and 14 years, the policy committee must submit a revised plan to Ohio EPA within three years of the date the plan was approved. For an approved plan that covers a planning period of 15 or more years, the policy committee must submit a revised plan to Ohio EPA within five years of the date the plan was approved.

C. District Overview

On March 6, 1989, the Lucas County Board of Commissioners created the Lucas County Solid Waste Management District. The District was created to provide for the management of solid waste in a safe, environmentally-sound, and effective manner.

The District's mission is to develop and enhance programs which enable residents to easily recycle common household wastes as well as to assist business and industry with the implementation of waste reduction and recycling programs, with programs/services to reduce, reuse and recycle.

The District's administration consists of one centralized office, which is located at 1011 Matzinger Road in Toledo, Ohio. The District's partner, Keep Toledo/Lucas County Beautiful, Inc., operates at the same address.

D. Waste Reduction and Recycling Goals

As explained earlier, a SWMD must achieve goals established in the state solid waste management plan. The current state solid waste management plan is the *2009 Solid Waste Management Plan* (2009 State Plan). The 2009 State Plan established nine goals as follows:

2009 State Plan Goals

Goal 1

- The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

Goal 2

- The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector and at least 66 percent of the solid waste generated by the industrial sector.

Goal 3

- The SWMD shall provide the following required programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.

Goal 4

- The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse and other alternative waste management methods to identified target audiences using best practices.

Goal 5

- The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.

Goal 6

- The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

Goal 7

- The SWMD will use U.S. EPA's Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.

Goal 8

- The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

Goal 9

- The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

All nine SWMD goals in this state plan are crucial to furthering solid waste reduction and recycling in Ohio. However, by virtue of the challenges posed by Goals 1 and 2, SWMDs typically have to devote more resources to achieving those two goals than to the remaining goals. Thus, Goals 1 and 2 are the primary goals of the state plan.

Each SWMD is encouraged to devote resources to achieving both goals. However, each of the 52 SWMDs varies in its ability to achieve both goals. Thus, a SWMD is not required to demonstrate that it will achieve both goals. Instead, SWMDs have the option of choosing either Goal 1 or Goal 2 for their solid waste management plans. This affords SWMDs with two methods of demonstrating compliance with the State's solid waste reduction and recycling goals. Many of the programs and services that a SWMD uses to achieve Goal 1 help the SWMD make progress toward achieving Goal 2 and vice versa.

A SWMD's solid waste management plan will provide programs to meet up to eight of the goals. Goal 8 (market development) is an optional goal. Goal 9 requires submitting annual reports to Ohio EPA, and no demonstration of achieving that goal is needed for the solid waste management plan.

See Chapter 5 Section B and Appendix I for descriptions of the programs the SWMD will use to achieve the nine goals.

CHAPTER 2. DISTRICT PROFILE

A. Profile of Political Jurisdictions

1. *Counties in the Solid Waste Management District*

As its name suggests, the Lucas County Solid Waste Management District is a single-county district comprised of Lucas County, with the exception of the Village of Swanton. The population of the Village of Swanton that resides in Lucas County is part of the Defiance-Fulton-Paulding-Williams Joint Solid Waste Management District, where the majority of the population resides.¹

2. *County Overview*

Lucas County is the sixth most populous county in Ohio after Cuyahoga, Franklin, Hamilton, Summit, and Montgomery Counties. It is the fourth-smallest county in Ohio by land area. Lucas County consists of the following notable communities:

- Toledo is the largest city. In 2014, it had a population of 281,031 people which comprised approximately 65 percent of the county's population.
- Oregon had a population of 20,196 in 2014.
- Sylvania had a population of 18,965 in 2014.
- Waterville had a population of 5,516 in 2014.
- There are five villages (excluding Swanton) ranging in population from 100 people to 4,473 people.
- There are eleven townships ranging in population from 728 people to 29,499 people.

B. Population

1. *Reference Year Population*

After subtracting the population of Swanton that was partially located in another SWMD (Defiance-Fulton-Paulding-Williams SWMD), the District had a total of adjusted population of 436,468 people in 2014.

Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in the SWMD during the 2014 reference year:

¹ When a community's population resides in more than one SWMD, the entire community's population is added to the SWMD where the majority of the community's population is located. The SWMD where the minority of the population lives subtracts the community's population when calculating the total SWMD's population.

Table 2-1. Population of Lucas County SWMD in 2014

County		Largest Political Jurisdiction		
Name	Population	Community Name	Population	Percent of County Population
Lucas	436,468	City of Toledo	281,031	64%
Total	436,468			

Source(s) of information: Ohio Development Services Agency, “2014 Population Estimates by County, City, Village, and Township.” May 2015.

2. Population Distribution

Table 2-2 below presents the distribution of Lucas County’s population in cities, villages, and unincorporated areas.

Table 2-2. Population Distribution

County	Percent of Population in:		
	Cities	Villages	Unincorporated Townships
Lucas	78%	2%	19%

Source(s) of information: Ohio Development Services Agency, “2014 Population Estimates by County, City, Village, and Township.” May 2015.

According to the Ohio Development Services Agency’s profile for Lucas County, it is comprised of nearly equal parts of urban and rural areas. The bullet points below show the largest uses of land in the county:

- 38% of land use is agricultural
- 37% of land use is urban
- 24% of land cover was forest, open water, or wetlands

Large portions of the county’s population are concentrated around the Toledo metropolitan area.

3. Population Change

Table 2-3 presents the data regarding the District’s population change.

Table 2-3. District Population Change

Time Period	Area	Lucas
2000 to 2010	County	-2.91%
	Largest City	-8.42%
	Unincorporated areas	13.84%
Planning Period	County	-3.32%
	Largest City	-6.48%
	Unincorporated areas	-3.01%

Sources of information: Ohio Development Services Agency, "Population Projections: County Totals" (2010-2040). Prepared March 2013. Ohio Development Services Agency, "2014 Population Estimates by County, City, Village, and Township." May 2015.

Based on the results of the 2000 and 2010 censuses, the District experienced an overall decrease in its population from 2000 to 2010. According to population projections developed by the Ohio Development Services Agency, the county's population is projected to decline during the planning period. The projected rate of decline during the planning period are greater than those experienced from 2000 to 2010.

The population of Toledo, the largest city in Lucas County, decreased 8.42% from 2000 to 2010. The decrease is partially due to city residents relocating to surrounding suburbs and a decline in manufacturing jobs in the region. Despite the current declining population in the City of Toledo, the City is committed to economic development. A number of downtown and neighborhood revitalization efforts have been completed, and more are underway, which are expected to attract more residents to the area. Completed projects include the development of Fifth Third Field and Lucas County Arena.

During the planning period, Lucas County's overall population is projected to decrease 3.32%. Despite revitalization efforts that have been completed thus far to attract more residents into the City of Toledo's downtown area, recent population estimates do not reflect positive population growth within the City of Toledo. Using current rates of migration from the City of Toledo to surrounding suburbs from 2014 to 2015, the City of Toledo's population could decrease 6.48% over the planning period. The population in unincorporated areas of Lucas County are projected to decrease 3.01% over the planning period, which is slightly less than the county's rate of overall population change.

4. *Implications for Solid Waste Management*

As the information above illustrates, large portions of the District's population are concentrated in the City of Toledo and surrounding areas.

Data trends indicate that, while the population in the Toledo-Metropolitan area is decreasing slowly, residents are moving from the City of Toledo to surrounding neighborhoods, thus dispersing the population over a greater geographical area. As populations increase in cities, villages, and townships surrounding Toledo, there may be more opportunities to implement or expand residential recycling programs.

C. Profile of Waste Management Infrastructure

Solid waste generated within Lucas County is currently collected by both private and public haulers, and delivered to a number of different facilities depending on the type of material collected. In 2014, trash was directly hauled to 12 landfills:

- one in-district landfill;
- nine out-of-district, but in-state landfills; and
- two out-of-state landfills.

The Hoffman Road Sanitary Landfill is located within the City of Toledo, and the Vienna Junction Landfill is located near the Ohio border in Michigan. These two landfills disposed more than 78 percent of the total waste direct-hauled to landfills in 2014. Transfer stations also received a minor portion of the District's waste (3 percent) prior to being sent for disposal.

Recyclables were collected and hauled to processors for sorting, and to prepare and ship recyclables to end markets which use the materials to manufacture new products. Yard waste was collected and processed by a number of private companies (including 12 facilities within the District) and political subdivisions to produce compost which could then be used as a beneficial soil amendment. Much smaller amounts of food waste and other organic material were also composted by some facilities.

D. Profile of Commercial and Institutional Sector

Lucas County has a strong commercial and institutional sector. Lucas County is home to three colleges and universities, including the University of Toledo, Mercy College of Northwest Ohio, and Lourdes College. Lucas County's eastern border is formed by Lake Erie. Fishing, wineries, and other water sports bring tourists to the coastal area during summer months. Cultural points of interest include the Toledo Museum of Art, the Valentine Theatre (a 901-seat facility operated by the Toledo Cultural Arts Center), the Toledo Zoo, Toledo Metroparks, and Imagination Station (a hands-on science museum).

The following table presents the major commercial/institutional sector employers in Lucas County that employ 1,000 or more people.

Major Commercial/Institutional Sector Employers in District

Employer	Nature of Activity	2014 Total Employees**
Promedica Health Systems	Medical Facilities	15,000*
University of Toledo	Universities	8,929
Mercy Health Partners	Hospitals	7,052
Toledo Public Schools	Education	3,665
Lucas County	Government	3,511
Kroger	Retail Grocery	2,924*
City of Toledo	Government	2,775
Walmart	Retail Sales	2,375*
Andersons (HQ)	Grain Storage/Process/Retail	1,672
Meijer	Retail Grocery	1,608
United Parcel Service (UPS)	Mail Service	1,597
U.S. Postal Service	Postal/Government	1,587*
HCR Manor Care	Health Care Services	1,463
YMCA of Greater Toledo	Organization	1,313*
Lott Industries	Packaging Services	1,200
Toledo Clinic	Medical Clinic	1,040

*Total employees include those in the Toledo MSA, which includes residents outside Lucas County.

**Total employees include salaried, hourly, part-time, and full-time personnel.

Source: Regional Growth Partnership, "Major Employers – Toledo MSA Spring/Summer 2014."

Lucas County's commercial/institutional sector is diverse, which contributes to the sector's stability. The healthcare/social assistance industry is the biggest employer in Lucas County, which employs more residents than the automotive industry. Healthcare/social assistance employs 16.6 percent of all people employed in Lucas County, which is greater than the average for Ohio (13.0 percent). Other types of commercial/institutional sector jobs that employ a significant portion of all Lucas County employees include governments (11.9 percent) and retail trade (10.8 percent).

Approximately 7,103 active businesses were located in Lucas County in 2014. Since 2008, the number of commercial businesses in Lucas County decreased by nearly 5 percent. Over that same time, employment in the commercial sector decreased by 4.7 percent.²

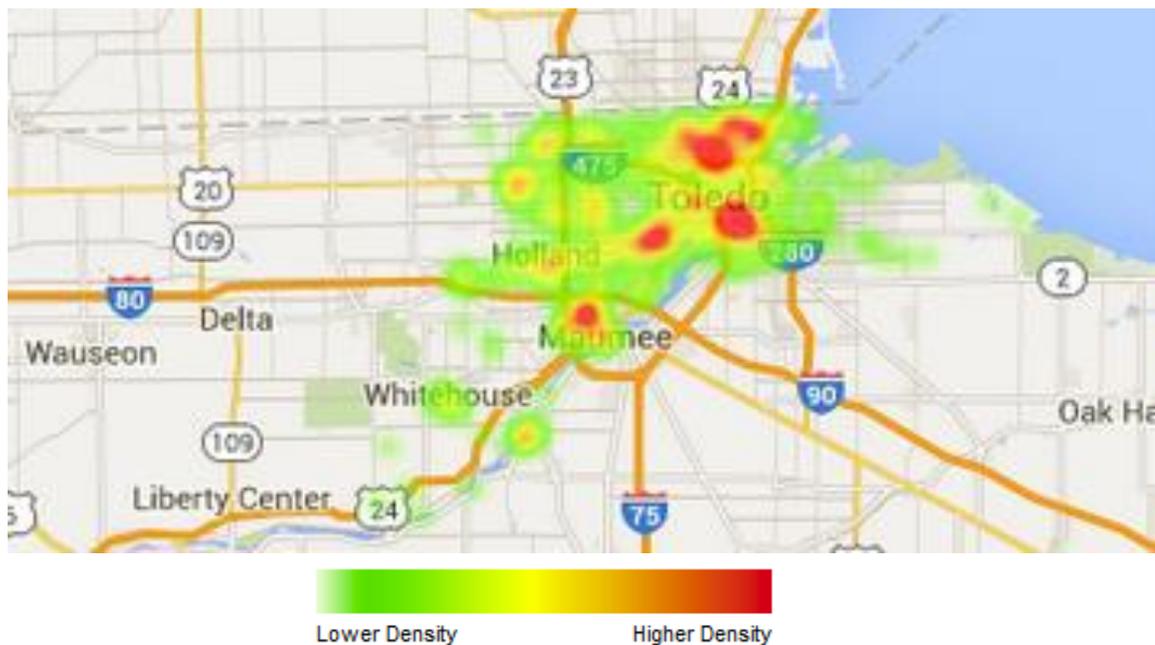
² Ohio Development Services Agency, "Ohio County Indicators," July 2015, pp 61, 62, 67, 74, 85. <http://development.ohio.gov/files/research/C1091.pdf>.

Employment in the commercial/institutional sector (service-providing industries) is projected to increase by 10 percent from 2010 to 2020 in the Toledo MSA³. Therefore, it is likely that the District will experience an increase in the amount of waste generated by the commercial sector in the upcoming planning period.

E. Profile of Industrial Sector

Manufacturing plays an important role in Lucas County’s economy, accounting for 28.9 percent of the Toledo Metropolitan Area’s gross domestic products in 2013, which is far more than the statewide average of 17.7 percent⁴. In 2013, there were approximately 531 industries employing 22,251 Lucas County residents. The locations of the industrial facilities are shown on the following figure. The figure below is a heat map, representing areas with a high-density of facilities in red and lower density areas in green.

Lucas County Industrial Facility Location



Manufacturing employment made up 8.6 percent of all employed people in Lucas County. Ohio’s average manufacturing employment in 2013 was 10.4%.

The following table presents the major industrial sector employers in Lucas County that employ 1,000 or more people.

³ Ohio Department of Job and Family Services, “Ohio Job Outlook 2010-2020 – Toledo MSA.” <http://ohiolmi.com/proj/OhioJobOutlook.htm>

⁴ Ohio Development Services Agency, “Gross Domestic Product from Ohio,” September, 2014, pp 8, <http://development.ohio.gov/files/research/E1001.pdf>.

Major Industrial Sector Employers in District

Employer	Nature of Activity	2014 Total Employees**
Chrysler Toledo Complex (North Assembly and South Wrangler Plant)	Automotive Mfg.	5,137
General Motors/Power Train	Automotive Mfg.	1,845
Toledo Molding & Die	Injection & blow molded components	1,570*
Libbey	Glass Mfg.	1,318
Owens-Corning	Glass Mfg.	1,229
Lott Industries	Packaging Services	1,200

*Total employees include those in the Toledo MSA, which includes residents outside Lucas County.

**Total employees include salaried, hourly, part-time, and full-time personnel.

Source: Regional Growth Partnership, "Major Employers – Toledo MSA Spring/Summer 2014."

Major industries in Lucas County are the automotive and glass industry.

In 2013, approximately 491 manufacturing facilities were located in Lucas County employing approximately 22,251 residents. Since 2008, the number of manufacturing facilities in Lucas County decreased by more than 14 percent. Over that same time, employment in the industrial sector decreased by 1.3 percent⁵.

According to the Department of Job and Family Services' publication *2020 Job Outlook for the Toledo Metropolitan Statistical Area (MSA)*, employment in manufacturing is projected to decrease by 0.3 percent from 2010 to 2020. The small change in annual manufacturing employment will likely be imperceptible in terms of the effect on industrial sector waste generation. It is likely that the District will experience a plateau in the amount of waste generated by the industrial sector in the upcoming planning period.

F. Other Characteristics

Lucas County is host to the University of Toledo (UT) which has an undergraduate student population of 16,192. Approximately 19 percent, or 3,076 students live in college-owned, operated, or affiliated housing. The students comprise a transitory population that is not included in the count of Lucas County residents for the census. However, the waste generated by the

⁵ Ohio Development Services Agency, "Ohio County Profiles – Lucas County," pp 5. <http://www.development.ohio.gov/files/research/C1049.pdf>.

students is included in the amount of waste generated by the residential/commercial sector and in the per capita generation rate for that sector.

Essentially, the waste that is generated by the students at UT becomes attributed to the permanent residents of Lucas County. The waste created by the university increases total generation by the residential/commercial sector, which in turn decreases the District's waste reduction and recycling rate, to the extent that this material is disposed rather than recycled. Thus, providing opportunities for students to reduce waste and recycle is an important issue for the Lucas County SWMD, and an issue which is not faced by many other SWMDs in Ohio without a major university.

CHAPTER 3. WASTE GENERATION

This chapter of the Solid Waste Management Plan provides a summary of the SWMD's historical and projected solid waste generation. The District's Policy Committee needs to understand the amounts and types of waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the District analyzed the amounts and types of waste that were generated within the SWMD in the past and that could be generated in the future.

The District calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. In order to calculate how much waste was generated, the District added the quantities of waste disposed of in landfills and reduced/recycled.

Reduction and recycling data was obtained by surveying communities, recycling service providers, collection and processing centers, commercial and industrial businesses, owners and operators of composting facilities, and other entities that recycle. Responding to a survey is voluntary, meaning that the District relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, only a partial picture of recycling activity can be developed. How much data the District obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

The District obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities submit annual reports to Ohio EPA. In these reports, owners/operators summarize the types, origins, and amounts of waste that were accepted at their facilities. Ohio EPA adjusts the reported disposal data by adding in waste disposed in out-of-state landfills. The District also obtains disposal information from facilities that are under contract, authorizing them to receive waste generated within Lucas County.

The District also analyzed historic quantities of waste generated to project future waste generation. The details of this analysis are presented in Appendix G. The Policy Committee used the projections to make decisions on how best to manage waste and to ensure future access to adequate waste management capacity, including recycling infrastructure and disposal facilities.

A. Solid Waste Generated in Reference Year

Table 3-1 shows the amounts of residential/commercial (R/C) and industrial waste generated within the District during 2014 (the reference year). The amount generated is defined by the tons disposed in landfills plus the tons recycled, composted, and otherwise diverted from landfill disposal.

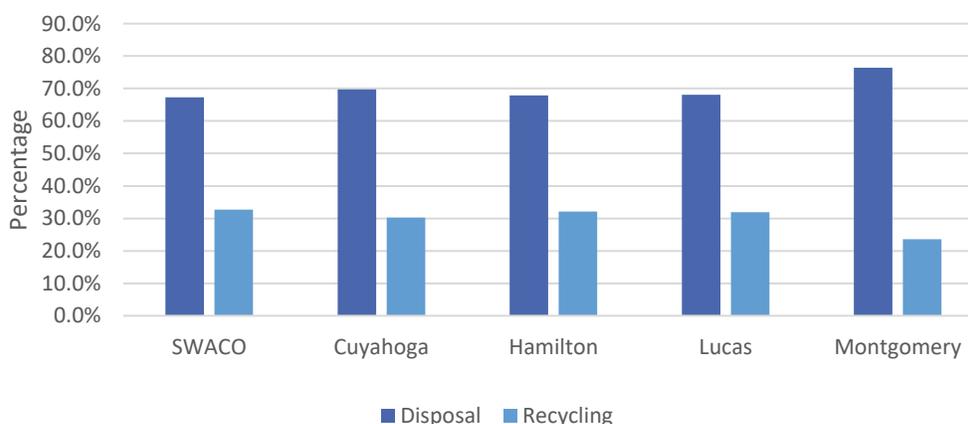
Table 3-1. Solid Waste Generated in the Reference Year

Type of Waste	Tons Generated
Residential/Commercial	569,361
Industrial	238,527
Total	807,889

1. Residential/Commercial Waste Generated in Reference Year

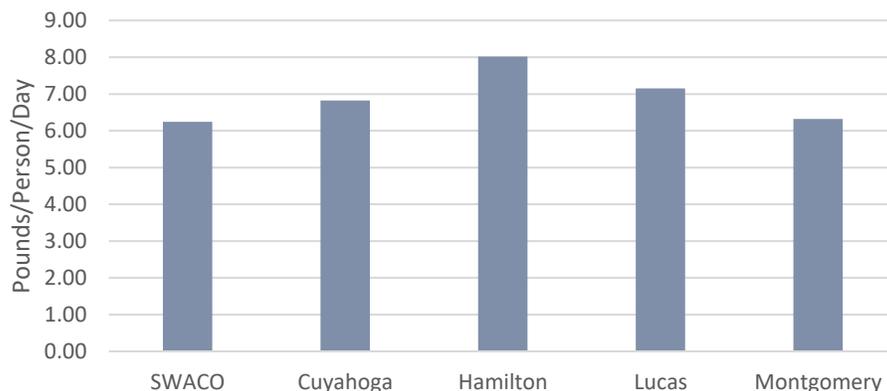
Disposal comprises a much larger percentage of total R/C generation than recycling for the District. This relationship is also true for some of the other urban solid waste districts in Ohio, which is illustrated in Figure 3-1. For these solid waste districts, disposal ranges from 67 to 76 percent of total generation while recycling is estimated at 24 to 33 percent.

Figure 3-1. R/C Disposal and Recycling as Percentage of Generation



In terms of the R/C generation rate, Lucas County residents, commercial businesses, and institutions produced daily amounts of waste during 2014 which was at the high end of the range compared to other urban Ohio SWMDs. Figure 3-2 shows that the R/C generation rate for the District was approximately 7.15 pounds per person per day (PPD) in 2014.

Figure 3-2. 2014 Residential/Commercial Generation Rates



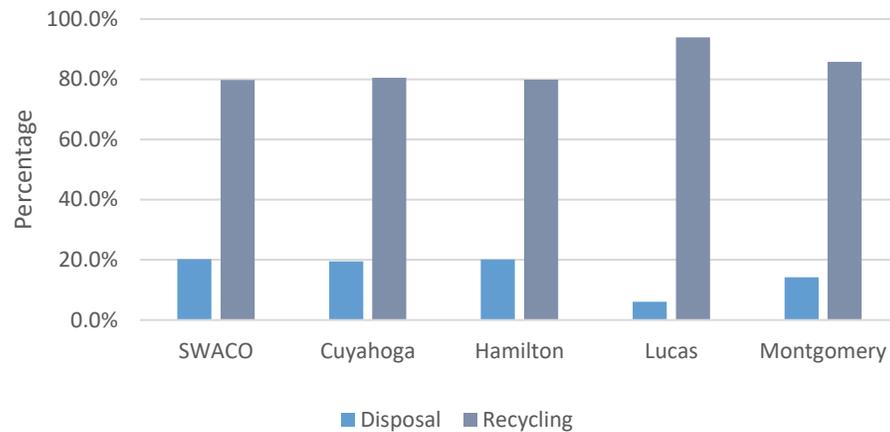
The statewide R/C generation for 2014 was approximately 6.25 PPD, while the average generation rate for all SWMDs was 5.85 PPD. The national R/C generation rate, according to a recent U.S. EPA publication, is approximately 4.4 PPD.

As discussed in Chapter 2, the District is home to the University of Toledo which potentially contributes substantial amounts of waste from the residential/commercial sector. The waste generated by the University also has the potential to fluctuate quite significantly throughout the year due to changes in the student population as the school year begins and ends.

2. Industrial Waste Generated in Reference Year

In contrast to the residential/commercial sector, recycling and waste reduction contribute the larger share of total generation in the industrial sector. The relative percentages in other urban solid waste districts for disposal vs. recycling are very similar to Lucas County’s percentages (see Figure 3-3).

Figure 3-3. Industrial Disposal and Recycling as Percentage of Generation

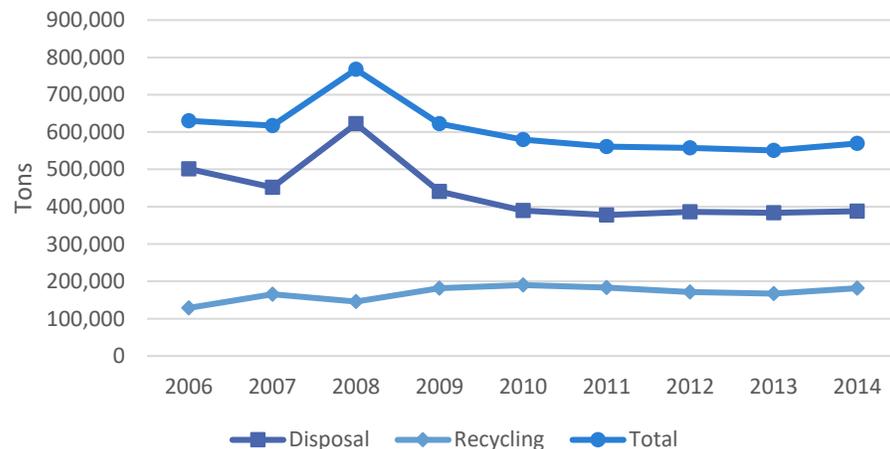


B. Historical Waste Generated

1. Historical Residential/Commercial Waste Generated

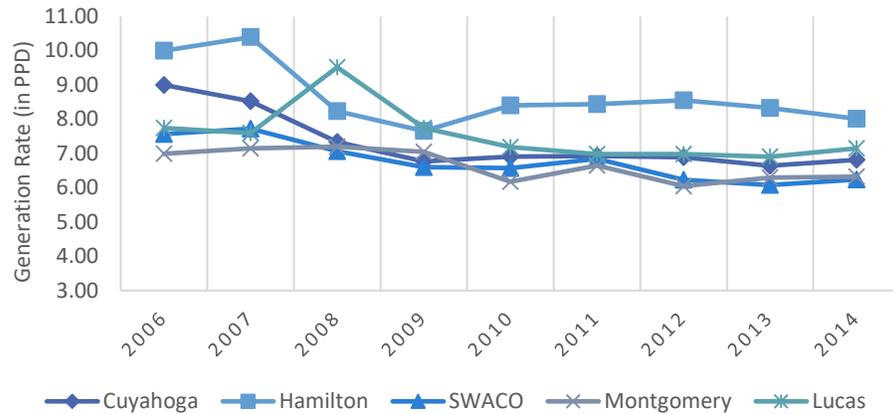
Although it has fluctuated some over the past nine years, the generation of R/C waste in the District has generally decreased since 2006. Disposal has decreased by more than 113,000 tons while recycling has increased almost 53,000 tons during this time period. (See Figure 3-4.) These trends are consistent with other urban SWMDs in Ohio.

Figure 3-4. Lucas County Historical R/C Generation: 2006 – 2014



In general, the R/C waste generation rates for urban SWMDs in Ohio have also declined during the last nine to ten years. While each of the SWMDs depicted in Figure 3-5 has experienced some fluctuation in the amount of waste produced, the overall trends exhibit decreasing generation rates.

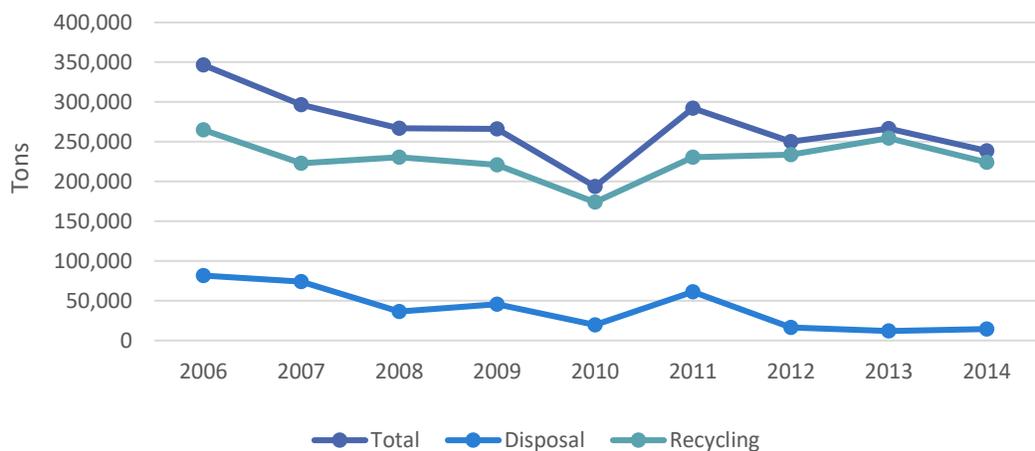
Figure 3-5. Residential/Commercial Generation Rates: 2006-2014



2. Historical Industrial Waste Generated

The generation of industrial waste during the past nine years has fluctuated to a much greater extent than the R/C generation. As illustrated in Figure 3-6, changes in industrial generation have been caused primarily by increases or decreases in the amount of recycling rather than disposal. The historical generation of industrial waste also seems to suggest that this sector is more influenced by the state of the economy than the R/C sector. The chart shows a substantial decrease in industrial generation from 2007 through 2009 during the most recent economic recession.

Figure 3-6. Lucas County’s Historical Industrial Generation: 2006 – 2014



C. Waste Generation Projections

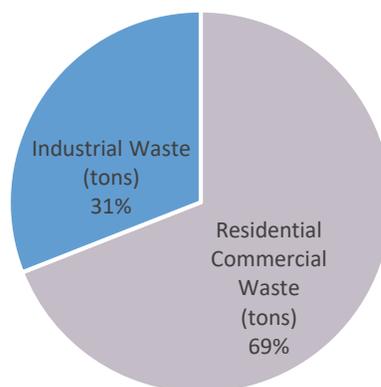
Table 3-2 shown below demonstrates that waste generation within the District is expected to decrease slightly during the first six years of the planning period. However, the projected total for 2018 is substantially larger than the total for the 2014 reference year.

Table 3-2. Waste Generation Projections

Year	Residential Commercial Waste (tons)	Industrial Waste (tons)	Total
2018	611,840	272,217	884,057
2019	610,935	272,012	882,946
2020	610,029	271,807	881,837
2021	609,128	271,604	880,733
2022	608,228	271,403	879,630
2023	607,327	271,403	878,730

Figure 3-7 shows the percentage of solid waste generated in the residential/commercial vs. industrial sectors for the first year of the planning period (2018). Projections for both of these sectors have been developed by first analyzing historical disposal data, determining trends for the historical data, and then estimating future disposal amounts by incorporating any known changes which may affect the tons landfilled. The same process has been used to establish the projections for waste reduction and recycling, and the sum of the disposal and waste reduction/recycling projections comprise the total waste generation projections.

Figure 3-7. Residential/Commercial vs. Industrial Waste Generation: 2018



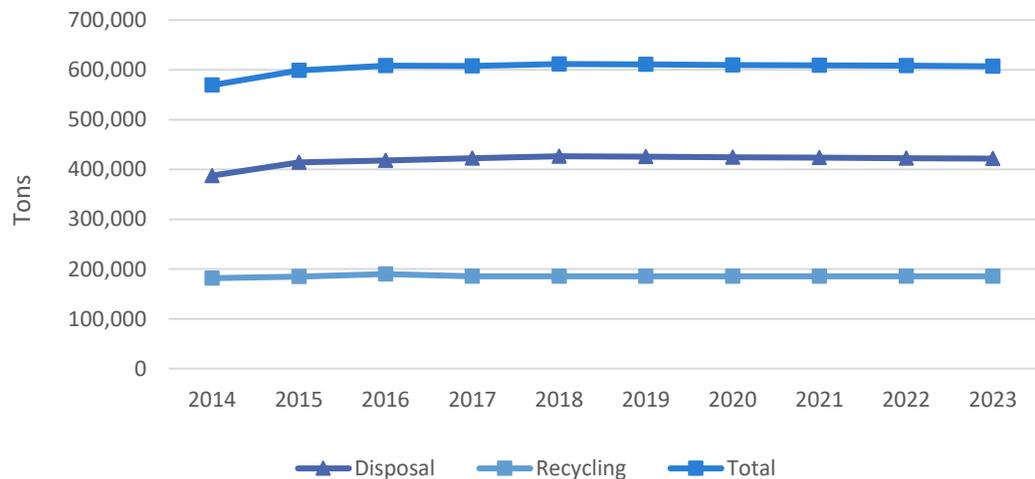
1. Residential/Commercial Waste Projections

As stated above, projections for the residential/commercial sector were developed for disposal and recycling in order to determine total generation. Figure 3-4 shows that disposal amounts for the residential/commercial sector have been decreasing over the past ten years. However, the disposal rate in pounds/person/day for the District has been steadily increasing since 2011, especially in 2015. The District believes this trend will continue through the first year of the planning period. The disposal rate is expected to remain constant through the remainder of the planning period.

Recycling projections were developed using the historical trend, but anticipated District programming was also a crucial component in determining the total residential/commercial sector recycling expected in future years. For example, the Districts expects existing curbside and drop-off recycling programs to continue with modest increases in tonnages. See Chapter 5, Section B, for a much more complete discussion of the District’s waste reduction and recycling programs, and the expectations for these programs during the planning period.

Figure 3-8 shown below shows that tonnages for the residential/commercial sector are expected to increase initially through 2018. For the remainder of the planning period total R/C generation is projected to decrease slightly to approximately 607,000 tons in 2023.

Figure 3-8. Residential/Commercial Waste Generation: 2014-2023



2. Industrial Waste Projections

Waste generation in the industrial sector is normally influenced to a lesser degree by solid waste district programming than the generation totals from the residential/commercial sector. As depicted in Figure 3-6 above, industrial generation tonnages within the District have shown a greater degree of variability over time than waste from the residential/commercial sector. This is especially true with respect to waste reduction and recycling, even though the District programs to assist and encourage waste reduction and recycling in the industrial sector have remained relatively consistent over time.

Generation tonnages dipped to their lowest levels in 2010 (probably as a result of the economic recession), followed by a substantial increase in 2011, and then lower generation levels in 2012 through 2014. In order to take a somewhat conservative approach, and to address the historical variability and uncertainty associated with determining industrial generation into the future, the following assumptions have been used to project industrial generation for planning purposes:

- Recycling. It is assumed that the tonnage reported for 2015 (238,535 tons) will continue throughout the planning period.
- Disposal. It is assumed that the amount of industrial sector disposal will decrease slightly for the first five years of the planning period, then remain constant through year 2032.

The result of these assumptions is that waste generation for the industrial sector is projected to decrease slightly from year 2018 through year 2022, then remain constant until the end of the planning period.

3. Excluded Waste

Projections for excluded waste (i.e., materials such as construction and demolition debris) have not been developed since excluded waste comprised less than 10 percent of the total waste generated in the reference year (2014).¹

¹ Ohio EPA's Format v4.0 instructs solid waste management districts to delete excluded waste if it comprises less than 10 percent of the total waste disposed.

CHAPTER 4. WASTE MANAGEMENT

Chapter 3 provided a summary of how much waste the SWMD generated in the reference year and how much waste the Policy Committee estimates the SWMD will generate during the planning period. This Chapter summarizes the Policy Committee's strategy for how the SWMD will manage that waste during the planning period.

A SWMD must have access to facilities that can manage the waste the SWMD will generate. This includes landfills, transfer facilities, incinerator/waste-to-energy facilities, compost facilities, and facilities to process recyclable materials. This Chapter describes the Policy Committee's strategy for managing the waste that will be generated within the SWMD during the planning period.

In order to ensure that the SWMD has access to facilities, the solid waste management plan identifies the facilities the District expects will take the SWMD's trash, compost, and recyclables. Those facilities must be adequate to manage all of the SWMD's solid waste. The SWMD does not have to own or operate the identified facilities. In fact, most solid waste facilities in Ohio are owned and operated by entities other than the SWMD. Further, identified facilities can be any combination of facilities located within and outside of the SWMD (including facilities located in other states).

Although the Policy Committee needs to ensure that the SWMD will have access to all types of needed facilities, Ohio law emphasizes access to disposal capacity. In the solid waste management plan, the District must demonstrate that the SWMD will have access to enough landfill capacity for all of the waste the SWMD will need to dispose of. If there isn't adequate landfill capacity, then the Policy Committee develops a strategy for obtaining adequate capacity.

Ohio has more than 40 years of remaining landfill capacity. That is more than enough capacity to dispose of all of Ohio's waste. However, landfills are not distributed equally around the state. Therefore, there is still the potential for a regional shortage of available landfill capacity, particularly if an existing landfill closes. If that happens, then the SWMDs in that region would likely rely on transfer facilities to transport waste to an existing landfill instead of building a new landfill.

Finally, the SWMD has the ability to control which landfill and transfer facilities can, and by extension cannot, accept waste that was generated within the SWMD. The SWMD accomplishes this by designating solid waste facilities (often referred to flow control). A SWMD's authority to designate facilities is explained in more detail later in this chapter.

A. Waste Management Overview

The solid waste generated within Lucas County is managed through four major categories: recycling, composting, processing at transfer facilities, and landfilling. (The waste delivered to transfer facilities is ultimately sent to landfills for disposal.) These methods of waste management are anticipated to continue

handling the District’s solid wastes throughout the planning period. Table 4-1 shows the projections for each management method for the first six years of the planning period, and indicates that disposal (“Transferred” plus “Landfilled”) will continue to comprise the largest category.

Table 4-1. Methods for Managing Waste

Year	Generated ¹	Recycled ²	Composted	Transferred ³	Landfilled ⁴
2018	884,057	371,234	52,540	12,010	448,273
2019	882,946	371,286	52,540	12,004	447,117
2020	881,837	371,338	52,540	11,997	445,961
2021	880,733	371,390	52,540	11,991	444,811
2022	879,630	371,443	52,540	11,985	443,662
2023	878,730	371,496	52,540	11,985	442,709

¹ "Generate" represents the total of the other four columns.

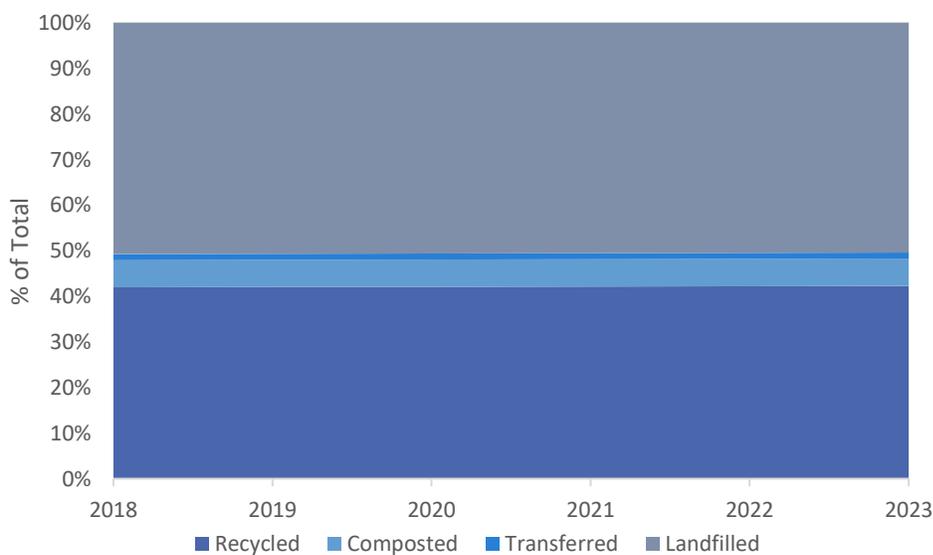
² "Recycle" is the total amount reduced and recycled minus composting.

³ "Transferred" is the amount sent to transfer stations, prior to delivery to a landfill.

⁴ "Landfilled" plus the "Transferred" amount equals the total disposal.

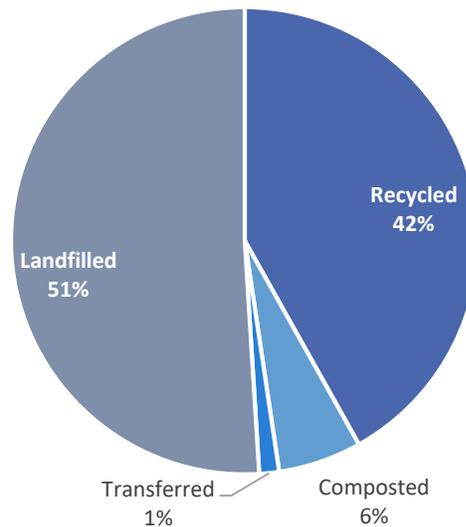
The proportion of each method used to manage Lucas County’s waste during the first six years of the planning period are predicted to change very little. Figure 4-1 shows that recycling as a percentage of total generation will remain at roughly 45 percent, while the total landfilling percentage (“Landfilled” plus “Transferred”) will be close to 50 percent of total generation.

Figure 4-1. Percent of Generation Managed by Each Method



The data presented in Figure 4-1 is shown below in a pie chart for year 2018.

Figure 4-2. Waste Management Methods: 2018



B. Profile of Solid Waste Infrastructure and Solid Waste Facilities Used in the Reference Year

1. Landfill Facilities

All the landfills which received waste directly (without first being processed at a transfer station) from the District during the reference year of 2014 are shown in Table 4-2 below. This table illustrates that more than 78 percent of the direct-hauled waste was disposed at the Hoffman Road Sanitary Landfill and the Vienna Junction Landfill. Both of these facilities are publicly-available, with the Hoffman Road facility owned by the City of Toledo and Vienna Junction owned by Republic Waste Services, a private company. These two facilities also have many years of remaining capacity available for disposal as shown in Table 4-2.

Table 4-2. Landfill Facilities Used by the District in the Reference Year

Facility Name	Location		Tons Accepted from SWMD	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
<i>In-District</i>					
Hoffman Road Landfill	Lucas	OH	126,997	31.2%	53.9
<i>Out-of-District</i>					
Wood County Landfill	Wood	OH	2,220	0.5%	11.9
Evergreen Recycling & Disposal	Wood	OH	83,754	20.6%	41.3

Facility Name	Location		Tons Accepted from SWMD	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
Williams County Landfill	Williams	OH	0.5	0.0001%	183.3
American Landfill	Stark	OH	162	0.0%	64.6
Sunny Farms Landfill	Seneca	OH	225	0.1%	22.3
Port Clinton Landfill	Ottawa	OH	8	0.002%	98.4
Hancock County Sanitary Landfill	Hancock	OH	116	0.0%	33.5
Erie County Sanitary Landfill	Erie	OH	2	0.000%	31
Defiance County Sanitary Landfill	Defiance	OH	5	0.001%	80.3
Out-of-State					
Twin Bridges Recycling & Disposal Facility	Hendricks	IN	7	0.002%	DNR
Vienna Junction Landfill	Monroe	MI	193,392	47.5%	14
Total			406,888	100%	621

Note: The "tons accepted from SWMD" represents only the amount of waste which was directly-hauled to landfills. It does not include the tonnage which was sent to transfer stations, then delivered to a landfill.

2. Transfer and Processing Facilities

The transfer facilities receiving waste from District entities during 2014 are listed in Table 4-3. Only a very small percentage of the total waste ultimately sent for disposal was processed by transfer stations, with the Stevens Disposal Transfer Station in Michigan receiving 96 percent of transferred waste. Table 4-3 also includes a number of processing facilities located in Indiana which handled very small amounts of District solid waste in 2014.

Table 4-3. Transfer and Processing Facilities Used by the District in the Reference Year

Facility Name	Location		Tons Accepted from SWMD	Percent of all District Waste Transferred	Landfill Where Waste was Taken to be Disposed
	County	State			
In-District					
None	N/A	N/A	0	0%	N/A
Out-of-District					
Archbold Refuse Service Solid Waste Transfer Facility	Fulton	OH	398	3.3%	Evergreen Recycling & Disposal

Facility Name	Location		Tons Accepted from SWMD	Percent of all District Waste Transferred	Landfill Where Waste was Taken to be Disposed
	County	State			
Fulton County Solid Waste Facility	Fulton	OH	3	0.0%	Williams County Landfill
Out-of-State					
Liquid Waste Removal Processing Facility	Johnson	IN	5	0.0%	DNR
Medassure of Indiana Treatment Facility	Marion	IN	0	0.0%	DNR
Merrell Brothers, Inc. Indy Disposal Solutions	Marion	IN	21	0.2%	DNR
Stericycle Solid Waste Processing Facility	Marion	IN	7	0.1%	DNR
Stevens Disposal Transfer Station	Monroe	MI	11,551	96%	DNR
Tradebe Treatment & Recycling	Lake	IN	61	0.5%	DNR
Total			12,045	100%	0

3. Composting Facilities

Table 4-4 shows the composting facilities which received yard waste and food waste from the District in 2014. Clean Wood Recycling and Riverside Disposal Facility processed more than 65 percent of the total composted waste.

Table 4-4. Composting Facilities Used by the District in the Reference Year

Facility Name	Location	Tons Composted	Percent of all Tons Composted
Lammon Brothers	7520 County Road 5-2 Swanton, OH	384	0.6%
Blue Creek Composting	7700 Schadel Rd. Maumee, OH	0	0.0%
Clean Wood Recycling, Inc.	6505 W. Bancroft St. Toledo, OH	25,281	38.8%
Oregon City Compost	444 Otter Creek Rd. Oregon, OH	1,239	1.9%
Schamberger Road Facility	2001 Schwamberger Rd. Sylvania, OH	44	0.1%

Facility Name	Location	Tons Composted	Percent of all Tons Composted
Floralandscape	130 Elmdale Rd. Toledo, OH	82	0.1%
Allgreen, Inc.	9940 Old Airport Hwy. Toledo, OH	766	1.2%
City of Toledo	221 Elmdale Toledo, OH	8,130	12.5%
Roland Richardson-Fangboner Farms	1179 S. Crissey Holland, OH	0	0.0%
The Toledo Zoo	749 Spencer St. Toledo, OH	133	0.2%
Bauer Lawn Maintenance, Inc.	10839 Sager Rd. Maumee, OH	7,298	11.2%
Hill Avenue Facility	3228 Hill Ave. Toledo, OH	0	0.0%
Toledo Topsoil & Mulch	5315 Stickney Ave. Toledo, OH	2,769	4.2%
Riverside Disposal Facility	303 Ohio St. Toledo, OH	17,385	26.7%
Sylvania Compost & Recycling LLC	8061 Sylvania Ave. Sylvania, OH	978	1.5%
Woodville Road Nursery	5819 Woodville Rd. Northwood, OH (Wood County)	239	0.4%
Envirocare Lawn & Landscape	24114 Lime City Rd. Perrysburg, OH (Wood County)	433	0.7%
Total		65,159	100.0%

Note: This table does not include the 1,855 tons of food which was reported by haulers, Kroger, and Walmart, and listed in Ohio EPA's composting report.

4. **Processing Facilities**

Table 4-5 shows all the companies and facilities which reported processing recyclables from the District during the reference year. This list was compiled by analyzing data resulting from the District's survey efforts, as well as data published by Ohio EPA.

Table 4-5: Processing Facilities Used by the District in the Reference Year

Name of Facility	Location		Type of Facility	Recyclables Accepted from District	
	County	State		Types	Tons
In-District					
AIM Ecycling LLC	Lucas	OH	Recycler	Electronics	*
Aldi	Lucas	OH	Commercial /Retail	Plastic, cardboard	476
Big Lots	Lucas	OH	Commercial /Retail	Cardboard	161
Dollar General	Lucas	OH	Commercial /Retail	Cardboard, mixed paper	343
Dynalite Corp.	Lucas	OH	Industry		*
Fondessy Enterprises, Inc	Lucas	OH	MRF	Multi-stream	*
Gateway Recycling & Waste Reduction, Inc.	Lucas	OH	MRF	Single & Multi-Stream	*
Home Depot	Lucas	OH	Commercial /Retail	Plastics, cardboard, ferrous, wood	546
Jo-Ann Fabrics	Lucas	OH	Commercial /Retail	Cardboard, commingled	40
Kohl's	Lucas	OH	Commercial /Retail	Plastic, cardboard, commingled	246
Kroger	Lucas	OH	Commercial /Retail	Cardboard	3,727
Lowe's	Lucas	OH	Commercial /Retail	Cardboard, ferrous	298
Lucas County Solid Waste	Lucas	OH	MRF	Multi-Stream	
Meijer	Lucas	OH	Commercial /Retail	Cardboard	2,312
Michael's	Lucas	OH	Commercial /Retail	Commingled	74
OmniSource	Lucas	OH	Single Material Processor	Scrap metal	*

Name of Facility	Location		Type of Facility	Recyclables Accepted from District	
	County	State		Types	Tons
ReCommunity	Lucas	OH	MRF	Multi-stream	26,961
Republic Services	Lucas	OH	MRF	Multi-Stream	*
Sims Metal Management	Lucas	OH	MRF, Single Material Processor	Scrap metal	*
State Paper & Metal	Lucas	OH	MRF	Multi-Stream	*
Target	Lucas	OH	Commercial /Retail	Plastic, cardboard, mixed paper, ferrous, commingled	144
Toledo Shredding	Lucas	OH	Recycler	Ferrous, non-ferrous metals, other	*
Walmart	Lucas	OH	Commercial /Retail	Plastics, cardboard, mixed paper, ferrous, wood, other	3,134
Out-of-District					
N & R & G Recycling	Henry	OH	Buyback/ Processor	Ferrous, non-ferrous, other	*
Out-of-State					
unknown					
Total					209,277

* Tonnage for this entity has not been included in order to protect the confidentiality of their survey response. The total tons represents the amount of residential/commercial and industrial recyclables reported by scrap yards, MRFs, and other processors receiving materials from the District.

5. Other Waste Management

The District did not identify any other methods used for waste management during the reference year.

C. Use of Solid Waste Facilities During the Planning Period

In general, the District anticipates that facilities which were used to manage District-generated waste during the reference year will continue to be available throughout the planning period, and in aggregate, will continue to provide

adequate capacity for the District's needs. Each landfill which received a substantial percentage of District-generated waste during 2014 is estimated to have a minimum of 14 years remaining capacity.

Transfer stations have not been important factors in the District's waste management strategy in past years, and that situation is not expected to change during the planning period.

The amount of materials composted throughout the planning period is not expected to change significantly. As the number of operating composting facilities processing the majority of yard waste from the District is not expected to change, composting facility capacity should be adequate throughout the planning period.

The District is anticipating the establishment of a new facility which will provide additional processing capacity for recyclables within Lucas County, and the development of this facility is projected to be developed within the first five years of the planning period or sooner. This facility is anticipated to be designed to handle single-stream recyclables currently generated within the District.

D. Siting Strategy

Ohio EPA's Format requires the inclusion of a siting strategy in a solid waste plan update if the solid waste district determines that it will construct a solid waste facility to provide disposal capacity. This requirement follows from Ohio law [Ohio Revised Code, Section 3734.53(A)(8)]. Even though the District does not anticipate the development of a new disposal facility during the planning period, a siting strategy has been included in this Plan Update in order to address the possibility of facility construction.

The District's siting strategy has been developed to provide a process for evaluating proposed solid waste facilities and the sites upon which they may be constructed. This strategy is not meant to replace current review and evaluation processes conducted by Ohio Environmental Protection Agency, local zoning and planning commissioner, or other state or local agencies. Rather the District's siting strategy is meant to supplement those reviews by evaluating a proposed facility's conformity with the goals and objectives of the District Solid Waste Management Plan and providing a forum for public participation in the siting process. The District may alter this strategy to assure that it consistently meets these objectives. Such changes in the strategy will be published as part of the District's Siting Evaluation and Ranking document. The evaluation and siting strategy applies to all facilities regardless of ownership, except solid waste facilities sited within the district prior to plan approval. The strategy consists of three components:

- Preliminary site survey;

- Evaluation of proposed sites and requests for designation; and
- Resolving site impasses through mediation.

The preliminary site survey involves identifying those areas within the District which are unsuitable for solid waste facilities due to environmental sensitivity. The evaluation of proposed sites includes compliance with all state and local requirements for establishing a solid waste facility, as well as complying with the District's goals and objectives contained in the Lucas County Solid Waste Management Plan and the District's siting criteria. A formal mediation process will be used for instances in which differences between the entity proposing the facility and the District cannot be resolved. (See Appendix S for a complete discussion of the District's siting strategy.)

E. Designation

Ohio law gives each SWMD the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.¹

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee (or the Board in the case of an Authority) specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If the SWMD desires to have the ability to designate facilities, then the policy committee includes a clear statement in the solid waste management plan giving the designation authority to the board of directors. The policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

Even if the policy committee grants the board of directors the authority to designate in a solid waste management plan, the board of directors decides whether to act on that authority. If it chooses to use its authority to designate facilities, then the board of directors must follow the process that is prescribed in ORC Section 343.013, 343.014 and 343.015. If it chooses not to designate facilities, then the board of directors simply takes no action.

Once the board of directors designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is when the board of directors grants a waiver to allow an undesignated facility to take the SWMD's

¹ Source-separated recyclables delivered to a "legitimate recycling facility" as defined in Ohio law are not subject to the requirements of designation. (A legitimate recycling facility is loosely defined as a facility which consistently recycles a majority of the materials processed on-site.)

waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and the time period available to the board for making a decision on a waiver request.

1. Description of the SWMD’s Designation Process

Decisions regarding designation or the granting of a designation waiver shall be made by the District, following a review of the request by the Policy Committee. Copies of applicable resolutions for the District’s most recent designation process are included in Appendix V.

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(l)(2). The Policy Committee will evaluate each request for designation or waiver based upon, at least, the following general criteria:

- The facility’s compatibility with the District’s Solid Waste Management Plan.
- The facility’s compliance with all rules promulgated by the District and the District’s Solid Waste Management Plan.

The full procedure for granting a designation waiver is included in the District’s *Designation Procedure and Evaluation Document*, found in Appendix V.

For this plan update, the District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015.

2. List of Designated Facilities

The currently designated facilities for the solid waste generators are shown in Table 4-6 below. These facilities were designated in 2013.

Table 4-6. Facilities Currently Designated

Facility Name	Location		Facility Type
	County	State	
<i>In-District</i>			
Hoffman Road Landfill	Lucas	OH	Landfill
<i>Out-of-District</i>			
Port Clinton Landfill	Ottawa	OH	Landfill
Wood County Landfill	Wood	OH	Landfill

Facility Name	Location		Facility Type
	County	State	
Suburban Landfill	Perry	OH	Landfill
American Landfill	Stark	OH	Landfill
Erie County Sanitary Landfill	Erie	OH	Landfill
Henry County Landfill	Henry	OH	Landfill
County Environmental of Wyandot	Wyandot	OH	Landfill
Williams County Landfill	Williams	OH	Landfill
Hancock County Landfill	Hancock	OH	Landfill
Evergreen Landfill	Wood	OH	Landfill
ARS Refuse Service	Fulton	OH	Transfer Station
Out-of-State			
Adrian Landfill	N/A	MI	Landfill
Vienna Junction Landfill	N/A	MI	Landfill
Steven's Disposal and Transfer Facility	N/A	MI	Transfer Station

CHAPTER 5. WASTE REDUCTION AND RECYCLING

As was explained in Chapter 1, a SWMD must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A SWMD also ensures that there are programs and services available to meet local needs. The SWMD may directly provide some of these programs and services, may rely on private companies and non-profit organizations to provide programs and services, and may act as an intermediary between the entity providing the program or service and the party receiving the program or service.

Through achieving the goals of the *State Plan* and meeting local needs, the SWMD ensures that a wide variety of stakeholders have access to reduction and recycling programs. These stakeholders include residents, businesses, institutions, schools, and community leaders. Programs and services collectively represent the SWMD's strategy for furthering reduction and recycling within its jurisdiction.

Before deciding upon the programs and services that are necessary and will be provided, the Policy Committee performed a strategic, in-depth review of the District's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 13 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the SWMD adequately serving all waste-generating sectors?
- Is the SWMD recovering high volume wastes such as yard waste and cardboard?
- How well is the SWMD's recycling infrastructure being used, and how well is it performing?
- What is the District's financial situation and ability to fund programs?

Using what it learned, the Policy Committee drew conclusions about the District's abilities, strengths and weaknesses, operations, existing programs and services, outstanding needs, available resources, etc. The Policy Committee reviewed a list of actions the SWMD could take, programs that the District could implement, or other steps the SWMD could take to address its conclusions. The Policy Committee used that list to make decisions about the programs and services that will be available in the SWMD during the upcoming planning period. (For more in depth information regarding the analyses of District programs and the development of priorities, see Appendix H and Appendix I, respectively.)

After deciding on programs and services, the Policy Committee reviewed projections of the quantities of recyclable materials that would be collected through those programs and services. This in turn allowed the Policy Committee to project its waste reduction and recycling rates for both the residential/commercial sector and the industrial sector. (See Appendix E for details regarding the residential/commercial sector and Appendix F for the industrial sector.)

Finally, the District and Policy Committee realize that the highest priorities identified during this Plan Update process were to implement all existing programs, develop a regional recycling facility, develop a permanent HHW facility, and enhance its education, awareness and outreach programs. The District reserves the right to ensure the implementation of these programs and initiatives first and before all other secondary new programs or initiatives. The District and Policy Committee also realize that the existing staff resources and budgetary constraints are limited and can also be a reason that certain newly identified programs or initiatives may or may not be implemented. This explains why many of the newly identified programs and initiatives contained in Appendix I and this Chapter may be considered for implementation versus will be implemented.

A. Program Evaluation and Priorities

1. Strategic Analysis

All existing District programs have been evaluated qualitatively in terms of the suggestions included within Ohio EPA’s guidance document (i.e., Format v4.0), and the strengths and weaknesses identified for each program. For programs which have data available, quantitative evaluations were incorporated, also. The District conducted additional analyses for subject areas or issues not necessarily related to an existing program, such as providing opportunities for food waste diversion within Lucas County.

Table 5-1 lists the 13 analyses conducted by the District, and defines the programs which were evaluated within each analysis. For example, the first analysis involved evaluating programs as well as topics/needs for residential recycling infrastructure. This analysis was subdivided into sections addressing drop-off recycling, curbside recycling, recycling provided at special events, and opportunities for recycling at multi-family housing units. Three existing programs were evaluated under drop-off recycling:

- Drop-off Recycling for Public Sites;
- Drop-offs at Schools; and
- Non-Public Drop-offs.

Table 5-1. Listing of District’s 13 Analyses: Strategic Evaluation

Section		Subsection	District Program or Topic
#	Name		Name/Description
1	Residential Recycling Infrastructure Analysis	A. Drop-off Recycling	<i>Drop-off Recycling for Public Sites</i>
			<i>Drop-offs at Schools</i>
			<i>Drop-offs at Non-Public Sites</i>
		B. Curbside Recycling	<i>Locations of Curbside Programs</i>
			<i>Materials Accepted</i>

Section		Subsection	District Program or Topic
#	Name		Name/Description
			<i>Contracting, Contract Management, etc.</i>
			<i>City of Toledo's Curbside Program</i>
			<i>Other Communities: Participation, Problems</i>
			<i>Education and Awareness</i>
			<i>Tons Recovered</i>
			<i>Municipal Assistance Program</i>
		C. Special Events Recycling	
		D. Multi-Family Housing	
2	Commercial Sector Analysis		
3	Industrial Sector Analysis	A. Waste Minimization Assessments	
4	Residential/Commercial Waste Composition Analysis	A. Yard Waste	
		B. Cardboard and Paper	
		C. Food Waste	
		D. Plastics	
5	Economic Incentive Analysis		
6	Restricted and Difficult to Manage Waste Streams	A. Scrap Tires	
		B. HHW	
		C. Lead-Acid Batteries	
		D. E-Waste	
		E. Appliances	
		F. Household Batteries	
		G. Bulk Items	
7	Waste Diversion Analysis	A. Residential/ Commercial Sector	
		B. Industrial Sector	
8	Special Program Needs		
9	Financial	A. Revenues	
		B. Expenditures	
		C. Balances	
10	Regional Analysis	Toledo-Lucas County Sustainability Commission	
11	Population		
12	Data Collection	Data Reporting Program	
13	Recyclable Material Processing Capacity		

Each of the District programs or topics listed above in Table 5-1 were evaluated using the information which was available. For drop-off recycling, the District examined:

- The locations of drop-offs to determine if the current number of sites is adequate and convenient for residents in each city, village, and township;
- The types of materials accepted at each drop-off;
- The operation of the drop-off program (i.e., number of drivers, number of collection vehicles, frequency of collection, etc.);
- The estimated participation rates as well as other information about the residents using the drop-off program;
- The tons of recyclables recovered through this program, and how the tonnage has changed over time; and
- The cost of the drop-off program.

2. Conclusions and Priorities

The strategic analysis conducted by the District identified strengths and weaknesses for existing programs, and challenges the District faces to improve certain programs. The topics or issues potentially needing to be addressed through some type of new initiative were also identified through this process.

After compiling a list of all the existing programs and the new initiatives, the District staff and the Policy Committee employed a ranking system to prioritize solid waste management efforts within Lucas County. Each existing program and new initiative were ranked from 1 to 5 based upon its importance and feasibility/ease of implementing. Programs and initiatives with a ranking of “4” or “5” are recommended for implementation, while all others are not recommended at this time.

The ranking process recommends that all existing programs be continued through the planning period associated with this Plan Update (2018 – 2032). A number of new initiatives are also recommended for potential implementation, and are listed in Table 5-2 shown below. (For a complete listing of all existing programs and initiatives, including those with a ranking of “1”, “2”, or “3”, see Appendix I.) In many cases, the new initiatives are intended to address problems identified for an existing program, or to enhance an existing program. For example, the initiatives and actions included for “Drop-off Recycling: Publicly-Available Sites” have been developed for the following reasons:

- Determine the appropriate number and location of drop-off sites. This initiative is intended to improve the efficiency of the drop-off program, and to ensure that scarce resources are directed towards locations and political jurisdictions which need greater service with regard to recyclables collection.

- Evaluate cost containment options. Drop-off recycling is one of the most expensive programs which the District operates. This initiative will evaluate design and operational alternatives which could improve the cost effectiveness of the drop-off program.
- Minimize contamination and littering. Contamination and littering continue to be problems at some drop-off sites. In order to address these problems, the District may consider additional signage at drop-off locations, education for participants/users, and enforcement action.
- Minimize theft of recyclables. The theft of recyclables (e.g., aluminum cans) continues to be a problem at some locations. The District may employ the same techniques for this problem as discussed above for contamination and littering, plus consider the use of cameras at certain sites.
- Update participation study. The last drop-off program participation study in the District was completed in 2006. Conducting a new survey and updating this study should provide important information regarding current users of the drop-offs and performance metrics. This data will allow the District to determine if changes to the drop-off program are needed.
- The District will consider long-term availability of sites by signing agreements w/ property owners. At least one property owner has recently informed the District that drop-offs currently placed in their parking lot will have to be removed in the future. The District will be evaluating alternatives to address the loss of this site, and possibly others.

A complete listing and description of all District programs and new initiatives recommended for implementation with this *Plan Update* is provided below in Section B, "Program Descriptions."

Table 5-2. District Conclusions and Priorities: Strategic Analysis

Program Category	Action or Program Name
<i>Residential Recycling Infrastructure</i>	
Curbside Recycling Services	Endeavor to expand Community Curbside Solid Waste and Recyclables Technical Assistance
	Facilitate implementation of non-subscription curbside collection in 2 townships
	Facilitate the formation of collection consortiums
	Attempt to obtain recycling data from subscription recycling programs

Program Category	Action or Program Name
Drop-off Recycling: Publicly-Available Sites	Determine the appropriate number and location of drop-off sites
	Evaluate cost containment options (e.g., single-stream vs. dual-stream)
	Minimize contamination and littering
	Minimize theft of recyclables
	Update participation study
	Ensure long-term availability of sites by considering agreements w/ property owners
Drop-off at Schools	Continue assistance with placement of recycling bins within school buildings
	Provide or facilitate placement of recycling bins within new schools not serviced by District or private sector
	Continue to work with schools on assignment of responsibility within buildings for emptying recycling bins, maintenance of program, etc.
Non-Public Drop-offs	Delineate costs and tonnage for program
	Consider pilot program for multi-family housing units
Special Events	Minimize contamination and littering
Multi-Family Housing	Expand education/awareness program
	Facilitate provision of recycling services through private sector
	See "Non-Public Drop-offs"
Commercial/Institutional Sector Reduction/Recycling	
Education/Awareness	Enhance program to target greater recycling
Industrial Sector Reduction/Recycling	
Waste Assessments	Expand awareness
	Develop greater emphasis on difficult to manage waste streams
	Devote more resources into program
Other	Promotion of market development grant opportunities
Restricted/Difficult to Manage Wastes	
Scrap Tires	Encourage residents to turn in old tires at dealers
	Identify illegal tire transporters
HHW	Establish a permanent collection site
E-Waste	Promote private sector collection of TVs

Program Category	Action or Program Name
Other Material Specific Programs	
Food Waste	Explore co-digestion of food waste and bio solids at Lucas County Water Resource Recovery Facility
	Target food waste collection and processing
Outreach, Education, Awareness, and Technical Assistance	
District Website	Improve branding and visual presentation
	Obtain a more user-friendly URL for the website
	Track the number visits to the website, etc.
Participation in Community Events	Increase participation
	Focus on changing behavior at community events by using facetime with residents to gather information about recycling habits and why people do/do not recycle.
Presentations	Measure effectiveness of presentations based on behavior change
	Increase presentations to targeted schools
Waste Assessment Program	Follow-up with companies after implementation assessment recommendations
Management of Collection Contracts Community Curbside Solid Waste and Recyclables Technical Assistance (formerly Management of Collection Contracts and Municipal Assistance Program)	Measuring success of District involvement vs baseline statistics such as cost, diversion, level of service, materials accepted, etc.
	Increase promotion of program to non-participating communities
	Measure success of program for communities provided assistance
Market Development Grant Technical Assistance	Increase promotion of grants to targeted commercial and industrial businesses and institutions.
Toledo-Lucas County Sustainability Commission	Measure effectiveness of District's involvement/support
Funding/Grants	
Community Grant	Consider alternatives to enhance this program
Market Development	
Market Development	Expand awareness of Ohio EPA grant program, assist businesses with grant applications
Feasibility Studies	
Evaluate a cost-effective solution for food waste from restaurants and bars.	
Evaluate hard to manager materials for recycling	

Program Category	Action or Program Name
Facilities	
Recyclables Processing	Facilitate development of single-stream recycling processing facility, or transfer station w/ recycling processing (hybrid MRF).
Data Collection	
Data Collection	Target commercial and institutional entities
	Contact set number of businesses annually

B. Program Descriptions

1. Residential Recycling Infrastructure

Curbside Recycling Services

The existing non-subscription curbside recycling services available to residents of the District in the reference year are expected to continue. These programs are shown below in Table 5-3. Eight of these communities are served by non-subscription curbside, while the remaining twelve are subscription programs. While some variation exists, most of the non-subscription programs collect newspaper, plastics, magazines, aluminum and steel cans, cardboard, paperboard, mixed paper, and glass. Each community or residents within those communities pay for the curbside service. For additional details regarding these programs, see Appendix B.

Table 5.3. Curbside Recycling Services

Name of Curbside Service	Type of Curbside ¹		Service Provider
	NS	S	
City of Maumee	✓		Contract between City and Republic
City of Oregon	✓		Contract between City and Waste Management
City of Sylvania	✓		Contract between City and Republic
City of Toledo	✓		Contract between City and Republic
City of Waterville	✓		Contract between City and Stevens Disposal
Holland Village	✓		Village maintenance department
Ottawa Hills Village	✓		City service department
Waterville Twp.	✓		Contract between Twp. Stevens Disposal
Monclova Twp.		✓	Contract between Twp. and Republic
Berkey Village		✓	DNR
Harbor View Village		✓	DNR
Harding Twp.		✓	DNR

Name of Curbside Service	Type of Curbside ¹		Service Provider
	NS	S	
Jerusalem Twp.		✓	DNR
Providence Twp.		✓	DNR
Spencer Twp.		✓	DNR
Springfield Twp.		✓	Private haulers
Swanton Twp.		✓	DNR
Sylvania Twp.		✓	DNR
Village of Whitehouse		✓	DNR
Washington Twp.		✓	DNR

In addition to the existing curbside programs, the District’s strategic analysis and ranking process identified five programs/initiatives to be considered for implementation during the planning period:

- a. Expand Community Curbside Solid Waste and Recyclables Technical Assistance. This program is a new program that will combine a technical assistance aspect and the Municipal Assistance Program. The District will try to increase the number of community contacts each year. This effort is intended to provide assistance to communities to enhance existing programs as well as encourage the development of new curbside programs by helping with service provider contracts for trash, recycling, and yard waste collection, bundling multiple services into one contract, and designing pay-as-you-throw programs. This program has the potential of greatly improving the service received by residents in the County, and possibly lowering costs as well.
- b. Facilitate implementation of non-subscription curbside collection in two townships (2018). The District’s analysis identified two townships currently with subscription curbside which may be better served with non-subscription programs based upon the number of households in their jurisdictions.
- c. Facilitate the formation of collection consortiums. Joint contracting through the formation of consortiums can result in better pricing and contract terms, and the District will continue to make this program a priority.
- d. Obtain recycling data from subscription recycling programs. The District was unable to obtain any recycling data (such as recovered tonnage) from subscription programs for the reference year. This type of information is important for determining the performance of these programs, their overall effectiveness, and recommending improvements if necessary.
- e. Reduction of contamination levels. This initiative will include working with the communities that have high contamination to provide

education and outreach assistance and technical assistance. This initiative will be ongoing throughout the planning period, as needed.

Drop-off Recycling: Publicly-Available Sites

The drop-off recycling program for publicly-available sites will continue. Table 5-4 shows a listing of the existing drop-off locations within the District.

Map of Drop-Off Recycling Sites

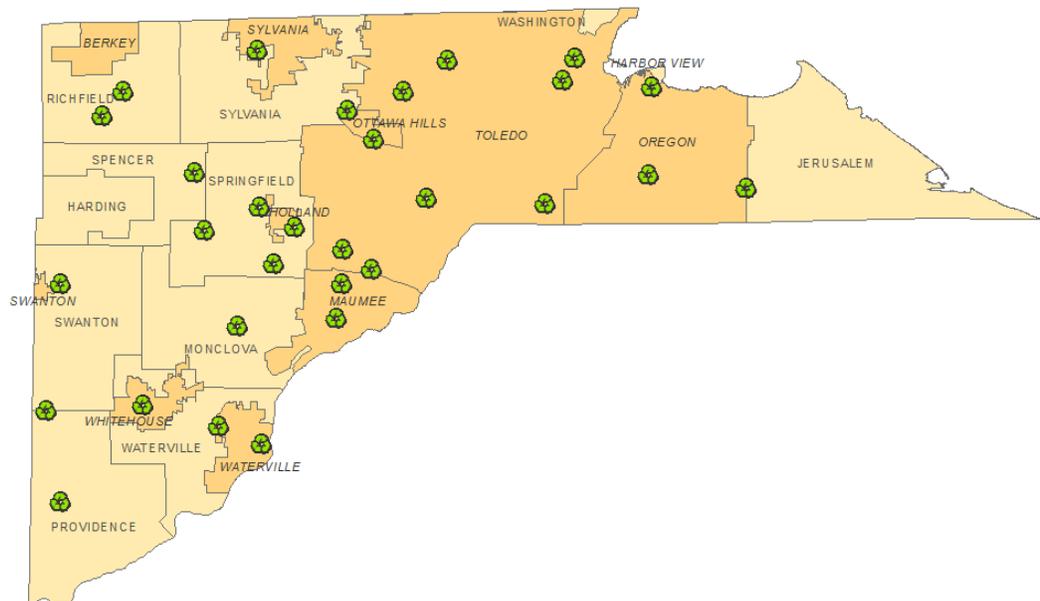


Table 5-4. Drop-Off Recycling Locations

Location of Drop-off	Community Served	Service Provider
605 Fassett St. Toledo, OH 43605	Toledo	Lucas County SWMD
Andover Apartments 2555 Eastgate Rd. Toledo, OH 43614	Toledo	Lucas County SWMD
Arrowhead Fire Station 450 W Dussel Dr. Maumee, OH 43537	Maumee	Lucas County SWMD
City of Waterville 25 N. Second St. Waterville, OH 43566	Waterville	Lucas County SWMD

Table 5-4. Drop-Off Recycling Locations

Location of Drop-off	Community Served	Service Provider
Kroger 8730 Waterville Swanton Rd. Waterville, OH 43566	Waterville	Lucas County SWMD
Hoffman Rd. Landfill 3962 Hoffman Rd. Toledo, OH 43611	Toledo	Lucas County SWMD
Jewish Community Center/YMCA 2440 South Ave. Toledo, OH 43609	Toledo	Lucas County SWMD
Kroger 4633 Suder Ave. Toledo, OH 43611	Toledo	Lucas County SWMD
Kroger 7556 King Rd. Sylvania, OH 43560	Sylvania	Lucas County SWMD
Monclova Twp. 4335 Albon Rd. Monclova, OH 43542	Monclova	Lucas County SWMD
Pearson Metropark 4600 Starr Rd. Oregon, OH 43616	Oregon	Lucas County SWMD
Ottawa Hills Village & Sylvania Twp. 2125 Richards Ottawa Hills, OH 43606	Ottawa Hills and Sylvania Township	Lucas County SWMD
Springfield Twp. Fire Station #2 1534 S. Crissey Rd. Holland, OH 43528	Springfield Township	Lucas County SWMD
Springfield Twp. Fire Station #3 7145 S. Garden Rd. Maumee, OH 43537	Springfield Township	Lucas County SWMD
Springfield Twp. Hall 7616 Angola Rd. Holland, OH 43528	Springfield Township	Lucas County SWMD
The Andersons 530 Illinois Maumee, OH 43537	Maumee	Lucas County SWMD

Table 5-4. Drop-Off Recycling Locations

Location of Drop-off	Community Served	Service Provider
Toledo Kroger 5109 Glendale Ave. Toledo, OH 43614	Toledo	Lucas County SWMD
Toledo Kroger 4533 Monroe St. Toledo, OH 43613	Toledo	Lucas County SWMD
Toledo Kroger 4925 Jackman Rd. Toledo, OH 43613	Toledo	Lucas County SWMD
Wildwood Metropark 5100 W. Central Toledo, OH 43615	Toledo	Lucas County SWMD
Harbor View Village 4421 Bayshore Rd. Oregon, OH 43616	Harbor View Village	Lucas County SWMD
Jerusalem Twp. 9501 Navarre Rd. Oregon, OH 43616	Jerusalem Township	Lucas County SWMD
Providence Fire Dept. Neapolis Rd. Swanton, OH 43558	Swanton	Lucas County SWMD
Providence Twp. 13344 Perry Rd. Grand Rapids, OH 43522	Providence Township	Lucas County SWMD
Richfield Twp. 3951 Washburn Rd. Berkey, OH 43504	Richfield Township	Lucas County SWMD
Secor Metro Park 10000 West Central Berkey, OH 43504	Berkey Village	Lucas County SWMD
Spencer Twp. 630 N. Meilke Rd Holland, OH 43528	Spencer Township	Lucas County SWMD
Swanton Twp. P. Conway Dr. Swanton, OH 43558	Swanton Township	Lucas County SWMD

Table 5-4. Drop-Off Recycling Locations

Location of Drop-off	Community Served	Service Provider
Whitehouse Village 6625 Providence St. Whitehouse, OH 43571	Whitehouse Village	Lucas County SWMD

The publicly-available drop-off program includes 21 sites categorized as “full-time urban” and 9 sites which are “full-time rural.” All of these locations are open seven days per week for 24 hours each day.

The strategic analysis identified five initiatives/strategies that will be further evaluated and may be considered for implementation by the District to improve or enhance the drop-off program. (These initiatives are described above on pages 4 and 5 of this chapter, and the descriptions will not be repeated here.)

- a. Determine the appropriate number and location of drop-off sites. Implement in 2018.
- b. Evaluate cost containment options. Implement in 2019.
- c. Minimize contamination and littering. Implement enhancement of existing efforts in 2019 and 2020.
- d. Minimize theft of recyclables. Implement enhancement of existing efforts in 2019 and 2020.
- e. Ensure long-term availability of sites by considering agreements w/ property owners. Implement in 2018 and 2019.

Multi-Family Recycling

Aside from the District’s drop-off program, the District currently does not have any programs which directly targeting multi-family housing units for recycling. The District does service several multi-family housing units currently on a case by case basis. The strategic analysis identified a need for programs serving residents living in multi-family units, and as a result, the following new initiatives were developed:

- a. Education and awareness (2020). The District may consider developing an education and awareness program, which specifically targets the residents of multi-family housing units. This program may involve targeted advertisements and outreach, and surveying of residents.
- b. Engagement of private sector (2021). The District plans to contact private haulers serving Lucas County and solicit input regarding the obstacles to providing greater recycling services for this sector.

- c. Pilot program (2022 or 2023). The District plans to identify one or more multi-family housing units for a recycling pilot program. The operation of the pilot program may be based on an evaluation of other Ohio solid waste district programs. The pilot program could be District operated or private sector operated depending on the results of the initiatives discussed above.

2. Commercial/Institutional Sector Reduction and Recycling Programs

Drop-Off Recycling: Schools

The District currently provides recycling collection service to a number of schools within Lucas County, and this service will continue. In addition, the District plans to enhance the program as follows:

- a. Servicing new schools. The District plans to facilitate the placement of containers at targeted schools currently without recycling services from their trash hauler. This initiative may be implemented beginning in 2019.
- b. Continue to work with schools on assignment of responsibility within buildings for emptying recycling bins, maintenance of program, etc.

The District will continue working with schools, as it has over the years, to provide technical assistance regarding school recycling program operations such as material flow within the schools, processing materials and other actions as needed by the schools related to recycling program operations.

Drop-off Recycling: Non-Public Sites (Small Businesses and Government Offices)

The District's drop-off collection services for small businesses and government offices will continue. During 2014, the District provided drop-off containers and serviced 89 recycling dumpsters for 59 separate entities throughout the County. This includes providing service for nearly 30 County-owned buildings. In addition, the District will implement the following initiatives:

- a. Beginning in 2022-2023, the District will evaluate options to identify a process to delineate the actual costs and tonnage collected. Currently, these metrics cannot be determined since the costs and tons collected for all District-operated drop-off programs are lumped together.

Large Venue Recycling

The District participates in a number of special events or large venues each year for recycling. Keep Toledo/Lucas County Beautiful (KT/LCB) assists with a number of the special collection events. These large venue events provide an excellent opportunity to educate the public, and improve awareness with regard to solid waste management issues. The District's role in these events is typically providing recycling dumpsters, servicing the dumpsters, and in some cases, providing the recycling bins or containers which collect the materials from event participants. This service is expected to continue. The District may implement a new initiative as well to support this program:

- a. Contamination and littering. In order to reduce the contamination of collected recyclables and the littering associated with special event recycling, the District may develop specific signage and educational messaging requirements/suggestions for large venue events that include recycling. In addition, for targeted events, the District may work with the event organizer in advance of the event to engage the food and beverage vendors to try and reduce non-recyclable container and packaging products from being offered at the event. This process may take several years of effort to incorporate into the targeted events.

Waste Assessments/Waste Audits

The waste assessment/waste audit program which is a collaboration between the District and the University of Toledo will continue. The District provides funding for this program and the University conducts the on-site waste assessments, waste audits, and energy audits. This program has been successful in identifying steps that businesses, organizations, and institutions can take to reduce waste and recycle more material. The following three initiatives are intended to enhance this program may also be implemented:

- a. Expanding awareness (2018 and ongoing). The District will take steps to expand the awareness of this program by increasing the promotion of the program through advertisements, handouts or other targeted promotional activities throughout the planning period.
- b. Difficult-to-manage waste streams (2018 and ongoing). The District and the University will identify particular waste streams generated within Lucas County which are especially challenging in terms of proper/sustainable management. These waste streams will be targeted or emphasized when selecting companies and organizations for waste assessment and waste audits.

- c. Expand resources. More resources may be considered for this program in the future such as District technical assistance.

Other Commercial/Institutional Programs

Although the District does not have a specific program providing contracting assistance for the commercial/institutional sector, the District has the expertise for this activity (i.e., the Community Curbside Solid Waste and Recyclables Technical Assistance program). If a business or institution requested help in this area, the District could assist with the request.

The District's Toledo-Lucas County Sustainability Commission is expected to continue, and provides a source of recognition for entities within Lucas County as well as offering a forum for discussion of sustainability issues. The Sustainable Business Recognition program was created through the Toledo-Lucas County Sustainability Commission to recognize businesses that are taking steps to reduce their negative impact on the environment, while also being a socially responsible business. The program aims to help those that are interested in incorporating more sustainable practices into their business. An option for those interested in the program is to have a free sustainability assessment conducted. (See above discussion under "Waste Assessments/Waste Audits.")

The District intends to develop an education and awareness effort to achieve greater recycling within the commercial and institutional sector. The District may implement the following:

- a. Develop targeted advertisements and outreach efforts;
- b. Develop commercial/institutional-specific handouts; and
- c. Develop a dedicated portion of the District's web site for commercial, industrial and institutional entities for recycling options in the region.

3. *Industrial Sector Reduction and Recycling Programs*

The waste assessment/waste audit program discussed above under the commercial/institutional sector provides those same services to the industrial sector and will continue to do so. The initiatives discussed above for this program are also applicable to the industrial sector within Lucas County.

4. *Restricted/Difficult to Manage Wastes*

Yard Waste

The District anticipates that all of the yard waste programs which operated during the reference year will continue. The existing yard waste programs

which will continue include the leaf collection programs operated by municipalities, yard waste collection programs, and technical assistance provided by the District upon request to communities desiring to design, establish, and/or improve a yard waste management program.

Scrap Tires

The District will continue to offer education and outreach to the public through its website and other means with regard to the proper management of scrap tires. Three additional initiatives may be implemented by the District as well. The first involves encouraging residents to return scrap tires to the dealer where they purchased their new tires through the development a handout explaining the consequences of mismanagement of scrap tires. The handout may be placed at tire dealers throughout the District and/or located on the District's web site. The second initiative may involve working with the Lucas County Health Department to assist in identifying illegal tire haulers. The final initiative will be to add scrap tires to the new permanent HHW facility as an acceptable item with a user fee as described above under "Household Hazardous Waste."

Household Hazardous Waste

The District will continue to provide education and information to the public regarding the proper disposal of household hazardous wastes. In addition, a new initiative may be implemented by the District to establish a permanent collection site for these wastes. The District conducted a study on permanent HHW programs in 2016, determining that it was feasible to use the District's Matzinger Road facility to operate a permanent HHW facility. The facility is scheduled to begin operation in 2017 under the following operational objectives:

- Participants will be required to schedule an appointment to drop off materials;
- Specific days and times will be available throughout the year for appointments;
- Scrap tires will be included as an acceptable item for drop-off, with a required user fee.

Electronic Equipment

The District will continue to publicize the collection of electronic equipment through various events held each year within Lucas County. The District will also continue to summarize the local and regional private sector and non-profit organizations that accept electronic waste and TVs for recycling.

Lead-Acid Batteries

The District provides information on its website and in paper flyers which list numerous businesses that accept lead-acid batteries. The District intends to continue the existing programs to promote proper management of lead-acid batteries.

Appliances

The District maintains a list of companies which accept small appliances on their website and in the “Recycler’s List.” (The “Recycler’s List” is discussed below under ***Outreach, Education, Awareness, and Technical Assistance***.) Companies available for Freon removal services are also provided. The District intends to continue the existing programs to promote proper management of appliances.

Pharmaceuticals

The District and Policy Committee identified this area as in need of programming or initiatives for this Plan Update. During the planning process, the District has identified numerous local options for residents and businesses to properly and safely disposed of unused pharmaceuticals which will be included in the District’s recycling and solid waste resource guide.

5. *Other Material Specific Programs*

Food Waste

The District does not currently have any programs which target food waste. However, the District will consider two new programs related to food waste management:

- a. Co-digestion of food waste. This project may involve digesting food waste with bio solids at the Lucas County Water Resource Recovery Facility. The facility is planned to be designed to include anaerobic digester modifications which will be able to process food waste. This facility may create the opportunity to accept food waste from specific commercial entities.
- b. Food waste collection. The District will consider conducting a feasibility study to evaluate cost effective options for collecting food waste, either directly or indirectly through the private sector. The food waste would be delivered to the Lucas County Water Resource Recovery Facility or a Class II compost facility.

6. Funding/Grants

Incentive-Based Grants

The District has offered a community grant program since 2005 to provide an incentive for greater recycling in the District. Although the District has not awarded a grant under this program since 2010, additional financial resources may be devoted towards this program during the planning period to encourage communities to develop new curbside recycling programs, upgrade existing curbside programs or create recycling programs for schools and other institutions. The existing grant program may be changed to a one-time grant for communities, schools and other institutions. Funding has been projected for 2019 to 2022.

7. Economic Incentives

Economic Incentive Based Trash Collection

Volume based or economic incentive based programs have a proven track record for increasing the amount of material recycled by each household. Currently, there are five economic incentive based non-subscription curbside collection programs in Lucas County. The District will consider implementing the following initiative associated with this program:

- a. Facilitate implementation of economic incentive programs. The District will encourage more communities to implement an economic incentive based program through its Community Curbside Solid Waste and Recyclables Technical Assistance Program which is discussed above in this chapter.

8. Market Development Programs

For many years, the District has helped local businesses obtain market development grants from Ohio EPA to improve recycling opportunities. In 2018, the District may expand the awareness of this program by actively promoting the grant opportunity to commercial and industrial businesses. The District may accomplish this by including a promotional handout with the annual survey that is mailed to commercial and industrial businesses each year for the District Annual Report.

9. Feasibility Studies

The District will consider conducting two feasibility studies during the planning period. The first study is projected to evaluate cost effective collection options for food waste from restaurants and bars with processing

at the Lucas County Water Resource Recovery Facility or a Class II compost facility in the region. This study may be initiated in 2021.

The second study is projected to identify possible solutions for the management of hard handle solid waste. This study may be initiated in 2019.

10. Facilities

Materials Recovery Facilities/Recycling Centers

The District plans to initiate the development of a facility for processing single-stream recyclables in 2019 or 2021. The plans include the continued exploration for the feasibility of the facility and the cost structure for its development. This evaluation process has been ongoing. Development of the facility may occur before 2019.

The facility may be a full-service single stream recycling facility, or include a recycling transfer station with the capability of processing recyclables. The implementation of this facility is contingent on the City of Toledo agreeing to deliver their single stream recyclables to the District for management and processing. If the City does not agree to deliver their recyclables to the District, the facility may be scaled down to a hybrid recycling transfer station operation or some other option.

11. Data Collection

The District collects data each year from entities located both within Lucas County and outside the county. Disposal data is reported to the District by solid waste facilities located in Ohio, and facilities in Michigan also report the amount of tons received and the type of waste. The District also receives data from Ohio EPA each year.

Each year the District also conducts a survey to obtain recycling data, composting data, and hauling information as a part of preparing the annual district report to be submitted to the Ohio EPA. The District will continue its existing data collection program which is described in detail Appendix H. In addition, two initiatives will be considered for implementation:

- a. Target new commercial and institutional entities to encourage the submittal of recycling data. This initiative may involve researching commercial and institutional business directories to determine if there are entities not being included by the current mail list provider for surveying purposes. This initiative may be implemented in 2018.
- b. Contact preset number of businesses. The District may establish a goal of contacting a set number of businesses each year. The

businesses will be contacted by phone or in-person, and the intent of these interactions will be to obtain more and better data regarding their recycling operations, or to determine why they are unable to submit data. This initiative may be implemented in 2018.

Both of the initiatives listed above may be delegated to the District's consultant who conducts the surveying each year for the completion of the Annual District Report.

12. Outreach, Education, Awareness, and Technical Assistance

The District will continue to offer a number of programs designed to provide education, technical assistance, and raise awareness of solid waste and recycling issues. New initiatives and programs will be developed as well.

District Website

The District has maintained a website since 1999, providing many different types of information to the public. The website will continue, and the District will develop three initiatives designed to improve the ease of using the site and enable evaluation of its use:

- a. Branding and presentation. The District will take steps to improve the branding and visual presentation of information on the website. This initiative may include, but is not limited to, the following:
 - ✓ Move the web site to a District operated URL
 - ✓ Develop a brand to identify with the residents, businesses and institutions within the District
 - ✓ Utilize the new branding in a redesign of the web site and for all electronic and paper documents/handouts
 - ✓ Add metrics analysis functions to web site redesign
 - ✓ Add smart phone app functionality with web site
 - ✓ Online survey functions
 - ✓ Other attributes as determined to be in the best interest of the District
 - ✓ Utilize the new branding for other educational and outreach activities
- b. User-friendly URL. Establishing a more user-friendly URL should make it much easier for residents and businesses to find the District's website.
- c. Developing user metrics. The District will select a number of metrics (such as visits to the website) which will be utilized to evaluate the use of the site. Analysis of the metrics should allow the District to make more informed improvements to the website.

Resource Guide

The District updates the “Recycler’s List” each year, which is a comprehensive compilation of all the locations accepting various types of recyclable and reusable materials within Lucas County. The “Recycler’s List” can be accessed by a variety of means. Electronically, the list is available on the District’s website and on Keep Toledo/Lucas County Beautiful, Inc.’s website. Printed copies may also be available through the District and Keep Toledo/Lucas County Beautiful, Inc.

Education Provider

During the reference year, the District continued its partnership with Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB) to perform education and outreach activities. KT/LCB’s mission is to establish greener communities through environmental education, litter prevention and voluntary partnerships.

KT/LCB employs a full-time Education Specialist that conducts classroom presentations for students of all ages and teachers in accordance with the State of Ohio’s educational standards. Classroom presentations are provided at no cost, and in 2014, the Education Specialist completed 38 presentations, reaching 1,155 students and 93 adults in Lucas County.

The Environmental Education Specialist and other staff from KT/LCB participate in local events such as the Toledo Zoo Party for the Planet and other events. KT/LCB typically maintains a booth that contains educational information and brochures for residents, such as the District’s Recycler’s List. Their staff is present at the events to engage residents, increase awareness, promote recycling/waste reduction opportunities and programs, and answer questions.

KT/LCB also maintains detailed information on its website about environmental field trips that can be scheduled with other local organizations or facilities. Field trip destinations include:

- Blue Creek Conservation Area
- City of Sylvania Composting Site
- EnviroSafe Services of Ohio
- Lourdes College Life Lab
- Maumee Bay State Park
- Metroparks of the Toledo Area
- Ottawa National Wildlife Refuge
- The Scrap Box – Where Discards Become Discoveries!
- Toledo Botanical Garden

- Toledo Zoo Educational Program
- University of Toledo Stranahan Arboretum and Eco Discovery
- A lending library for solid waste management topics is also maintained by KT/LCB. Materials can be borrowed at no cost for educators. The lending library has a variety of VHS tapes, DVDs, and books that are appropriate for a range of age groups, from preschool to adult learners.

Infrastructure Inventory

A copy of the District's approved Plan is posted on the website, which includes the infrastructure inventory as compiled during the Plan's reference year. In an effort to provide the most up-to-date information, the District may create a stand-alone document containing Lucas County's solid waste and recycling infrastructure inventory. The infrastructure inventory will consist of at least the following:

- Solid waste management and disposal infrastructure (landfill facilities, transfer facilities, scrap tire facilities, and incinerators/waste-to-energy facilities); and
- Waste reduction and recycling infrastructure (curbside recycling services, economic incentive based trash collection services, drop-off recycling locations, composting facilities, yard waste collection programs, recycling centers, material recovery facilities, and other facilities for processing recyclable materials or other special waste materials).

The inventory may be made available by the first year of the planning period (2018), and an electronic version will be posted on the District's website. The infrastructure inventory will be updated as needed.

Outreach and Marketing Plan

The District evaluated the existing education and outreach programs in terms of effectiveness and in the context of the *State Plan's* minimum requirements for reaching the required target audiences. Table 5-5 provides a summary of the evaluation, and shows for instance, that the District website addresses all five target audiences.

The District will continue to offer all the existing education and outreach programs to residents of Lucas County. Initiatives designed to enhance or improve these programs are listed above in Table 5-2.

Table 5-5. Outreach and Marketing Plan: Existing Programs

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website	✓	✓	✓	✓	✓
Distributing Publications at Community Events	✓	✓			✓
Social Networking	✓				
Presentations	✓	✓		✓	✓
Outreach (Tours, KT/LCB Events)	✓	✓			
Lending Library		✓			
Community Curbside Solid Waste and Recyclables Technical Assistance					✓
Toledo-Lucas County Sustainability Commission	✓	✓	✓	✓	✓
Market Development Grant Technical Assistance			✓		
Waste Assessment Program		✓	✓	✓	
School Paper Recycling Program		✓			
Total Program per Group	6	8	4	4	5

Each of the existing programs in Table 5-5 is briefly discussed below, and new initiatives are described where applicable:

- District website. The website contains information about participating in programs, so the focus of the website is not just on increasing awareness; educational materials are geared to changing behavior. This program, along with new initiatives, is described in greater detail above.
- Distributing Publications at Community Events. In addition to the website, the District also uses printed flyers and lists to disseminate information about recycling and waste reduction opportunities. Currently, materials are available at community events.

- Social Networking. The District regularly updates its Facebook page with posts promoting special District and community recycling drives, sustainability events, and other environmentally-related content.
- Presentations. This is discussed above under “Education Provider.”
- Outreach. This is discussed above under “Education Provider.”
- Lending Library. This is discussed above under “Education Provider.”
- Community Curbside Solid Waste and Recyclables Technical Assistance. This program combines the District Management of Collection Contracts program and the Municipal Assistance program. The District continues to provide technical assistance to communities for collection contracts with private hauling companies. For several years, the District has managed the contract between the City of Toledo and a private hauler for curbside collection of trash and recyclables.
- Toledo-Lucas County Sustainability Commission. The District has continued to serve on the Toledo-Lucas County Sustainability Commission and will consider funding specific Commission initiatives, as directed by the Lucas County Board of County Commissioners. (This program is also discussed above under “Other Commercial/Institutional Programs.”)
- Market Development Grant Technical Assistance. This program is discussed above under “Market Development Programs.”
- Waste Assessment Program. This program is discussed above under “Commercial/Institutional Sector Reduction and Recycling Programs.”

Outreach Priority

In 2016, the District and the City of Toledo conducted an audit of recycling collected from the District’s drop-off program and the City of Toledo’s curbside recycling program. The results indicated that contamination is a serious issue. Results from the audit indicated contamination rates were as high as 24% for the District’s drop-off program and 35% for the City of Toledo’s curbside recycling program. The District has identified reducing contamination in District drop-offs and curbside recycling programs (specifically, the City of Toledo curbside recycling program) as an outreach priority.

As a response, the District recently updated the graphics it uses to promote proper recycling. These graphics have been used on social media as well as the District’s website and educational flyers. Using a consistent and frequently repeated message is a best practice for educating residents. The District also began standardizing the wording on education materials.

The District is using a multi-faceted approach to reach the target audience by providing messages about proper recycling on social media, on the website, and in printed publications. The City of Toledo is reinforcing these efforts by using “OOPS tags” to notify residents when the incorrect materials are placed in curbside recycling containers.

The District plans to conduct a follow-up waste audit in 2017 to measure contamination rates and the impact of providing additional education to residents about proper recycling.

Results from the follow-up waste audit will be used to develop an on-going education campaign to ensure that contamination-reduction efforts remain effective.

C. Waste Reduction and Recycling Rates

1. Residential/Commercial Recycling in the District

In the 5-year period leading up to and including the reference year, residential/commercial sector recycling decreased on average 2,091 tons, or 1%. Recycling decreased annually from 2010 to 2013, then increased in 2014. The following table presents the historic residential/commercial recovery from 2010-2014, which includes recycling, composting, and waste reduced by incineration:

Table 5-6. Historical Residential/Commercial Sector Waste Reduction Analysis

Year	Residential/ Commercial		
	Weight	Annual Percentage Change	Annual Tonnage Change
2010	190,038	-----	-----
2011	182,922	-4%	-7,116
2012	171,454	-6%	-11,468
2013	167,459	-2%	-3,996
2014	181,672	8%	14,213
2010-2014 Average			
Average Annual Percentage Change			-1%
Average Tons Over 5 Year Period			178,709
Average Annual Tonnage Change			-2,091

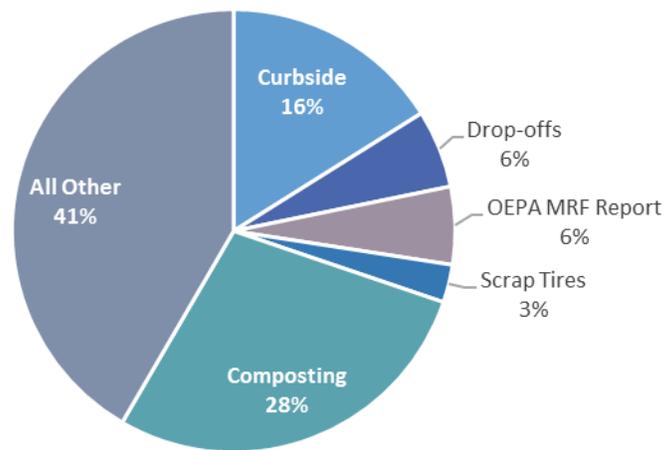
Waste reduction and recycling in the residential/commercial sector is expected to increase slightly during the first six years of the planning period, as demonstrated in the following table.

Table 5-7. Residential/Commercial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Residential/ Commercial Waste Reduction Rate
2018	185,240	30.28%
2019	185,291	30.33%
2020	185,343	30.38%
2021	185,396	30.44%
2022	185,448	30.49%
2023	185,501	30.54%

The program areas which are expected to provide the amounts of waste reduction and recycling shown in Table 5-7 are depicted in Figure 5-1. The largest amount of reduction and recycling is projected from the category entitled, "All Other." The largest component of this category is the data reported by scrap yards.

Figure 5-1. R/C Waste Reduction and Recycling in 2018 by Program Area



2. Industrial Recycling in the District

In the 5-year period leading up to and including the reference year, industrial sector recycling increased on average 12,540 tons, or 7.72%. The following table presents the historic industrial sector recovery from 2010-2014, which includes recycling, composting, and waste reduced by incineration:

Table 5-8. Historical Industrial Sector Waste Reduction Analysis

Year	Industrial Sector		
	Weight	Annual Percentage Change	Annual Tonnage Change
2010	173,891	-----	-----
2011	230,664	32.65%	56,773
2012	233,826	1.37%	3,162
2013	254,519	8.85%	20,692
2014	224,052	-11.97%	-30,467
2010-2014 Average			
Average Annual Percentage Change			7.72%
Average Tons Over 5 Year Period			223,390
Average Annual Tonnage Change			12,540

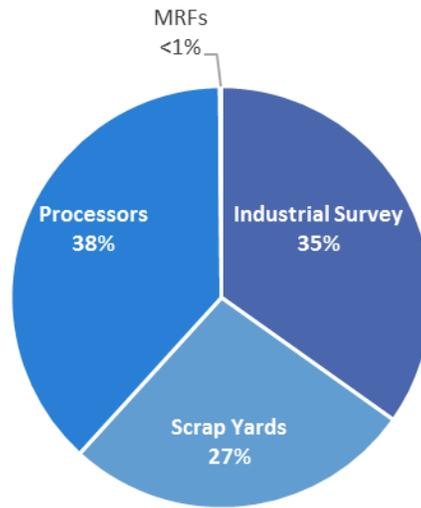
Table 5-9 shows the projected amount of waste reduction and recycling for the industrial sector during the first six years of the planning period. The District was able to project a flat quantity of tons recycled by the industrial sector because the industrial sector recycled more than the industrial sector *State Plan* goal of 66% during the reference year. The waste reduction and recycling rate is expected to be approximately 88 percent.

Table 5-9. Industrial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Industrial Waste Reduction and Recycling Rate
2018	238,535	87.63%
2019	238,535	87.69%
2020	238,535	87.76%
2021	238,535	87.82%
2022	238,535	87.89%
2023	238,535	87.89%

The percentage of the recycled materials from program area or source is shown for the first year of the planning period in Figure 5-2. Processors of recyclables and the industrial survey are the sources of the majority of industrial recycling within the District.

**Figure 5-2. Industrial Waste Reduction and Recycling by Source:
2018**



CHAPTER 6. BUDGET

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the SWMD will obtain money to pay for operating the SWMD programs and how the SWMD will spend that money. For revenue, the solid waste management plan identifies the sources of funding the SWMD will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the SWMD expects to receive from each source. For expenses, the solid waste management plan identifies the programs the SWMD intends to fund during the planning period and estimates how much the SWMD will spend on each program. The plan must also demonstrate that planned expenses will be made in accordance with ten allowable uses that are prescribed in ORC Section 3734.57(G).

Ultimately, the solid waste management plan must demonstrate that the SWMD will have adequate money to implement the approved solid waste management plan. The plan does this by providing annual projections for revenues, expenses and cash balances.

If projections show that the SWMD will not have enough money to pay for all planned expenses or if the SWMD has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the SWMD will balance its budget. This can be done by increasing revenues, decreasing expenses, or some combination of both.

This Chapter of the solid waste management plan provides an overview of the SWMD's budget. Detailed information about the budget and District budget policies are provided in Appendix O.

The District's budget projections are presented with two options. Option A includes all the planned District activities and the development of a full-service single stream material recovery facility. Option B includes all the planned District activities and the development of a hybrid MRF/recycling transfer station combination facility.

The two budgets are designed to be implemented independently or in phases from one budget to the next depending on if and when a recycling facility is developed.

A. Overview of the District's Budget (Option A)

During the 2014 reference year, the District's overall revenue was \$11.0 million. During the first five years of the planning period, revenue is projected to increase from \$12.8 million to \$17.4 million. Current revenue is generated through reimbursements, contract fees, rates and charges, generation fees, recycling revenue, grants, funding from the Health Department, and miscellaneous sources.

Projected expenditures were developed based on the programmatic needs identified in Appendix H, I, and L. During the first five years of the planning period, annual expenditures increase from \$12.4 million to \$17.6 million. Based on

projections, the District will have ample revenue to finance the implementation of the programs and initiatives described throughout this Plan Update. The District is projected to begin the planning period in 2018 with a carryover balance of \$6.4 million and end the planning period with a carryover balance of between \$2.0 and 2.6 million depending on either Budget A or B.

B. Revenue (Option A)

Overview of How Solid Waste Management Districts Earn Revenue

There are several mechanisms SWMDs can use to raise the revenue necessary to finance their solid waste management plans. Two of the most commonly used mechanisms are disposal fees and generation fees.

Before a SWMD can collect a generation or disposal fee it must first obtain approval from local communities through a ratification process. Ratification allows communities in the SWMD to vote on whether they support levying the proposed fee.

Disposal Fees (See Ohio Revised Code Section 3734.57(B))

Disposal fees are collected on each ton of solid waste that is disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste came from – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed at landfills in the SWMD. Out-of-state waste is solid waste generated in other states and disposed at landfills in the SWMD.

Ohio's law prescribes the following limits on disposal fees:

- The in-district fee must be at least \$1.00 and no more than \$2.00;
- The out-of-district fee must be at least \$2.00 and no more than \$4.00; and
- The out-of-state fee must be equal to the in-district fee.

Generation Fees (see Ohio Revised Code Section 3734.573)

Generation Fees are collected on each ton of solid waste that is generated within the levying SWMD and accepted at either a transfer facility or landfill located in Ohio. The fee is collected at the first facility that accepts the SWMD's waste. There are no minimum or maximum limits on the per ton amount for generation fees.

Rates and Charges (see Ohio Revised Code Section 343.08)

The board of directors can collect money for a SWMD through what are called rates and charges. The board can require anyone that receives solid waste services from the SWMD to pay for those services.

Contracts (see Ohio Revised Code Sections 343.02 and 343.03)

The board of directors can enter into contracts with owners/operators of solid waste facilities or transporters of solid waste to collect generation or disposal fees on behalf of a SWMD.

Other Sources of Revenue

There are a variety of other sources that SWMDs can use to earn revenue. Some of these sources include:

- Revenue from the sale of recyclable materials;
- User fees (such as fees charged to participate in scrap tire and appliance collections);
- County contributions (such as from the general revenue fund or revenues from publicly-operated solid waste facilities (i.e., landfills, transfer facilities));
- Interest earned on cash balances;
- Grants;
- Debt; and
- Bonds.

The following summarizes the actual funding sources for the District:

1. Generation Fees

The District receives \$2.20 per ton on all solid waste that is generated in the District.

2. Designation Fees

The District levies a contract disposal designation fee to all solid waste facilities, either in-state or out-of-state that are designated by the District to receive District solid waste. In 2010 and 2011, the fee was \$1.00 per ton for waste disposed at Ohio landfills and \$3.20 per ton for waste disposed at out-of-state landfills. In 2012, the fee increased to \$3.00 per ton for Ohio landfills and \$5.20 per ton for out-of-state landfills. The District may evaluate the amount of that fee, as part of its annual budgeting cycle, and may consider decreasing/increasing it, depending on the economic conditions facing the District throughout the planning period. Any changes to the designation fee would follow all required procedures of the Ohio

Revised Code for establishing and adjusting solid waste management district fees for openness, transparency, inclusiveness, and public input and approval. At this time, there are no plans to change the designation fee.

3. Rates and Charges

Residents with improved property parcels in Lucas County cities, villages, and townships began paying \$2.50 per half fixed fee (\$5 per year). The rate and charge is shown on property tax documents starting in 2014.

It is estimated that each household contributes 1 ton per year in fee eligible wastes to designated landfills. The current \$5.20 per ton disposal fee (\$2.20 generation fee + \$3.00 contract fee) is based on the amount of waste generated in Lucas County that goes into a landfill. Each \$1 per ton in the disposal fee generates the corresponding number of tons going to landfills (400,000 tons/year = \$400,000/year)

The rate and charge fee would be paid directly by all improved parcels resulting in a \$5.00 per year per improved parcel. This is a fixed fee per improved parcel. Each \$1 in rate and charge fee generates \$150,000 as estimated revenue from all improved parcels in Lucas County (\$5/parcel/year = \$750,000/year).

An annual re-evaluation of fees is intended to reduce the disposal fees based on the success of stabilizing revenue and providing cost effective programs/services. In future plan updates, it is intended to move from disposal fees to fixed fees by maximizing the return on investment with a material recovery facility located in Lucas County.

4. Other Sources of Revenue

Other sources of revenue include:

- **Reimbursements** – The District serves as a pass-through entity for the City of Toledo’s curbside collection services contract. The District makes payments on behalf of the City to the program contractor. The City of Toledo reimburses the District for costs incurred for performing this service.
- **Funding from Health Department** – The Toledo-Lucas County Health Department pays the District for disposal of construction and demolition waste.
- **Grants** – Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue

from future grants has been excluded from the projections in Table O-5A.

- **Recycling Revenue** – This revenue came from the sale of fiber related commodities from the District’s drop-off program. Revenue from this source ceases after 2021 or sooner because the District anticipates that the new MRF will be operating by the 4th quarter of 2021 or sooner.
- **Miscellaneous Revenue** – Miscellaneous revenue represents revenue resulting from untraditional and unforeseen sources. Due to the changing, unpredictable nature of this category, potential miscellaneous revenue has been excluded from the projections in Table O-5A.
- **Scrap Tire User Fee** – The District plans to begin accepting scrap tires for a fee of approximately \$2 per tire in 2017 at a permanent facility.
- **HHW User Fee** – The District plans to begin accepting HHW for a fee in 2017 at the planned permanent HHW facility located at the District’s current facility on Matzinger Road. The user fee is estimated to be approximately \$1 per pound for materials that are costly to manage.
- **MRF Tipping Fees** – The District anticipates that the new single stream MRF will be operating for the last quarter of 2021 or sooner. For budgetary purposes, the MRF tipping fee is estimated to be \$20.00 for each ton of single stream recyclable material delivered to the facility by the City of Toledo (estimated to be 20,000 tons) and \$25.00 for each ton delivered by others (estimated to be 5,000 tons). The District may adjust tip fees based on market conditions regarding the operation of the MRF. Agreements for receipt of recyclable tons are anticipated and negotiations may alter the terms of these tip fee estimates.
- **MRF Recycling Revenue** – A separate study developed for the MRF projected recycling revenue at roughly \$2.8 million for the first full operating year in 2022 or sooner. This figure was based on historical tonnage trends and average commodity pricing in the Midwest region. In 2021, MRF recycling revenue is 25% of the annual revenue projected in 2022 to reflect that the MRF will only operate during the last quarter of the year. Revenue is projected to increase 1% annually to reflect modest increases in tonnage.

Revenue from other sources excluding reimbursement revenue increases from \$8.9 million in 2014 to \$18.3 million in 2032. The large increase is the result of the operation of the material recovery facility.

5. Summary of Revenue

The following table presents the District’s total revenue by source for the 2014 reference year and the first 6 years of the plan (2018 to 2023).

Table 6-1a. Summary of Revenue

	Year	Generation Fees	Contract Fees	Other Revenue	Total Revenue
	2010	\$519,201	\$657,922	\$452,826	\$1,629,949
	2011	\$492,100	\$676,998	\$3,050,346	\$4,219,445
	2012	\$441,590	\$1,563,000	\$10,019,931	\$12,024,521
	2013	\$398,208	\$1,611,993	\$9,661,643	\$11,671,844
	2014	\$441,589	\$1,668,718	\$8,909,952	\$11,020,258
	2015	\$511,127	\$1,798,674	\$11,358,088	\$13,667,889
	2016	\$489,808	\$1,880,799	\$10,562,705	\$12,933,312
	2017	\$443,162	\$1,649,817	\$10,474,880	\$12,567,859
X First Year of Planning Period →	2018	\$442,937	\$1,648,980	\$10,714,102	\$12,806,019
	2019	\$442,711	\$1,648,137	\$10,959,302	\$13,050,150
	2020	\$442,483	\$1,647,289	\$11,210,628	\$13,300,400
	2021	\$442,257	\$1,646,449	\$12,261,985	\$14,350,691
	2022	\$442,030	\$1,645,604	\$14,967,278	\$17,054,913
	2023	\$442,030	\$1,645,604	\$15,265,920	\$17,353,554
	2024	\$442,030	\$1,645,604	\$15,571,392	\$17,659,026
	2025	\$442,030	\$1,645,604	\$15,884,077	\$17,971,711
	2026	\$442,030	\$1,645,604	\$16,204,151	\$18,291,785
	2027	\$442,030	\$1,645,604	\$16,531,793	\$18,619,427
	2028	\$442,030	\$1,645,604	\$16,867,190	\$18,954,824
	2029	\$442,030	\$1,645,604	\$17,210,530	\$19,298,164
	2030	\$442,030	\$1,645,604	\$17,562,008	\$19,649,642
2031	\$442,030	\$1,645,604	\$17,920,592	\$20,008,226	
2032	\$442,030	\$1,645,604	\$18,290,177	\$20,377,811	

Source(s) of information: Plan Tables O-6A

C. Expenses (Option A)

Overview of How Solid Waste Management Districts Spend Money

Ohio's law authorizes SWMDs to spend revenue on 10 specified purposes (often referred to as the 10 allowable uses). All the uses are directly related to managing solid waste or for dealing with the effects of hosting a solid waste facility. The 10 uses are as follows:

1. Preparing, monitoring, and reviewing implementation of a solid waste management plan.
2. Implementing the approved solid waste management plan.
3. Financial assistance to approved boards of health to enforce Ohio's solid waste laws and regulations.
4. Financial assistance to counties for the added costs of hosting a solid waste facility.
5. Sampling public or private wells on properties adjacent to a solid waste facility.
6. Inspecting solid wastes generated outside of Ohio and disposed within the SWMD.
7. Financial assistance to boards of health for enforcing open burning and open dumping laws, and to law enforcement agencies for enforcing anti-littering laws and ordinances.
8. Financial assistance to approved boards of health for operator certification training.
9. Financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.
10. Financial assistance to communities adjacent to and affected by a publicly-owned landfill when those communities are not located within the SWMD or do not host the landfill.

In most cases, most of a SWMD's budget is used to implement the approved solid waste management plan (allowable use 2). There are many types of expenses that a solid waste management district incurs to implement a solid waste management plan. Examples include:

- Salaries and benefits;
- Purchasing and operating equipment (such as collection vehicles and drop-off containers);
- Operating facilities (such as recycling centers, solid waste transfer facilities, and composting facilities);
- Offering collection programs (such as for yard waste, HHW and scrap tires);
- Providing outreach and education;
- Providing services (such as curbside recycling services); and
- Paying for community clean-up programs.

Table 6-2a presents a summary of expenses for the 2014 reference year and for the first 6 years of the planning period (2018 to 2023) broken into specific expense categories.

Table 6-2a. Summary of Expenses

Expense Category	Year						
	Reference	Planning Period					
	2014	2018	2019	2020	2021	2022	2023
Plan Preparation/Monitoring	\$13,971	\$28,628	\$28,757	\$28,888	\$44,022	\$77,157	\$29,294
Direct Admin.	\$752,057	\$993,048	\$1,002,979	\$1,013,009	\$1,023,139	\$1,033,370	\$1,043,704
Facility Operation	\$0	\$0	\$0	\$0	\$1,734,633	\$2,944,306	\$2,963,276
Recycling Collection	\$9,551,242	\$10,759,902	\$11,019,300	\$11,288,038	\$11,560,274	\$11,845,167	\$12,130,882
HHW and Special Collections	\$0	\$112,000	\$114,038	\$116,115	\$118,231	\$120,387	\$122,585
Education/Awareness	\$109,076	\$225,000	\$225,000	\$185,000	\$185,000	\$185,000	\$185,000
County Assistance	\$30,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
Waste Assessments, Audits, and Feasibility Studies	\$90,471	\$90,000	\$125,000	\$90,000	\$125,000	\$90,000	\$90,000
Loan Repayment	\$101,000	\$100,913	\$100,913	\$100,913	\$956,284	\$956,284	\$956,284
Other (Financial Incentive Program)	\$0	\$0	\$100,000	\$75,000	\$50,000	\$50,000	\$0
Total Expenses	\$10,647,818	\$12,389,491	\$12,795,986	\$12,976,963	\$15,876,582	\$17,381,672	\$17,601,025

Source(s) of information: Plan Table O-7A

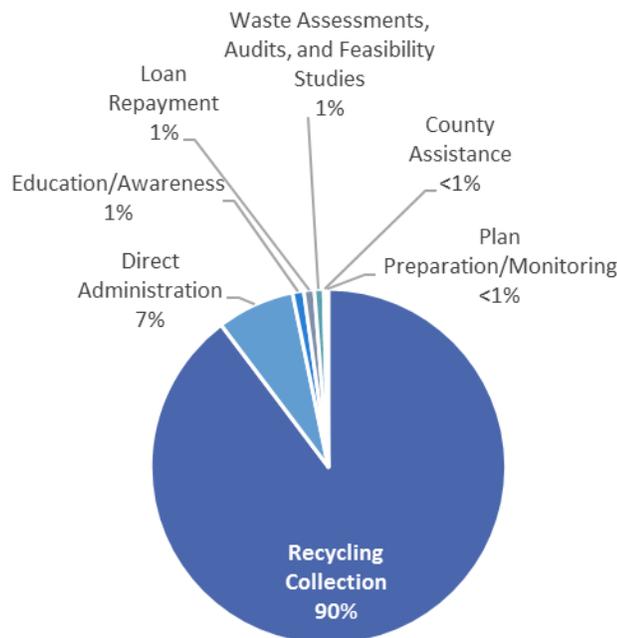
Expense categories in Table 6-2a include the following:

- **Plan Preparation/Monitoring** – Represents expenditures for working with consultants to develop solid waste plan updates, expenses for assistance with annual reporting and plan implementation monitoring, and expenses for legal assistance and an annual waste audit.
- **Direct Administration** – Budget includes expenditures for salaries, OPERS, FICA, unemployment compensation, workers' compensation, health insurance, and office overhead such as drug testing, postage, office rent, utilities, telecommunications, staff training, trade organization memberships, industry-specific subscriptions, and asset insurance.

- **Facility Operation** – Reflects expenditures to operate the full-service single-stream material recovery facility (MRF).
- **Recycling Collection** – Expenses reflect the cost of the City of Toledo curbside collection services contract and the drop-off recycling program.
- **HHW and Special Collections** – Includes expenses for the HHW program and the scrap-tire collection program.
- **Education/Awareness** – Reflects expenditures for a service agreement between the District and KT/LCB, advertisement and promotion costs, and funding to invest in rebranding.
- **County Assistance** – Includes a flat annual budget of \$80,000 for the Toledo-Lucas County Sustainability Commission.
- **Waste Assessments/Audits** – This line item reflects the budget for waste assessments and audits performed by the University of Toledo (UT) on behalf of the District. It also includes funding to complete two planned feasibility studies.
- **Loan Repayment** – This budget includes debt retirement for the District’s three loans listed in Table O-4A.
- **Other (Financial Incentive Program)** – Includes funds budgeted for an incentive program which aims to assist political subdivisions and other entities with upgrading/expanding residential recycling services.

In 2014, 90% of the District’s expenses were attributed to recycling collection.

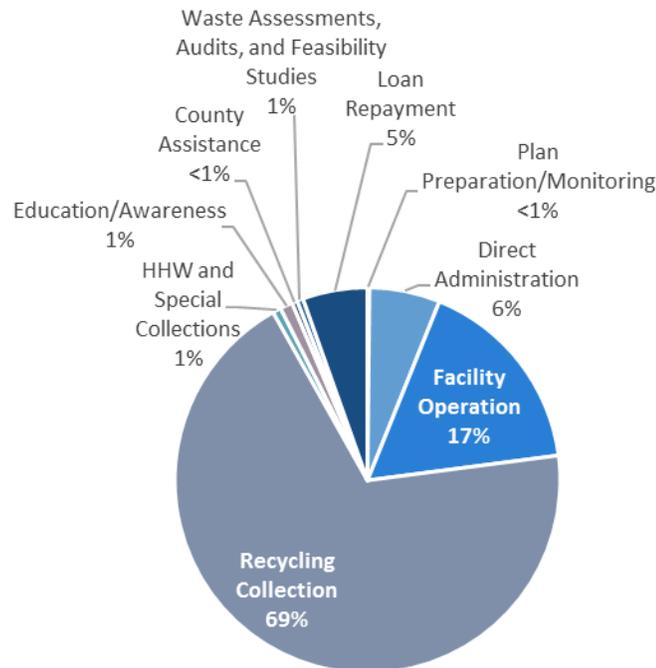
2014 Distribution of Expenses by Category



Throughout the first five years of the planning period, the distribution of expenses among categories varies slightly. In 2023, the sixth year of the planning period,

the top three expense categories include recycling collection at 69%, facility operation at 17% and District administration at 6%.

2023 Distribution of Expenses by Category



D. Budget Summary (Option A)

Table 6-3a presents a summary of the budget for the 2014 reference year and the first 6 years of the planning period (2018 to 2023). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue is projected to increase from \$11.0 million in 2014 to \$17.05 in 2023. Expenses increase from \$10.6 million in 2014 to \$17.4 million in 2023. The District’s ending balance during the first 6 years of the planning period ranges from \$5.5 million to \$7.3 million annually. Ample funding should be available to operate the programs outlined throughout this plan.

Table 6-3a. Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2014	\$11,020,258	\$10,647,818	\$372,441	\$3,086,601
Planning Period				
2018	\$12,567,859	\$12,504,243	\$63,616	\$6,353,569
2019	\$12,806,019	\$12,389,491	\$416,528	\$6,770,097

Year	Revenue	Expenses	Net Difference	Ending Balance
2020	\$13,050,150	\$12,795,986	\$254,163	\$7,024,260
2021	\$13,300,400	\$12,976,963	\$323,437	\$7,347,697
2022	\$14,350,691	\$15,876,582	(\$1,525,891)	\$5,821,806
2023	\$17,054,913	\$17,381,672	(\$326,759)	\$5,495,047

E. Overview of the District's Budget (Option B)

The District's alternative budget, Scenario B, is like Scenario A with the exception that instead of a full-service single stream MRF, the District would construct and operate a hybrid MRF/transfer station combination facility.

The hybrid MRF will be designed to include the latest technology for automated sorting and processing and will be designed to service the capacity needs for the District into the future. The facility is also anticipated to include options for educating residents and businesses on recyclable materials processing through tours and other educational activities. The main difference between this operation and the full-service single stream MRF will be that the hybrid MRF will be designed to extract certain and limited recyclables, remove contaminants and then ship all remaining recyclables to a third-party facility for further processing.

Under this scenario, the revenue from tipping fees and commodity sales only partially funds the operation of the MRF. The District will need to provide significant subsidy for the operation.

Under Scenario B, many revenue sources and expenditures are the same as Scenario A. Differences in Scenario B include the following:

- Hybrid MRF Recycling Revenue in Scenario B is significantly less than the full-service MRF Recycling Revenue because less recyclables are extracted for sale versus the full-service single stream MRF, then sent to a third-party facility for further processing. For example, hybrid MRF Recycling Revenue during the first full year of operation (2020 or sooner) is projected to be \$453,000 while MRF Recycling Revenue is projected to be \$2.8 million during its first full year of operations (2022).
- Loans and the related annual debt retirement amounts for the hybrid MRF are less than loans for the MRF. Construction of the MRF is projected to require an \$8.5 million loan for the building and \$2.5 million for equipment, while the hybrid MRF is projected to require a \$4.25 million loan for the building and \$1.8 million for equipment.
- Hybrid MRF operating costs are significantly less than MRF operating costs. For example, MRF operating costs are projected to be \$2.9 million during

the first full year of operations (2022) and hybrid MRF operating costs are projected to be \$875,708 during the first full year of operating (2020).

The following table presents the alternative budget (Scenario B) summary for the first six years of the planning period. Revenue increases annually from approximately \$12.8 million in 2018 to \$14.9 million in 2023. Expenses increase annually from \$12.4 million in 2018 to \$15.2 million in 2023. The carry-over balance decreases from \$6.8 million in 2018 to \$4.8 million in 2023. The District projects having adequate money to implement the approved solid waste management plan under either Scenario A or Scenario B.

Table 6-4. Alternative Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
2018	\$12,806,019	\$12,389,491	\$416,528	\$6,784,064
2019	\$13,272,150	\$14,505,286	(\$1,233,137)	\$5,550,927
2020	\$14,189,000	\$14,343,044	(\$154,044)	\$5,396,883
2021	\$14,447,809	\$14,659,462	(\$211,653)	\$5,185,230
2022	\$14,713,060	\$14,961,991	(\$248,931)	\$4,936,299
2023	\$14,985,992	\$15,169,245	(\$183,253)	\$4,753,046



APPENDIX A

**REFERENCE YEAR, PLANNING PERIOD,
GOAL STATEMENT, MATERIAL CHANGE
IN CIRCUMSTANCES, EXPLANATIONS
OF DIFFERENCES IN DATA**



APPENDIX A. Reference Year, Planning Period, Goal Statement, Material Change in Circumstances, Explanations of Differences in Data

A. Reference Year

The reference year for this solid waste management plan is 2014.

B. Planning Period (first and last years)

The planning period for this solid waste management plan is: 2018 to 2032

C. Goal Statement

The SWMD will achieve the following Goal(s): Goal 1

D. Material Change in Circumstances/Contingencies

The District will use the Plan as a tool to achieve the goals and standards established by the Ohio Environmental Protection Agency, thereby leaving the implementation flexible enough as to allow investigations, strategies, and program the latitude to be responsive to the changing conditions within the District and the solid waste management industry.

1. Criteria for Determining Material Change

In accordance with ORC Section 3734.56(D), the Plan must be revised if the District has determined that “circumstances have materially changed from those addressed in the approved initial or amended plan of the District.” The District will use the following process and criteria to determine when a material change in circumstance has occurred in the District, and as a result, requires a plan amendment.

The policy committee has defined the circumstances that could necessitate a plan update. These include:

- Facility Designations. The designated facilities identified in this Plan will remain in effect during the planning period unless added to or deleted through the procedures established by ORC Sections 343.013, 343.014, and/or 343.015 and as outlined in the District’s “Designation Procedure and Evaluation Document” (Appendix I). An addition to or deletion from the list of designated facilities will not be considered a material change in circumstances unless capacity availability, revenues for plan implementation or program availability is adversely affected.

- **Waste Generation.** The District will monitor the volume of Lucas County generated solid waste accepted at designated landfills and other solid waste facilities. In Section 5, the District has identified the amounts of waste generated by the residential, commercial and industrial sectors. The District relies on annual surveys and records from processing facilities to calculate waste reduction and actual disposal reports provided monthly for District fees and annual Ohio Environmental Protection Agency Ohio Facility Data Reports to calculate tonnages disposed. Therefore, the District will not consider changes in the estimated annual amount of waste generated in the District to be a material change. The District will provide updates through the Ohio Environmental Protection Agency's Annual District Report process and when the five-year update is required, make the appropriate adjustments.
- **Capacity Availability.** Current contracts with solid waste landfills, transfer, composting and recycling facilities ensure proper disposal, processing and management of solid waste generated within the District. Landfill capacity assurance has been guaranteed by contract through the year 2030. The District will consider ensuring capacity by renegotiating contracts when there is less than three years of capacity remaining under existing contracts. The District will use a Request for Proposal process to secure the "lowest and best" bid for solid waste management facilities. It is not anticipated that solid waste disposal capacity will change enough to result in a material change of circumstance.
- **Strategies for Waste Reduction and Recycling.** The District has proposed programs that maintain or slightly increase the amounts of recyclables retrieved from the waste stream. The District will, through the Board of County Commissioners and the Policy Committee, review its operations and plan implementation annually. Through this review, deviations from this Plan shall be reviewed to determine materiality contained in this document as part of the District's Annual District Report process. If, during the annual tabulation of data from the District, decreases in recycling and source reduction are identified in excess of 30% of the current (2008) rate, the District will follow appropriate reporting procedures to inform Ohio Environmental Protection Agency-Department of Solid and Infectious Waste Management office of a material change in circumstance.
- **Availability of Revenues for Plan Implementation.** In coordination with "Waste Generation", above, the District will monitor the budgetary solvency with respect to financing the facilities and programs identified in this plan. The District reserves the right to

adjust the amount of funds allocated to individual programs, without resulting in a material change in circumstance, in order to maintain budget solvency surpluses and deficits. The District, will, through the Board of County Commissioners and the Policy Committee, review its operations and plan implementation annually. Through this review, deviations from this Plan shall be reviewed to determine materiality (the threshold above which missing or incorrect information is considered to have an impact on the decision making of users) contained in this document as part of the District's Annual District Report process. If the revenues for the District should result in negative cash flow after line item budget adjustments, the District will notify the Ohio Environmental Protection Agency, Division of Materials and Waste Management that the District will perform a feasibility study as outlined in Section 6 subsection H. If adjustments cannot be made that correct the negative cash flow, the feasibility study shall provide corrective actions to be taken and the timeline for implementation. Only, if the District's fee schedule is changed or programs have to be adjusted and the District is no longer able to maintain compliance with the State of Ohio's Solid Waste Management Plan, shall there be a material change in circumstance.

2. *Monitoring Procedure*

The District shall review quarterly the progress of its Plan implementation. Data shall be kept so that end of the year statistics can be compiled for the District's Annual District Report. The District's review of its operations and plan implementation will include an assessment of any changes in the procedures and timetable for plan implementation, including the criteria listed above. Should any identified changes result in a determination that the minimum Access and Participation Standards are no longer being met, then the District will find that a material change in circumstances has occurred and take action as described above. The District has presented a list of programs proposed for implementation during the planning period. The District Director and Manager shall review each program for compliance with applicable State goals and objectives and resultant economic benefits. The District has proposed certain procedures and timetables for facilities and programs identified in the Plan. The availability of these programs is an integral part of the Plan's compliance with the Access and Participation Standards that were used by Ohio Environmental Protection Agency in approving the Plan.

3. *Timetable for Analyzing the Determination and Notification Process*

At the end of each calendar year, the District shall begin the preparation of its Annual District Report for submission to Ohio Environmental Protection

Agency. During preparation of the Annual District Report, the District will use the criteria listed in this Section to analyze whether a material change of circumstance has occurred. Prior to submitting the District's Annual District Report to Ohio Environmental Protection Agency, the District shall submit, at least two weeks prior to the required submission date to Ohio Environmental Protection Agency, the Annual District Report to the Board of County Commissioners for approval.

If, during the annual evaluation of programs and other relevant data reveals that a material change in circumstance has occurred, the District Director shall report these findings to the Policy Committee. Once a quorum of the Policy Committee is assembled, the Policy Committee shall pass a resolution declaring that a material change of circumstance has occurred. The resolution shall be submitted to the Board of County Commissioners within one week of its passage. The Board of County Commissioners shall direct the District Director to prepare and submit a report, which shall include recommendations and timetables for revising the Plan due to the material change in circumstance.

The District Director shall then submit the report and recommendations to the Board of County Commissioners for approval prior to sending it to and notifying the Ohio Environmental Protection Agency. The District will proceed with steps as required to complete a Plan Update that addresses all portions of the Plan that need to be modified as a result of the material change including all the required projections, demonstrations, and strategies to manage the District's waste for the succeeding planning period beyond the approval date of the Plan Update.

E. Explanations of Differences Between Data Previously Reported and Data Used in the Solid Waste Management Plan

1. *Differences in Quantities of Materials Recovered between the Annual District Report and the Solid Waste Management Plan*

None.

2. *Differences in Financial Information Reported in Quarterly Fee Reports and the Financial Data used in the Solid Waste Management Plan*

None.



APPENDIX B

**RECYCLING INFRASTRUCTURE
INVENTORY**



APPENDIX B. Recycling Infrastructure Inventory

This Appendix provides a review of the recycling infrastructure available in the 2014 reference year, which include curbside recycling programs, drop-off recycling sites, collection service providers, and compost facilities/activities.

A. Inventory of Residential Recycling Infrastructure Available in the Reference Year

ID #	Name of Curbside Service	Type		How Service is Provided	Pick-Up	Materials Collected ⁽¹⁾	Type of Collection	PAYT	Tons
		NS	S					✓	
NSC1	City of Maumee	✓		Contract between City and Republic	Weekly	Al, Sc, PI (#1-#7), N, Mg, Mp, Cc, Pb, G	Dual stream, manual	✓	1,249
NSC2	City of Oregon	✓		Contract between City and WM	Biweekly	PI (#1-#6), G, Al, Sc, N, Mg, Mp, Cc, Pb, As	Single stream, automated		DNR
NSC3	City of Sylvania	✓		Contract between City and Republic	Biweekly	Pb, Cc, As, Mg, Mp, N, PI (#1, 2, 4, 5, 7), Al, Sc, Gl	Single stream, automated		1,648
NSC4	City of Toledo	✓		Contract between City and Republic	Biweekly	Pb, Cc, As, Mg, Mp, N, PI (#1, 2, 4, 5, 7), Al, Sc, Gl	Single stream, automated		20,559
NSC5	City of Waterville	✓		Contract between City and Stevens Disposal	Biweekly	N, Pb, G, PI (#1-#7), Al, Sc, Cc	Single stream, manual	✓	375
NSC6	Holland Village	✓		Village Maint. Dept.	Weekly	Pb, Cc, As, Mg, Mp, N, G, PI (#1-#7), Al, Sc	Dual stream*, semi-automated	✓	116
NSC7	Ottawa Hills Village	✓		City service department	Weekly	G, Al, As, Sc, PI (#1-#7), N, Cc, Pb	Dual stream**, manual		130
NSC8	Waterville Twp.	✓		Contract between Twp. Stevens Disposal	Biweekly	G, Al, Sc, PI (#1-#7), N, Cc, Pb, Ph, Kc, PLB	Single stream, manual		47
SC1	Berkey Village		✓	DNR	DNR	DNR	DNR		DNR

ID #	Name of Curbside Service	Type		How Service is Provided	Pick-Up	Materials Collected ⁽¹⁾	Type of Collection	PAYT	Tons
		NS	S					✓	
SC2	Harbor View Village		✓	DNR	DNR	DNR	DNR		DNR
SC3	Harding Twp.		✓	DNR	DNR	DNR	DNR		DNR
SC4	Jerusalem Twp.		✓	DNR	DNR	DNR	DNR		DNR
SC5	Monclova Twp.		✓	Contract between Twp. and Republic	Biweekly	Cc, Pb, Mg, Mp, N, Sc, Al, Ph, G, Kc, PI (#1-#7)	Single stream, manual		524
SC6	Providence Twp.		✓	DNR	DNR	DNR	DNR		DNR
SC7	Spencer Twp.		✓	DNR	DNR	DNR	DNR		DNR
SC8	Springfield Twp.		✓	Private haulers	Varies	DNR	DNR		9
SC9	Swanton Twp.		✓	DNR	DNR	DNR	DNR		109
SC10	Sylvania Twp.		✓	DNR	DNR	DNR	DNR		345
SC11	Village of Whitehouse		✓	DNR	DNR	DNR	DNR		16
SC12	Washington Twp.		✓	DNR	DNR	DNR	DNR		DNR
Total									25,127

⁽¹⁾ Cc = cardboard, Pb = paperboard, Mg = magazines, Mp = mixed paper, N = newspaper, Sc = steel cans, Ph = phone books, PI = plastics, Al = aluminum, G = glass, As = aseptic containers; Kc = kitchen cookware/utensils/tins (metal), PLB = plastic bags

Notes: In 2014, Waterville Twp. had a contract with Waste Management until May. They began a contract with Stevens Disposal in June.

*The Village of Holland asks residents to place paper and cardboard in a separate container from commingled bottles and cans, but all materials are collected on the same truck. Residents are asked to set recycling at the curb in a dual stream fashion to reduce contamination. Collection crews reported that diapers placed in the recycling is one of the main recycling contamination issues.

**Ottawa Hills tonnage reflects only cardboard and newspaper; the rest of the materials were delivered to the District and the totals were included in the drop-off program's tonnage.

Tonnage reported in Table B-1 reflects the most accurate information available, which was reported by cities, villages, townships, and haulers. Tonnage reported for the Village of Waterville (46.93 tons) reflects tonnage collected by Stevens

Disposal. Waste Management did not provide tonnage collected from January to May of 2014.

In 2014, the following Pay-As-You-Throw (PAYT) programs operated in Lucas County:

- **Village of Holland.** The Village will only collect blue trash bags from residents on the refuse route. Each residence is limited to three bags of refuse per week. Blue bags can be obtained at the Village offices at 1245 Clarion Avenue, Monday through Friday, from 8:00 a.m. to 4:30 p.m. Any additional trash that must be disposed must be marked with a green sticker. The stickers are available at the Village offices for \$1.00 each. The volume of recyclables each resident may put out each week is not limited; additional bins are available at Village offices at no cost.
- **City of Maumee.** Residents were limited to one 95-gallon cart for waste per week. Additional items must have a “bag tag” for additional service. Bag tags could be purchased at The Andersons and Rite Aid within the City of Maumee for \$3.50; one bulk item tag could be purchased for \$15.00 or three bulk item tags could be purchased for \$30.00.
- **City of Waterville.** Residents were limited to three bags or containers of waste per week. Each bag or container was required to weigh 50 pounds or less. Households with excess waste were required to purchase tags for each additional bag or container of waste for \$1.00 at the Municipal Office located at 25 N. Second Street from 8:00 a.m. to 4:30 p.m., Monday through Friday.

The following table summarizes the number of curbside recycling programs and the tons recycled by the programs in 2014:

Table B-1b. Total Number of Curbside Programs and Total Quantity

County	Total # of Non-Subscription Curbside Programs	Total # of Subscription Curbside Programs	Total Tons from all Curbside Programs
Lucas	8	12	25,127

At least 25,127 tons of materials were recycled by 8 non-subscription curbside recycling programs and 12 subscription curbside recycling programs in 2014. Tonnage for many subscription curbside recycling programs was not available.

Table B-2. Inventory of Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
FTU1	605 Fassett St. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	9,655
FTU2	Andover Apartments 2555 Eastgate Rd. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU3	Arrowhead Fire Station 450 W Dussel Dr. Maumee, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU4	City of Waterville 25 N. Second St. Waterville, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU5	Kroger 8730 Waterville Swanton Rd. Waterville, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU6	Hoffman Rd. Landfill 3962 Hoffman Rd. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU7	Jewish Community Center/YMCA 2440 South Ave. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU8	Kroger 4633 Suder Ave. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU9	7556 King Rd. Sylvania, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU10	Montclova Twp. 4335 Albon Rd. Monclova, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU11	Pearson Metropark 4600 Starr Rd. Oregon, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU12	Ottawa Hills Village & Sylvania Twp. 2125 Richards Ottawa Hills, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	
FTU13	Springfield Twp. 1414 Spring Meadows Holland, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD	
		Urban		Rural		O						
		FT	PT	FT	PT							
FTU14	Springfield Twp. Fire Station #2 1534 S. Crissey Holland, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes	Included in tonnage listed for FTU1--FTU13.	
FTU15	Springfield Twp. Fire Station #3 7145 S. Garden Maumee, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTU16	Springfield Twp. Hall 7616 Angola Rd. Holland, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTU17	The Andersons 530 Illinois Maumee, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc, RB accepted in store	Yes		
FTU18	Toledo Kroger 5109 Glendale Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTU19	Toledo Kroger 4533 Monroe St. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTU20	Toledo Kroger 4925 Jackman Rd. Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTU21	Wildwood Metropark 5100 W. Central Toledo, OH	✓					Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTR1	Harbor View Village 4421 Bayshore Oregon, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		Included in Full-Time Urban Drop-Off Totals.
FTR2	Jerusalem Twp. 9501 Navarre Rd. Oregon, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTR3	Providence Fire Dept. Neapolis Rd. Swanton, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTR4	Providence Twp. 13344 Perry Rd. Grand Rapids, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTR5	Richfield Twp. 3951 Washburn Berkey, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		
FTR6	Secor Metro Park 10000 W. Central Berkey, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 Pl, Ac, Sc	Yes		

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
FTR7	Spencer Twp. 630 N. Meilke Rd Holland, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 PI, Ac, Sc	Yes	Included in Full-Time Urban Drop-Off Totals.
FTR8	Swanton Twp. P. Conway Dr. Swanton, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 PI, Ac, Sc	Yes	
FTR9	Whitehouse Village 6625 Providence Whitehouse, OH			✓			Lucas County SWMD	24/7	Mp, Cc, Pb, G, #1-#2 PI, Ac, Sc	Yes	
ODO1	AccuShred 1114 W. Central Toledo, OH					✓	Private business	Business hours	Al, B, Mg, N, Pb, Mp, PI (#1-#2), EW	No	DNR
ODO2	AIM 5656 Opportunity Dr. #11 Toledo, OH					✓	Private business	Business hours	Mp, Pb, EW	No	DNR
ODO3	All Shred 3940 Technology Maumee, OH					✓	Private business	8:30AM - 3:30PM	Mp, Pb, Al, PI (#1-#2), EW	No	DNR
ODO4	Gateway Products Recycling Inc. 926 Dearborn Toledo, OH					✓	Private business	Business hours	Al, Al foil, Mp, Mg, NFM, Pb, PI (#1-#2)	No	DNR
ODO5	Lott Industries 3350 Hill Ave. Toledo, OH					✓	Private business	Business hours	B, Cc, Pb, Mp, Ph, N, Mg, Oth	No	DNR
ODO6	Love Property Mmgmt. 5941 Acres Rd. Sylvania, OH					✓	Private business	Business hours	Al, Al foil, WG, Sc, NFM, FM	No	DNR
ODO7	Metal Mgmt. of Ohio (Sims Metal Mgmt. as of 2015) 2535 Hill Ave. Toledo, OH					✓	Private business	8AM-4PM M-F, 8AM-12PM Sat.	Al, WG, Al foil, Sc, NFM, FM	No	DNR
ODO8	OmniSource 1320 Lagrange St. Toledo, OH					✓	Private business	8AM-4:30PM M-F, 8AM-12PM Sat.	Al, Al foil, WG, Sc, NFM, FM	No	DNR
ODO9	OmniSource 2453 Hill Ave. Toledo, OH					✓	Private business	8AM-4:30PM M-F, 8AM-12PM Sat.	Al, Al foil, WG, Sc, NFM, FM	No	DNR

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
ODO10	OmniSource 5000 N. Detroit Toledo, OH					✓	Private business	8AM-4:30PM M-F, 8AM-12PM Sat.	Al, Al foil, WG, Sc, NFM, FM	No	
ODO11	R&M Recycling 4103 LaGrange Toledo, OH					✓	Private business	Business hours	Al, WG, Sc, NFM, FM	No	DNR
ODO12	Recycle Waste Svc 3793 Silica Rd. Sylvania, OH					✓	Private business	Business hours	Al, WG, Sc, AB	No	DNR
ODO13	State Paper & Metal 1118 W. Central Toledo, OH					✓	Private business	Business hours	Al, Al foil, WG, Sc, NFM, FM, B, Mg, Mp, Pb, NFM, FM	No	DNR
ODO14	Zenobia Shrine 8048 Broadstone Perrysburg, OH					✓	Non-profit org.	Varies	Pb, N	No	DNR
ODO15	ReCellOne 2620 Centennial Toledo, OH					✓	Private business	Business hours; free shipping for 10+ cell phones	EW, CP	No	DNR
ODO16	Virtual PC 3550 Executive Parkway Toledo, OH					✓	Private business	Business hours	EW	No	DNR
ODO17	Goodwill Stores Multiple locations					✓	Non-profit org.	9AM-8PM M-Sat. 12PM-5PM Sun.	EW, Tx, B, furniture, small appliances (working)	No	DNR
ODO18	Reboot Computers 1627 Navarre Ave. Toledo, OH					✓	Private business	Business hours	EW	No	DNR
ODO19	Computer Discount 1705 W. Laskey Toledo, OH					✓	Private business	Business hours	EW	No	DNR
ODO20	Niche Precious Metal Recovery 414 Burbank Toledo, OH					✓	Private business	11AM-3PM Sat.	EW	No	DNR

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
ODO21	Recycle I.T. USA 137 S. River Rd. Waterville OH					✓	Private business	Business hours	EW	No	DNR
ODO22	Best Buy Multiple locations					✓	Private business	Business hours	IC, CP, EW	No	DNR
ODO23	Office Max Multiple locations					✓	Private business	Business hours	IC	No	DNR
ODO24	Batteries Plus Multiple locations					✓	Private business	Business hours	IC, Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries,	No	DNR
ODO25	Home Depot Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries, CFLs	No	DNR
ODO26	K-Mart Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries	No	DNR
ODO27	Lowe's Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries, CFLs, PLB	No	DNR
ODO28	Office Depot Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries	No	DNR
ODO29	Radio Shack Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries	No	DNR
ODO30	Verizon Wireless Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries	No	DNR
ODO31	Battery Wholesale Multiple locations 419-478-5704					✓	Private business	Business hours	All batteries	No	DNR
ODO32	Menards Multiple locations					✓	Private business	Business hours	CFLs, fluorescent tubes	No	DNR
ODO33	Area Office on Aging 2155 Arlington Toledo, OH					✓	Public agency	Business hours	CP	No	DNR

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
ODO34	Toledo Fire Departments Multiple locations					✓	Public agency	Business hours	CP	No	DNR
ODO35	Toledo Senior Centers Multiple locations					✓	Public agency	Business hours	CP	No	DNR
ODO36	Toledo Wireless 6819 W. Central Toledo, OH					✓	Private business	Business hours	CP	No	DNR
ODO37	Sprint 5577 Monroe St. Toledo, OH					✓	Private business	Business hours	CP	No	DNR
ODO38	Kroger Multiple locations					✓	Private business	Business hours	CP, PLB	No	DNR
ODO39	Auto Zone Multiple locations					✓	Private business	Business hours	LAB, UO	No	DNR
ODO40	Murray's Discount Auto Stores Multiple locations					✓	Private business	Business hours	UO	No	DNR
ODO41	Pennzoil Multiple locations					✓	Private business	Business hours	UO	No	DNR
ODO42	Toledo-Lucas County Public Libraries Participating branches 419-354-9297					✓	Public agency	Business hours	B (hard bound only; no spiral binding or binders)	No	DNR
ODO43	Sylvania Tire and Wheel 6505 Monroe St. Sylvania, OH 419-885-3501					✓	Private business	Business hours	Bicycles	No	DNR
ODO44	Toledo Bikes 1114 Washington Toledo, OH 419-386-6090					✓	Private business	Business hours	Bicycles	No	DNR
ODO45	The Sight Center 1002 Garden Lake Toledo, OH 419-720-3937					✓	Private business	Business hours	Eyeglasses	No	DNR
ODO46	Lenscrafters Multiple locations 419-473-1500					✓	Private business	Business hours	Eyeglasses	No	DNR
ODO47	Maumee Valley Growers Multiple locations 419-356-4847					✓	Private business	Business hours	Plastic greenhouse flats and pots	No	DNR

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
ODO48	Easter Seals 440 S. Reynolds. Toledo, OH 419-535-5750					✓	Non-profit org.	Business hours	Hearing aids, B, Tx, home goods, accessories	No	DNR
ODO49	Easter Seals Donation Center 5929 W. Sylvania Toledo, OH 1.800.708.2716					✓	Non-profit org.	Business hours	Hearing aids, B, Tx, home goods, accessories	No	DNR
ODO50	Wrap 'N Ship 3137 W. Central 419-531-8968					✓	Private business	Business hours	Packing peanuts and bubble wrap	No	DNR
ODO51	The UPS Store 427 W. Dussell Dr. Maumee, OH 419-891-9000					✓	Private business	Business hours	Packing peanuts and bubble wrap	No	DNR
ODO52	The UPS Store 5800 Monroe St. Sylvania, OH 419-885-3124					✓	Private business	Business hours	Packing peanuts and bubble wrap	No	DNR
ODO53	Giant Eagle Multiple locations					✓	Private business	Business hours	PLB	No	DNR
ODO54	Walmart Multiple locations					✓	Private business	Business hours	PLB	No	DNR
ODO55	Meijers Multiple locations					✓	Private business	Business hours	PLB	No	DNR
ODO56	Kohl's Multiple locations					✓	Private business	Business hours	PLB	No	DNR
ODO57	Salvation Army Multiple locations 419-241-8231					✓	Non-profit org.	Business hours	Tx, B, furniture, small appliances (working)	No	DNR
ODO58	Scrap4Art 1501 Adams St. Toledo, OH 419-720-2978					✓	Non-profit org.	Business hours	Unusual items	No	DNR
ODO59	Sears Multiple locations					✓	Private business	Business hours	Ni-Cd, NI-MH, Li-ON, small sealed lead (Pb) batteries	No	DNR
ODO60	Heritage Environmental Services 5451 Enterprise Toledo, OH 419-729-1321					✓	Private business	Business hours	HHW (fees apply)	No	DNR

ID#	Name of Drop-off Site	Type					How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Tons Collected from SWMD
		Urban		Rural		O					
		FT	PT	FT	PT						
ODO61	Environmental Recycling 527 E. Woodland Bowling Green, OH 419-354-6110					✓	Private business	Business hours	HHW (fees apply)	No	DNR
ODO62	Aluminum Cans for Burned Children Maumee, Toledo, and Sylvania Fire Stations					✓	Non-profit org.	24/7	Al	No	DNR
ODO63	Ronald McDonald House 3883 Monroe St. Toledo, OH 419-471-4663					✓	Non-profit org.	24/7	Aluminum can pull tabs	No	DNR
ODO64	Habitat for Humanity ReStore 1310 Conant St. Maumee, OH 419-382-1658					✓	Non-profit org.	10AM-6PM Tues-Sat	Remodeling materials, tools, furniture, WG	No	DNR
ODO65	Play It Again Sports 5333 Monroe St. #16 Toledo, OH 419-843-4230					✓	Private business	10AM-8PM Mon-Fri, 10AM-6PM Sat, 11AM-5PM Sun	Athletic equipment	No	DNR
ODO66	Easter Seals Clothing Donation Drop-Offs (25+ locations)					✓	Non-profit org.	24/7	Tx	No	DNR
ODO67	Go Green Ohio Recycling Drives (Multiple events annually)					✓	Non-profit org.	Varies	Denim, shoes	No	DNR
Total											9,655

¹ AB = Auto-bodies, Ac = Aluminum Cans, Al = Aluminum, As = Aseptic Containers, B = Books, Cc = Corrugated Cardboard, CP = cellphones, EW = electronic waste, FM = ferrous metals, G = Glass Bottles, HHW = household hazardous waste, IC = ink cartridges, LAB = lead-acid batteries, Mg = Magazines, Mp = Mixed Paper, N = Newspaper, NFM = Non-ferrous metals, Oth = Other, Pb = Phone books, PI = Plastic Bottles and Jugs, PLB = Plastic bags, Sc = Steel Cans, Tx = textiles, UO = used oil, WG = white goods/appliances, FT = Full-Time, PT = Part-Time

Many companies listed in Table B-2 responded to the District’s annual recycling survey and provided tonnage for the reference year. This tonnage was not included in Table B-2 because the tonnage reported by each company was for all company operations and programs and not specific to the drop-off recycling site.

The following table summarizes the number of drop-offs and the total tons recycled:

Table B-2b. Total Number of Drop-offs by Type and Total Quantity Collected

County	Total # of FT, Urban	Total # of PT, Urban	Total # of FT, Rural	Total # of PT, Rural	Total # of "Other"	Tons of Materials Collected
Lucas	21	0	9	0	67	9,655

FT = Full-Time, PT = Part-Time

Approximately 9,655 tons of materials were collected from 30 full-time urban and rural drop-offs. An unknown quantity of additional tonnage was collected from 67 other drop-offs.

There were no mixed municipal solid waste material recovery facilities located in the District (see Table B-3).

Table B-3. Mixed Municipal Solid Waste Material Recovery Facility

Name of Facility	Location	Types of Materials Recovered ⁽¹⁾	Tons of Materials Recovered	Waste Processed	Bypass Waste	Total Waste	Recovery Rate in 2014
None						0	0

The following table presents an inventory of the recycling and trash collection service providers in 2014:

B-4. Inventory of Recycling and Trash Collection Service Providers in the Reference Year

Name of Provider	County Served	Trash Collection Service				Recycling Collection Service		
		PAYT	RES	COM	IND	RES	COM	IND
A.R.S. Refuse Service	Lucas	✓	✓	✓	✓	✓	✓	✓
ABC Roll Off Services	Lucas			✓	✓			
Action Disposal	Lucas		✓	✓	✓	✓	✓	✓
Certified Document Destruction	Lucas						✓	
Gateway	Lucas						✓	✓
Great Lakes Waste Services	Lucas						✓	✓
Hauling Anything, Inc. (HAI Dumpsters)	Lucas			✓	✓			

Name of Provider	County Served	Trash Collection Service				Recycling Collection Service		
		PAYT	RES	COM	IND	RES	COM	IND
Joe's Hauling & Dumpster Service	Lucas			✓	✓		✓	✓
Metal Management of Ohio	Lucas							✓
N&R&G	Lucas							✓
Republic Services	Lucas		✓	✓	✓	✓	✓	✓
State Paper and Metal	Lucas						✓	✓
Stevens Disposal	Lucas	✓	✓			✓		
Suburban Sanitation	Lucas		✓					
Toledo Handyman	Lucas			✓	✓			
Village of Holland	Lucas	✓	✓					
Village of Ottawa Hills Refuse, Recycling, & Streets Dept.	Lucas		✓			✓		
Village of Whitehouse Dept. of Public Service	Lucas		✓					
Waste Management	Lucas		✓	✓	✓	✓	✓	✓

PAYT = Pay-As-You-Throw, RES = Residential, COM = Commercial, IND = Industrial

The list of haulers was obtained through surveys. The following were excluded from Table B-4:

- Private construction, plumbing, and other companies that haul their own waste but do not provide collection services to residents, businesses, or industries.
- Public sector entities that delivered waste to disposal facilities from community clean-ups, but that did not provide regular collection services.
- Haulers that specialize in C&DD removal.

Other haulers that service residential customers via dumpster/roll-off rental were categorized as commercial if they did not also provide bin/bag collection.

Table B-5. Inventory of Composting/Yard Waste Management Activities Available in the Reference Year

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
Compost Facilities						
YW1	Lammon Brothers	CF-IV	✓	7520 County Road 5-2 Swanton, OH	0	384

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
YW2	Blue Creek Composting	CF-III	✓	7700 Schadel Rd. Maumee, OH	0	0
YW3	Clean Wood Recycling, Inc.	CF-IV	✓	6505 W. Bancroft St. Toledo, OH	0	25,281
YW4	Oregon City Compost	CF-IV		444 Otter Creek Rd. Oregon, OH	0	1,239
YW5	Schamberger Road Facility	CF-IV		2001 Schwamberger Rd. Sylvania, OH	0	44
YW6	Floralandscape	CF-IV		130 Elmdale Rd. Toledo, OH	0	82
YW7	Allgreen, Inc.	CF-IV		9940 Old Airport Hwy. Toledo, OH	0	766
YW8	City of Toledo	CF-IV		221 Elmdale Toledo, OH	0	8,130
YW9	Roland Richardson-Fangboner Farms	CF-IV		1179 S. Crissey Holland, OH	0	0
YW10	The Toledo Zoo	CF-IV		749 Spencer St. Toledo, OH	0	133
YW11	Bauer Lawn Maintenance, Inc.	CF-IV	✓	10839 Sager Rd. Maumee, OH	0	7,298
YW12	Hill Avenue Facility	CF-IV		3228 Hill Ave. Toledo, OH	0	0
YW13	Toledo Topsoil & Mulch	CF-IV	✓	5315 Stickney Ave. Toledo, OH	0	2,769
YW14	Riverside Disposal Facility	CF-IV		303 Ohio St. Toledo, OH	0	17,385
YW15	Sylvania Compost & Recycling LLC	CF-IV		8061 Sylvania Ave. Sylvania, OH	0	978
YW16	Woodville Road Nursery	CF-III		5819 Woodville Rd. Northwood, OH (Wood County)	0	239
YW17	Envirocare Lawn & Landscape	CF-IV		24114 Lime City Rd. Perrysburg, OH (Wood County)	0	433
YW18	Hauler/Kroger/Walmart Food Waste Data	N/A		N/A	1,855	0
Total					1,855	65,159
<i>Yard Waste Collection Programs</i>						
YW19	City of Sylvania Division of Parks & Forestry			221 Elmdale Toledo, OH		2,369

ID#	Facility or Activity Name	Class	Open to Public	Location	Tons Received from the SWMD	
					Food Waste	Yard Waste
YW20	Village of Holland Leaf Collection			1245 Clarion Ave. Holland Ohio		300
YW21	City of Maumee Leaf Collection			210 Illinois Ave, Maumee, OH		1,896
YW22	City of Waterville Leaf Collection			25 N. Second St. Waterville, OH		2,518
YW23	Village of Whitehouse Leaf Collection			6925 Providence St. Whitehouse, OH		227
					Total	7,309
Mulching Operations						
	None					
					Total	0
Land Application						
	None					
					Total	0
Anaerobic Digestion						
	None					
					Total	0

Table B-5b. Total Number of Composting/Yard Waste Management Activities by Type and Total Quantity Managed

Number of Each Type of Facility/Program					Quantities (tons)		
Compost Facilities	Community Collection Programs	Mulching Operations	Land Applications	Anaerobic Digestion	Food Waste	Yard Waste	Total Tons of Materials
18	5	0	0	0	1,855	72,469	74,324
Quantity Adjustments							
Materials collected by Community Yard Waste Collection Programs (Tonnage was managed by Registered Compost Facilities and double-counted)					0	-7,309	
Adjusted Quantity Totals					1,855	65,159	67,015

There were 17 registered compost facilities in Ohio that managed food waste and yard waste generated in the District. Table B-5b identifies 18 compost facilities; the additional compost facility listed in this summary table reflects materials that were diverted by haulers, Walmart, and Kroger (YW18).

Adjustments were made to avoid double counting reported tonnage. A total of 67,015 tons of organics were diverted from landfills in 2014 through a combination of registered compost facilities, organics haulers, and community collection programs.



APPENDIX C

POPULATION DATA



APPENDIX C. Population Data

The population of Lucas County, as of July 1, 2014, was estimated to be 436,603. The community populations which need to be added or subtracted to the Lucas County total in order to obtain the total district population for the reference year are shown in Table C-1. Estimates are based on Ohio Department of Development (ODOD) Office of Strategic Research document, “2014 Population Estimates for Cities, Villages and Townships”, published in May 2015. As indicated in the table, the population for the Village of Swanton was subtracted from the total to determine the total District population of 436,468.

Table C-1. Population Adjustments and Total Reference Year Population

Community	Lucas
Before Adjustment	436,603
Additions	
None	0
Subtractions	
Swanton Village	135
After Adjustment	436,468

Source(s) of Information: Village of Swanton Population: Ohio Development Services Agency, “2014 Population Estimates by County, City, Village, and Township,” May 2015. <http://development.ohio.gov/files/research/P5027.pdf>

Lucas County Population: Ohio Development Services Agency, “2010 to 2040 Projected Population for Ohio Counties – Summary 2010 to 2040 Projected,” March 30, 2013. <http://www.development.ohio.gov/files/research/P6090.pdf>

Sample Calculations: 2014 Adjusted Lucas County SWMD population = 2014 Lucas County population – 2014 Swanton Village population (Lucas County portion)

436,333 residents = 436,468 residents – 135 residents

Assumptions: The projected population of Lucas County for 2014 was calculated using a straight-line average from the 2010 to 2040 Projected Population document rather than the 2014 Population Estimates document. Using the actual 2014 estimate would have shown as an increase in population between 2013 and 2014 in Table C-2 in an otherwise decreasing population from 2010 to 2032.

Table C-2. Population Projections

Year	Lucas	Total District Population
2014	436,468	436,468
2015	435,165	435,165
2016	434,195	434,195
2017	433,225	433,225
2018	432,255	432,255
2019	431,285	431,285
2020	430,315	430,315
2021	429,349	429,349
2022	428,383	428,383
2023	427,417	427,417
2024	426,451	426,451
2025	425,485	425,485
2026	424,512	424,512
2027	423,404	423,404
2028	422,296	422,296
2029	421,188	421,188
2030	419,945	419,945
2031	418,990	418,990
2032	417,900	417,900

Source(s) of Information: Ohio Development Services Agency, "2010 to 2040 Projected Population for Ohio Counties – Summary 2010 to 2040 Projected," March 30, 2013. <http://www.development.ohio.gov/files/research/P6090.pdf>

Sample Calculations: 2016 Adjusted Lucas County Population = 2015 Lucas County Population – Village of Swanton Population (Lucas County portion) + ((2020 Adjusted Lucas County Population – 2015 Adjusted Lucas County Population) ÷ 5)

434,195 residents = (435,300 residents - 135 residents) + ((430,315 residents - 435,165 residents) ÷ 5 years)

Assumptions: The population of the Village of Swanton (Lucas County portion) which is subtracted from the SWMD's population is assumed to remain constant at the reference year population of 135 residents.



APPENDIX D

DISPOSAL DATA



APPENDIX D. Disposal Data

A. Reference Year Waste Disposed

Most District waste that was direct-hauled for disposal in the reference was sent to the Hoffman Road Landfill in Lucas County and the Vienna Junction Landfill in Michigan. (See Table D-1a.) These two landfills received more than 78 percent of the total district waste disposed in 2014.

Table D-1a. Reference Year Waste Disposed – Publicly-Available Landfills (Direct Haul)

Facility Name	Location		Waste Received from SWMD (TPY)			
	County	State	Residential/ Commercial	Industrial	Excluded	Total
<i>In-district facilities</i>						
Hoffman Road Landfill	Lucas	OH	126,501	0	496	126,997
<i>Out-of-district facilities</i>						
Wood County Landfill	Wood	OH	2,216	0	4	2,220
Evergreen Recycling & Disposal	Wood	OH	53,511	14,131	16,113	83,754
Williams County Landfill	Williams	OH	0.5	0	0	0
American Landfill	Stark	OH	0	26	136	162
Sunny Farms Landfill	Seneca	OH	0	225	0	225
Port Clinton Landfill	Ottawa	OH	0	0	8	8
Hancock County Sanitary Landfill	Hancock	OH	114	0	2	116
Erie County Sanitary Landfill	Erie	OH	0	0	2	2
Defiance County Sanitary Landfill	Defiance	OH	0	0	5	5
<i>Out-of-state facilities</i>						
Twin Bridges Recycling & Disposal Facility	Hendricks	IN	0	7	0	7
Vienna Junction Landfill	Monroe	MI	193,392	0	0	193,392
Total Direct Haul Waste Disposed in Landfills			375,733	14,389	16,766	406,888

Source(s) of Information: Ohio Environmental Protection Agency, “2014 Annual District Review Forms for Lucas County.”

Indiana Department of Environmental Management, “2014 Complete Solid Waste Quarterly Report Database.”

There were no captive landfills located within the District or used to manage waste generated within the District during the reference year.

Table D-1b. Reference Year Waste Disposed – Captive Landfills

Facility Name	Location		Tons Received from SWMD		
	County	State	Industrial	Excluded	Total
<i>In-district facilities</i>					
None			0	0	0
Total Waste Disposed in Captive Landfills			0	0	0

Source(s) of Information: Ohio Environmental Protection Agency

Transfer facilities used by the District in the reference year are shown in Table D-2. The majority of Lucas County waste sent to transfer facilities was received at a facility located in Michigan.

Table D-2. Reference Year Waste Transferred

Facility Name	Location		Waste Received from the SWMD (TPY)				Destination
	County	State	Residential/ Commercial	Industrial	Excluded	Total	
<i>In-district facilities</i>							
None						0	
<i>Out-of-district facilities</i>							
Archbold Refuse Service Solid Waste Transfer Facility	Fulton	OH	398	0	0	398	Evergreen Recycling & Disposal
Fulton Co. Solid Waste Facility	Fulton	OH	0.1	0	2	3	Williams County Landfill
<i>Out-of-state facilities</i>							
Liquid Waste Removal Processing Facility	Johnson	IN	0	5	0	5	DNR
Medassure of Indiana Treatment Facility	Marion	IN	0.4	0	0	0.4	DNR
Merrell Brothers, Inc. Indy Disposal Solutions	Marion	IN	0	21	0	21	DNR
Stericycle Solid Waste Processing Facility	Marion	IN	7	0	0	7	DNR
Stevens Disposal Transfer Station	Monroe	MI	11,551		0	11,551	DNR
Tradebe Treatment & Recycling	Lake	IN	0	61	0	61	DNR
Total Transferred Waste			11,956	86	2	12,045	

DNR = did not report

Source(s) of Information: Ohio Environmental Protection Agency, “2014 Annual District Review Forms for Lucas County.”

Table D-3 shows the total waste disposed in the reference year for the District. Excluded waste has not been included in this table since it accounted for only 4% of the total waste disposed.

Table D-3. Reference Year Total Waste Disposed

Disposal Method	Residential/Commerical	Industrial	Total	% of Total Waste Disposed
Direct Hauled	375,733	14,389	390,123	97%
Transferred	11,956	86	12,043	3%
Total	387,690	14,476	402,165	100%
% of Total	96%	4%	100%	

Source(s) of Information: Ohio Environmental Protection Agency, “2014 Annual District Review Forms – Lucas County.”

B. Historical Waste Analysis

The amount of solid waste disposed from Lucas County since 2006 has decreased substantially; however, during the past five years the disposal amounts have remained relatively constant, with the exception of 2011 when total waste disposed increased by more than 7% from the previous year. The increase in waste disposed during 2011 was due to an additional 41,600 tons sent from the industrial sector. (See Table D-4.)

Table D-4. Historical Disposal Data

Year	Population	Residential/Commercial Solid Waste		Industrial Solid Waste	Total Waste
		Rate (ppd)	Tons	Tons	Tons
2006	445,281	6.16	500,962	81,633	582,595
2007	445,281	5.56	451,593	73,823	525,416
2008	441,910	7.71	621,937	36,482	658,420
2009	440,456	5.48	440,534	45,459	485,993
2010	441,815	4.83	389,406	19,753	409,159
2011	440,005	4.70	377,754	61,338	439,092
2012	437,998	4.83	386,465	16,309	402,774
2013	436,990	4.81	383,234	11,874	395,108
2014	436,468	4.87	387,690	14,476	402,165

Source(s) of Information: Ohio EPA Facility Data Reports; Lucas County Annual District Reports.

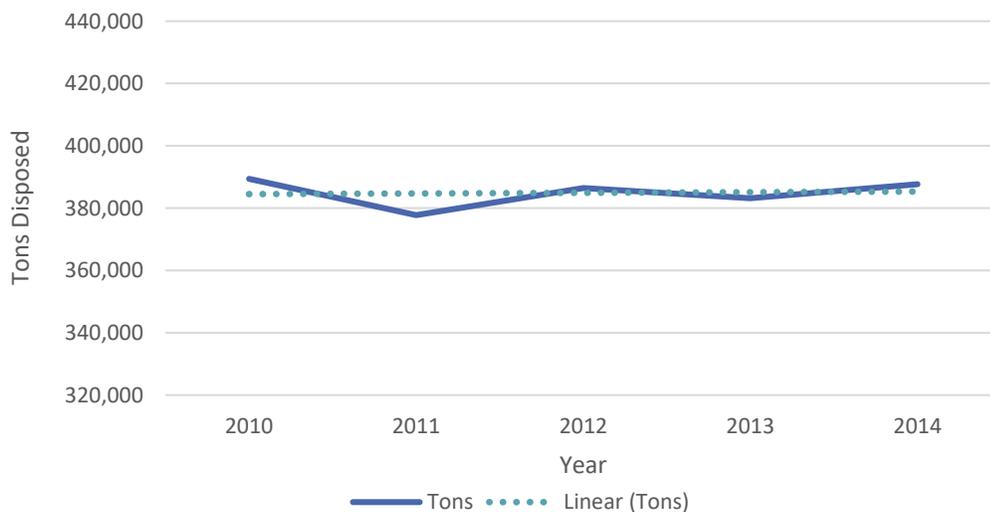
During the last five years, residential/commercial disposal has ranged from 378,000 tons in 2011 to 389,000 tons in 2010. The per capita disposal rate for residential/commercial waste has ranged from a low of 4.70 pounds per person per day (ppd) in 2011 to 4.87 ppd in 2014, and the average disposal rate for the five-year period was 4.81 ppd. This average disposal rate for the Lucas County SWMD is reasonably consistent with other urban SWMDs in Ohio, as demonstrated in the table below.

Table D-4a. Residential/Commercial Disposal Rate for Selected Urban SWMDs (2014)

SWMD	Residential/Commercial Disposal Rate (lbs/person/day)
Cuyahoga	4.76
Franklin	4.25
Hamilton	5.44
Lorain	3.90
Lucas	4.88
Montgomery	4.83
Summit	4.12

The residential/commercial tons disposed from 2010 through 2014 is shown in the figure below with a trend line included. The trend line suggests that disposal of residential/commercial waste from Lucas County is practically flat, which is also reflected in the disposal rate change during the same time period.

Figure D-1. 2010-2014 Residential/Commercial Sector Disposal Trends



The actual disposal of residential/commercial waste from the District is very different from the amounts projected for 2010 through 2014 in the currently-approved plan. The table below shows that the projected amounts in the current Plan are 33 to 37% higher than the actual disposal tonnages for the same time period. A number of factors and circumstances may have influenced actual disposal and contributed to this discrepancy, including greater success in recycling and/or reduction than expected. In fact, actual reduction and recycling totals for the R/C sector have ranged from 1.3 percent to 14.1 percent higher than projected totals for the five-year time period.

Probably the single most important factor leading to lower residential/commercial disposal involves auto-shredder residue (or ASR). When the current Plan was developed, large quantities of ASR were hauled from auto shredders in Lucas County to one or more landfills in Michigan for disposal. Within the last several years, Lucas County auto shredders have invested thousands of dollars in equipment designed to recover as many recyclables as possible from the ASR. The result of these investments is much lower amounts of ASR are now generated in Lucas County.¹

Table D-4b. 2010-2014 Actual vs. Current Plan Projections for Residential/Commercial Disposal

Residential/Commercial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2010	389,406	523,615	34.6%
2011	377,754	518,259	37.2%
2012	386,465	513,534	32.9%
2013	383,234	522,599	36.4%
2014	387,690	531,819	37.2%

Actual industrial disposal also has been much lower than the tonnages projected in the current Plan (see Table D-4c). Except for year 2011, actual industrial disposal has averaged approximately 62,000 tons less than projected amounts based upon the current plan.

¹Several attempts were made to obtain 2014 disposal tonnage from one of the landfills in Michigan that accepted ASR from Lucas County auto shredders in the past. Neither the landfill nor the Michigan's Department of Environmental Quality could provide the information requested.

Table D-4c. 2010-2014 Actual vs. Current Plan Projections for Industrial Sector Disposal

Industrial Sector Tons Disposed			
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)
2010	19,753	80,252	-306.3%
2011	61,338	78,944	-28.7%
2012	16,309	77,657	-376.2%
2013	11,874	76,392	-543.4%
2014	14,476	75,146	-419.1%

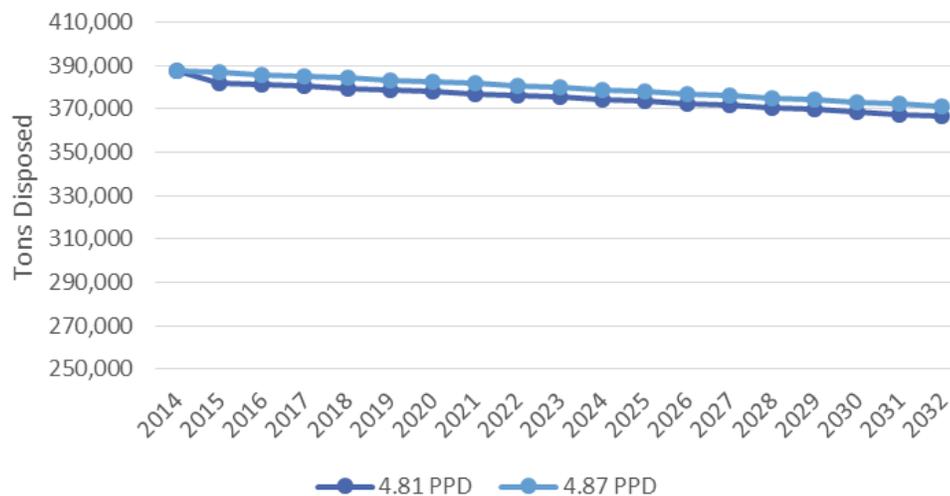
C. Disposal Projections

Several methodologies can be used to project disposal for the planning period. One of the most straight-forward and frequently-used methods for the R/C sector is multiplying the population by the estimated disposal rate in pounds per person per day (ppd). Figure D-2 shows the results of using this methodology, assuming two different disposal rates:

1. The average per capita disposal rate for 2010 through 2014 (4.81 ppd); and
2. The per capita disposal rate for 2014 (4.87 ppd).

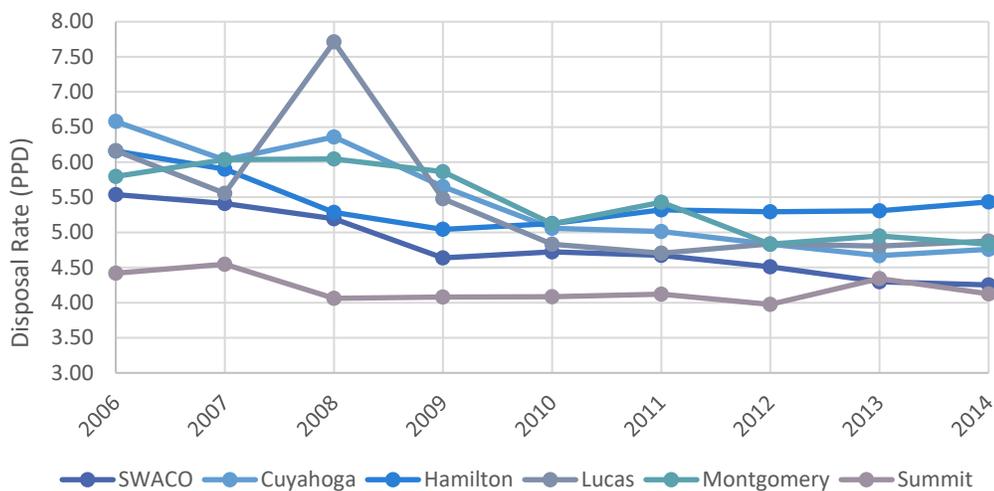
These projections result in a decrease of roughly 20,000 to 25,000 tons by the end of the planning period due to decreasing population.

Figure D-2. Residential/Commercial Disposal Projections: 4.81 and 4.87 PPD



A comparison of the disposal rate for the District with other urban SWMDs in Ohio is shown in Figure D-5. In general, this figure shows that most of these SWMDs have experienced a decline in the R/C disposal rate since 2006. However, the disposal has generally flattened during the most recent five years. The only exception to this pattern is the Summit-Akron SWMA, for which the disposal rate has remained relatively constant. The annual rate of change in the per capita disposal rate for these selected urban SWMDs ranges from -0.87% (Summit) to -3.97% (Cuyahoga), with the average annual rate of change for all six SWMDs equal to -2.30%.

Figure D-3. Residential/Commercial Sector Disposal Rate Trends for Urban Ohio SWMDs



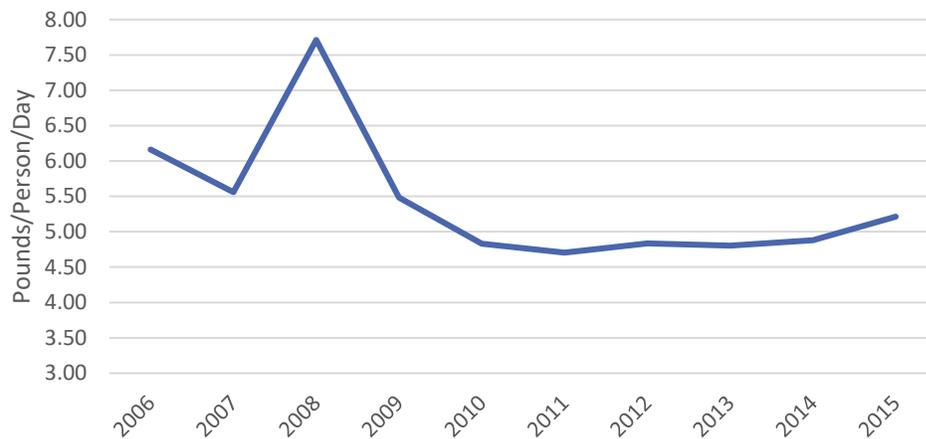
Since the District (as well as other urban Ohio SWMDs) seems to have experienced less variability in terms of R/C tons disposed during the most recent five years, using the annual average rate of change in the R/C per capita disposal rate as a method of making disposal projections is another possible alternative.

National trends for per capita residential/commercial sector waste generation and disposal have been steadily decreasing since the year 2000. Based on U.S. EPA data, the annual rate of change in the national residential/commercial sector generation rate since the year 2000 is -0.57%, while the corresponding rate of change for disposal since the year 1990 is -1.38%. The nationwide tonnage of R/C disposed since 2000 has decreased slightly.

Since the District initially analyzed disposal trends, data for year 2015 became available which demonstrates a substantial increase in disposal compared to the previous five years. Figure D-4 shows that the increase in the R/C disposal rate from 2014 to 2015 accelerated. The annual rate of change in the disposal rate from 2011 through 2014 was 1.2 percent/year, but increased to 2.6 percent/year

for 2011 through 2015. Most SWMDs in Ohio have also experienced increases in the disposal rate from 2012 through 2015.

Figure D-4. R/C Disposal Rate: 2006-2015

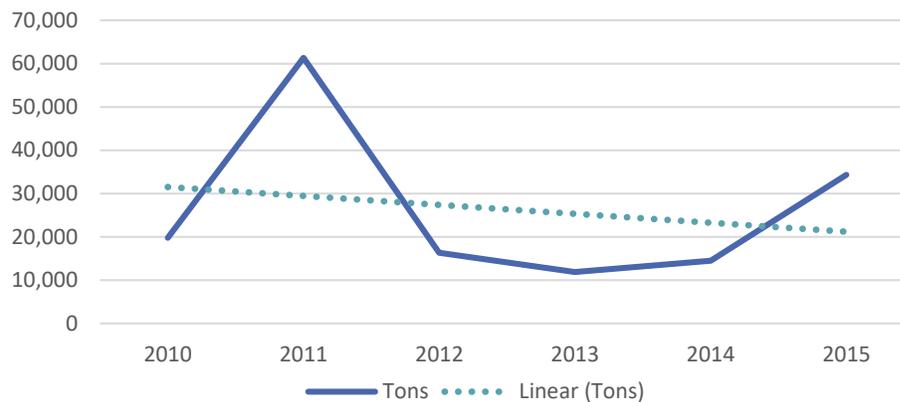


Industrial disposal has remained relatively consistent from 2010 through 2014, with the exception of the estimated tonnage for 2011. Using the average percentage change in industrial tonnage over this time period (32.96 percent) or the average annual rate of change in the disposal rate (-9.84 percent) to develop projections produces results which are very high and very low, respectively. For the final year of the planning period, these approaches result in the following tonnage estimates:

- Average percentage (32.96 percent) = 2,440,368 tons
- Average annual rate of change (-9.84 percent) = 2,242 tons

Another approach for projecting industrial disposal is using the rate of change in industrial employment. According to the Ohio Department of Job and Family Services (ODJFS) Ohio Jobs Network, the average annual rate of change in manufacturing employment for the Toledo Metropolitan Area for 2012-2022 is negative 0.61 percent. Applying this percentage to the 2014 reference year industrial tonnage, results in approximately 13,800 tons projected for the end of the planning period.

Similar to the R/C sector, the amount of industrial waste disposed increased substantially in 2015 compared to the previous three years. Also, the tonnage disposed in 2015 is more consistent with the disposal amounts reported for 2008 and 2009.

Figure D-5. Industrial Waste Disposed: 2010-2015

Based upon the above discussion, the District believes that the following approaches are appropriate for establishing disposal projections:

- For the residential/commercial sector, calculating the rate of change in the disposal rate based upon 2011 through 2015 data (2.6 percent/year), and applying this disposal rate to the 2015 tonnage for 2016 through 2018;
- For the industrial sector, calculating the rate of change in manufacturing employment based on 2012 through 2022 Ohio Jobs Network projections (-0.61 percent/year), and applying this rate to the 2015 tonnage for 2016 through 2022; and
- For the residential/commercial sector, holding the disposal rate constant at 5.41 PPD after the year 2019. With 2008 being somewhat of an outlier, 5.41 PPD represents the upper range of historical disposal rates for Lucas County from 2007 through 2015.
- For the industrial sector, hold the disposal tonnage constant after 2022. The employment projections used to make the disposal projections extend only through the year 2022. Therefore, it seems reasonable to hold industrial projections constant after the year 2022.
- Using a constant R/C disposal rate after 2018 and a constant industrial disposal tonnage after 2022 supports the notion that projections become more uncertain the farther into the future they are extended.

Table D-5 represents the results of using the approaches proposed above by the District for disposal projections. The estimates shown in the “Waste Transferred” column in Table D-5 are based upon the percentage of waste which was first sent to transfer facilities in 2014 prior to disposal in landfills, or approximately 3 percent. Compared to the 2014 transferred tonnage, a similar amount was sent to transfer facilities in 2013. In years prior to 2013, the transferred waste amount reported was much less.

Table D-5. Projections for Waste to be Disposed and Transferred

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Total Waste	Waste Transferred (as part of Total Disposal)	
	Tons	Tons	Tons	Tons	Percent
2014	387,690	14,476	402,165	12,043	2.99%
2015	414,108	34,306	448,415	13,428	
2016	418,233	34,097	452,330	13,545	
2017	422,397	33,889	456,286	13,663	
2018	426,601	33,682	460,283	13,783	
2019	425,643	33,477	459,120	13,748	
2020	424,686	33,273	457,959	13,713	
2021	423,733	33,070	456,802	13,679	
2022	422,779	32,868	455,647	13,644	
2023	421,826	32,868	454,694	13,616	
2024	420,872	32,868	453,740	13,587	
2025	419,919	32,868	452,787	13,558	
2026	418,959	32,868	451,827	13,530	
2027	417,865	32,868	450,733	13,497	
2028	416,772	32,868	449,640	13,464	
2029	415,678	32,868	448,546	13,431	
2030	414,452	32,868	447,320	13,395	
2031	413,509	32,868	446,377	13,367	
2032	412,433	32,868	445,301	13,334	



APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA



APPENDIX E. Residential/Commercial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the residential and commercial sectors in the 2014 reference year. In order to avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as generators, brokers, and scrap yards, will be demonstrated. A historic analysis of the residential/commercial sector’s recycling is included in this Appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2015 to the end of the planning period (2032) which are included at the end of this Appendix.

A. Reference Year Recovery Data

The North American Industry Classification System (NAICS) classifies business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. The NAICS industry codes define establishments based on the activities in which they are primarily engaged.

To obtain commercial sector recycling data, the District annually surveys establishments that are classified under the following NAICS codes:

52	{	•Finance and Insurance
53	{	•Real Estate Rental and Leasing
54	{	•Professional, Scientific, and Technical Services
55	{	•Management of Companies and Enterprises
56	{	•Administrative and Support Services •Waste Management and Remediation Services
61	{	•Educational Services
62	{	•Health Care and Social Assistance
71	{	•Arts, Entertainment, and Recreation
72	{	•Accommodation and Food Services
81	{	•Civic Organizations •Other Services (except Public Administration)
92	{	•Public Administration

Table E-1. Commercial Survey Results

NAICS	WG	EW	LAB	FW	GI	FM	NFM	OCC	MxP	PI	Tx	W	R	CoM	YW	Other: Used Tires	Other: Used Motor Oil	Total	Adj.	Adjusted Total		
42	0	0	29.04	7	0	0	7	103	48	14	0	257	0	0	0	0	6	5	493	79	414	
44	0	0	105.3	0	60	8,091	74	66	1	0	0	3	0	0	0	0	1	0	8,402	8,232	170	
45	7	26	0	0	0	0	0	78	726	2	0	0	0	0	0	0	0	0	839	9	830	
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	94	0	59	502	36	0	0	0	81	0	0	0	0	771	94	677	
51	0	0	0	0	0	0	0	7	91	4	0	0	0	0	0	0	0	0	102	0	102	
52	0	0	0	0	0	0	2	0	44	2	0	0	0	0	0	0	0	0	49	2	46	
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
54	1	8	0.038	1	1	2	5	74	452	4	1	1	0	0	5	0	0	0	556	78	478	
55	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	
56	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	0	5	
61	2	0	1.75	10	2	40	13	247	184	18	2	5	0	0	0	0	0	0	526	261	265	
62	0	2	5.17	0	0	46	0	474	292	18	6	0	0	1,022	0	0	0	0	1,864	393	1,471	
71	0	0	0.25	0	0	3	1	54	6	0	0	0	0	0	2	0	0	1	67	45	23	
72	0	0	1.8	0	0	0	1	172	4	10	0	8	11	0	0	0	0	1	208	170	38	
81	45	14	0	1	0	85,025	260	8	1	0	24	0	0	0	0	27	1,964	87,369	85,361	2,008	2,008	
92	54	0	0	0	10	22	12	264	518	24	3	1	0	0	42	0	0	0	949	116	833	
Total	108	50	143	18	74	93,330	386	1,605	2,876	131	36	276	11	1,102	49	34	1,971	102,200	-94,839	7,361		
Adj.	42	6	7	18	0	93,330	386	869	0	0	0	0	0	98	49	34	0	94,838		7,361		
Adj. Total	66	44	136	0	74	0	0	737	2,876	131	36	276	11	1,004	0	0	1,971	7,361				

WG = white goods, EW = electronic waste, LAB = lead-acid batteries, FW = food waste, GI = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = corrugated cardboard, MxP = mixed paper, PI = plastics, Tx = textiles, W = wooden pallets/packaging, R = rubber, CoM = commingled, YW = yard waste, Adj. = adjusted/adjustments

Source(s) of information: 2014 ADR Calculation Spreadsheets

Sample Calculations:

NAICS 42 Unadjusted Quantities (493 tons) - Adjustments (79 tons) = NAICS 42 Adjusted Quantities (414 tons)

Assumptions:

Adjustments reflect tonnage that was removed from generator surveys because the generator either did not identify the hauler, broker, or processor used to manage materials, or if the generator identified using a hauler, broker, or processor that was included in the District’s annual recycling calculations.

Table E-2. Data from Other Recycling Facilities

Source	WG	EW	FM	NFM	OCC	MxP	CoM	Other: DCB	Total	Adj.	Adj. Total
Buybacks											
None									0		0
Scrap Yards											
SY1	0	0	6,356	991	0	0	0	0	7,347	0	7,347
SY2	4,355	0	39,195	4,503	0	0	0	0	48,053	0	48,053
Total	4,355	0	45,551	5,494	0	0	0	0	55,400	0	55,400
Adj.	0	0	0	0	0	0	0	0	0		
Adj. Total	4,355	0	45,551	5,494	0	0	0	0	55,400		
Processors											
PR1	0	435	65	124	0	14	0	4	654	352	302
Total	0	435	65	124	0	14	0	4	654	352	302
Adj.	0	326	0	0	0	14	0	0	352		
Adj. Total	0	109	65	124	0	0	0	4	302		
MRF's											
MRF1	0	0	0	0	3,307	14	20,551	0	23,873	20,565	3,307
MRF2	0	0	0	0	0	4,233	0	0	4,233	0	4,233
Total	0	0	0	0	3,307	4,247	20,551	0	28,106	20,565	7,541
Adj.	0	0	0	0	0	14	20,551	0	20,565		
Adj. Total	0	0	0	0	3,307	4,233	0	0	7,541		
Grant Total	4,355	109	45,616	5,618	3,307	4,233	0	4	63,243		

WG = white goods/appliances, EW = electronic waste, LAB = lead-acid batteries, FM = ferrous metals, NFM = non-ferrous metals, OCC = corrugated cardboard, MxP = mixed paper, PI = plastics, CoM = commingled, DCB = dry-cell batteries, Adj. = adjusted or adjustments

Source(s) of Information: District surveys, 2014 Ohio EPA MRF Report

Sample Calculations (PR1):

Unadjusted E-Waste total – Adjustment = Adjusted E-Waste total

435 tons – 326 tons = 109 tons

Assumptions:

The following adjustments were made: PR1 reported that 25% of the volume recycled was accepted from the residential sector, so 75% of the total tonnage was removed. Tonnage reported by PR1 in other categories was removed as well because the business specialized in electronics recycling and other materials were likely managed by another broker/processor that could have been included in the District's total.

Paper and commingled tonnage reported by MRF1 was removed to avoid double counting. The material recovery facility that MRF1 uses to process residential material also reported. Cardboard collected by MRF1 was not removed because it was collected from commercial sources and not included in the material recovery facility's total.

The data used to complete Table E-2 was taken from ADR survey responses. Ohio EPA commented on the total appliance and ferrous metal tonnage submitted on the District's ADR for the residential/commercial sector. Ohio EPA noted that the categories were larger than what would be expected for the size of the District. The District's main scrap yard (SY2) has multiple facilities throughout Lucas County. This business accepts materials from Lucas County as well as from the surrounding region. This business indicated on their survey that the data reported reflects only 15% of the total tons accepted, which is the percent of materials received that comes from Lucas County. The District has communicated with the survey respondent and Ohio and feels comfortable with the data submitted and utilized for this Plan Update.

Table E-3. Data Reported to Ohio EPA

Source	PI	OCC	MxP	FM	W	CoM	Total	Adj.	Adj. Total
Aldi, Inc.	4	472	0	0	0	0	476	0	476
Big Lots	0	161	0	0	0	0	161	0	161
Buehler's	0	0	0	0	0	0	0	0	0
Dollar General	0	342	1	0	0	0	343	0	343
Home Depot	4	212	0	18	312	0	546	0	546
Jo-Ann Fabrics	0	19	0	0	0	20	40	0	40
Kohl's	22	223	0	0	0	0	246	0	246
Kroger	0	3,727	0	0	0	0	3,727	0	3,727
Lowe's	0	173	0	125	0	0	298	0	298
Meijer	0	2,312	0	0	0	0	2,312	0	2,312
Michaels Corp.	0	0	0	0	0	74	74	0	74
Target	20	111	7	3	0	2	144	0	144
Wal-mart	96	2,660	15	1	0	361	3,134	0	3,134
Total	147	10,412	23	146	312	458	11,499	0	11,499
Adj.	0	0	0	0	0	0	0		
Adj. Total	147	10,412	23	146	312	458	11,499		

Source(s) of Information: 2014 Ohio EPA MRF Report

Sample Calculations:

Aldi, Inc. Unadjusted total – Adjustments = Adjusted Total

476 tons – 0 tons = 476 tons

Assumptions:

No adjustments were made to data reported to Ohio EPA.

Table E-4. Other Recycling Programs/Other Sources of Data

Source	HHW	ST	FW	MxP	CoM	YW	Total	Adj.	Adj. Total
Ohio EPA Scrap Tire Data		4,562					4,562	0	4,562
HHW Collection	6						6	0	6
Curbside					25,127		25,127	0	25,127
Drop-offs				6,626	3,029		9,655	6,797	2,858
Ohio EPA Compost Report			1,855			65,159	67,015	0	67,015
Total	6	4,562	1,855	6,626	28,156	65,159	106,365	6,797	99,568
Adj.	0	0	0	6,626	171	0	6,797		
Adj. Total	6	4,562	1,855	0	27,985	65,159	99,568		

Source(s) of Information: 2014 Ohio EPA Scrap Tire Report, 2014 District program data, 2014 Ohio EPA Compost Report

Sample Calculations:

Unadjusted Drop-Off Total – Adjustments = Adjusted Total

9,655 tons – 6,797 tons = 2,858 tons

Assumptions:

A portion of the drop-off tonnage was removed because it was included in data reported by the material recovery facility that manages the District’s residential recycling.

Table E-5. Reference Year Residential/Commercial Material Recovered

Material	Quantity
Appliances/"White Goods"	4,421
Household Hazardous Waste	6
Used Motor Oil	1,971
Electronics	153
Scrap Tires	4,562

Material	Quantity
Dry Cell Batteries	4
Lead-Acid Batteries	136
Food	1,856
Glass	74
Ferrous Metals	45,762
Non-Ferrous Metals	5,618
Corrugated Cardboard	14,457
All Other Paper	7,133
Plastics	279
Textiles	36
Wood	588
Rubber	11
Commingled Recyclables	29,447
Yard Waste	65,159
Recycling Subtotals	181,672
Incineration	0
Grand Total	181,672

Source(s) of Information: 2014 ADR Data, District surveys, 2014 Ohio EPA MRF Report, 2014 Ohio EPA Scrap Tire Report, 2014 District program data, 2014 Ohio EPA Compost Report

Sample Calculations:

Recycling Subtotal (181,672) + Waste Reduced by Incineration (0) = Grand Total (181,672)

Table E-6a. Quantities Recovered by Program/Source

Source of R/C Recycling Data	Quantities
Commercial Survey	7,361
Scrap Yards	55,400
Processors	302
MRFs	7,541
Ohio EPA Commercial Retail Data	11,499
Ohio EPA Scrap Tire Data	4,562
HHW Collection	6
Curbside	25,127
Drop-Offs	2,858
Ohio EPA Compost Report	67,015
Total	181,672

Source(s) of Information: 2014 ADR Calculation Spreadsheets

Sample Calculations:

Commercial Survey+ Scrap Yards + Processors + MRFs + Ohio EPA Commercial Retail Data + Ohio EPA Scrap Tire Data + Household Hazardous Waste Collection + Curbside + Drop-offs + Ohio EPA Compost Report = 2014 Total

7,361 tons + 55,400 tons + 302 tons + 7,541 tons + 11,499 tons + 4,562 tons + 6 tons + 25,127 tons + 2,858 tons + 67,015 tons = 181,672 tons

Assumptions: Due to adjustments identified in Tables E-1 - E-4, the total presented in Table E-6 is assumed to be free of double-counting.

B. Historical Recovery

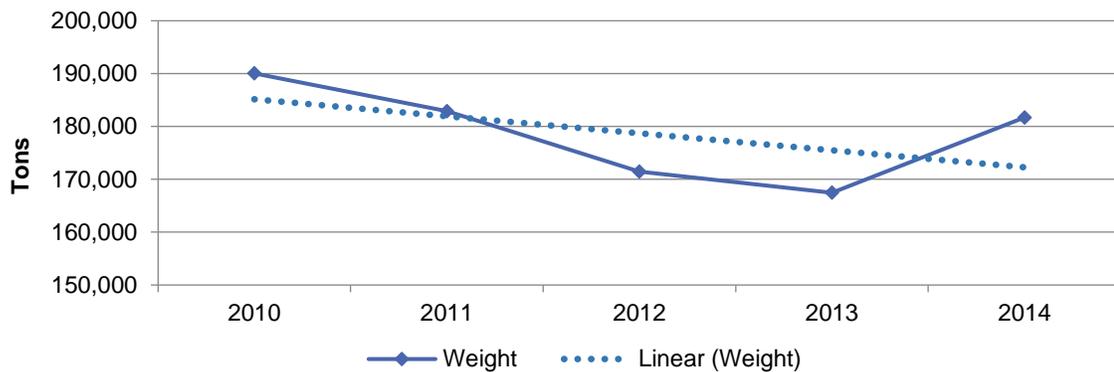
Total recovery includes recycling, composting, and waste reduction from incineration. The District’s historical recovery for the residential/commercial sector over a five-year period spanning from 2010 to 2014 is presented in the following table.

Table E-6b. Historical Recycling Analysis

Year	Residential/ Commercial		
	Weight	Annual Percentage Change	Annual Tonnage Change
2010	190,038	-----	-----
2011	182,922	-4%	-7,116
2012	171,454	-6%	-11,468
2013	167,459	-2%	-3,996
2014	181,672	8%	14,213
2010-2014 Average			
Average Annual Percentage Change			-1%
Average Tons Over 5 Year Period			178,709
Average Annual Tonnage Change			-2,091

An examination of the recovery patterns over the five-year period reveals that in 2010, a high of 190,038 tons recovered and in 2013, a low of 167,459 tons were recovered. Waste recovery decreased from 2010 to 2013, then increased 8% from 2013 to 2014. Over the five-year period, recovery decreased by an average of 2,091 tons, or 1%, annually. The District’s recovery of 181,672 tons in 2014 was approximately 1.7% greater than the 2010-2014 average of 178,709 tons. The following figure presents the District’s historical residential/commercial recovery totals from 2010 to 2014.

Historical Recycling Analysis: Residential/Commercial Sector



C. Residential/Commercial Recovery Projections

The District used historical program data to develop projections shown in Table E-7. The categories in this table are somewhat different than those envisioned in the Format 4.0 (and in previous tables in this Appendix) in order to associate tonnage projections with actual District programs. The remainder of this Appendix provides explanations for each the projections for category included in Table E-7.

Table E-7. Residential/Commercial Recovery Projections by Source

	Year	Curb-side	Drop-Off	HHW Events	OEPA MRF Report: Stores	OEPA Scrap Tire Report	OEPA Compost Report		E-Waste Events	KT/LCB GAC Drive	Other	Totals
							Yard Waste	Food Waste				
1 st Year of Planning Period → X	2014	25,127	9,655	6	11,499	4,562	65,159	1,855	24	3	63,780	181,672
	2015	28,965	10,911	19	8,526	4,592	51,368	1,428	6	3	79,048	184,865
	2016	28,965	11,397	12	8,486	3,942	37,416	1,226	87	1	98,479	190,010
	2017	28,965	10,314	40	8,486	4,366	51,314	1,226	39	2	80,436	185,188
	2018	28,965	10,366	40	8,486	4,366	51,314	1,226	39	2	80,436	185,240
	2019	28,965	10,418	40	8,486	4,366	51,314	1,226	39	2	80,436	185,291
	2020	28,965	10,470	40	8,486	4,366	51,314	1,226	39	2	80,436	185,343
	2021	28,965	10,522	40	8,486	4,366	51,314	1,226	39	2	80,436	185,396
	2022	28,965	10,575	40	8,486	4,366	51,314	1,226	39	2	80,436	185,448
	2023	28,965	10,628	40	8,486	4,366	51,314	1,226	39	2	80,436	185,501
	2024	28,965	10,681	40	8,486	4,366	51,314	1,226	39	2	80,436	185,554
	2025	28,965	10,734	40	8,486	4,366	51,314	1,226	39	2	80,436	185,608
	2026	28,965	10,788	40	8,486	4,366	51,314	1,226	39	2	80,436	185,661
2027	28,965	10,842	40	8,486	4,366	51,314	1,226	39	2	80,436	185,715	

Year	Curb-side	Drop-Off	HHW Events	OEPA MRF Report: Stores	OEPA Scrap Tire Report	OEPA Compost Report		E-Waste Events	KT/LCB GAC Drive	Other	Totals
						Yard Waste	Food Waste				
2028	28,965	10,896	40	8,486	4,366	51,314	1,226	39	2	80,436	185,770
2029	28,965	10,951	40	8,486	4,366	51,314	1,226	39	2	80,436	185,824
2030	28,965	11,005	40	8,486	4,366	51,314	1,226	39	2	80,436	185,879
2031	28,965	11,060	40	8,486	4,366	51,314	1,226	39	2	80,436	185,934
2032	28,965	11,116	40	8,486	4,366	51,314	1,226	39	2	80,436	185,989

Actual data was used for 2014-2016.

Curbside Recycling. The reported 2015 tonnage is held constant throughout the planning period. Although data from 2016 was available, curbside totals were not available as in previous years.

Drop-Off Recycling. Tonnage collected from the drop-off program 2012-2016 ranged from a low of 9,775 in 2012 to a high of 11,397 tons in 2016. The average of tons collected from 2012 to 2016 was used to project the total for 2017. Historical analysis of this program indicates that tonnage is generally increasing each year. Drop-off recycling tonnage increased 17% from 2012 to 2016. Tonnage is projected to increase 0.5% annually from 2017 to 2032. In March of 2015, the Toledo Schools Drop-Off program ended. Despite the closure of this program, drop-off tonnage collected from this program in 2015 and 2016 continued to surpass volumes collected in previous years. The District does not have more specific information about why tonnage increased even after the removal of the Toledo Schools Drop-Off program. The District selected a conservative growth rate of 0.5% annually for this program rather than projecting growth based on current rates. This was done for two reasons: 1. Tonnage patterns typically flatten after a program matures; and 2. The District will aggressively combat the contamination issue present in the drop-off program, which will likely slow the growth of tonnage collected as less residual waste is deposited in the containers.

HHW Events. In 2014, 6 tons of hazardous household waste (HHW) were collected from District events. In 2015, tonnage increased due to a paint collection event held by KT/LCB in conjunction with P4P using the company ePaint Recycling. The City of Toledo also began a program in each of the six council districts to collect HHW annually as a special event, but no program tonnage was reported for 2015. In 2016, the City of Toledo council districts and the KT/LCB and P4P Paint Recycling event collected 12.26 tons. A permanent year-round HHW collection program will begin operating in 2017 at the District's Matzinger Road facility. Based on historic volumes collected when the District previously operated a year-round HHW collection program, tonnage is projected to increase by 28 tons. Tonnage is held constant for the rest of the planning period.

Ohio EPA MRF Report: Stores. Data in this category reflects recycling reported in Ohio EPA's MRF Report by commercial entities. Tonnage decreased more than 35% from 2014 to 2016; the majority of the decrease was caused by one grocery store chain which reported a steep decrease in tonnage. The store did not report cardboard recycling in 2015 and 2016 but did report cardboard in 2014. It is unknown if the store was unable to obtain tonnage information or if their program stopped accepting cardboard after 2014. The number of stores included in Ohio EPA's MRF Report has decreased in the years leading up to 2016. For this reason, and the uncertainty of whether additional stores will be added to the report, tonnage is being held constant for the remainder of the planning period. The projections assume that stores currently reporting will continue to report.

Ohio EPA Scrap Tire Report. Scrap tire collection has increased annually from 2012 to 2015 then decreased 14% in 2016. Tonnage ranged from a low of 3,942 tons in 2016 to a high of 4,592 tons in 2015. There was no information available to explain the decrease in tires from 2015 to 2016. The flat annual projected tonnage from 2017 to 2032 was calculated from the average tonnage collected from 2014 to 2016.

Ohio EPA Compost Report: Yard Waste. Yard waste tonnage fluctuated from 2012 to 2016. Yard waste volumes can vary greatly each year based on weather-related events and patterns. Tonnage ranged from a low of 31,719 tons in 2013 to a high of 65,159 tons in 2014. The flat annual projected tonnage from 2017 to 2032 was calculated from the average tonnage collected from 2014 to 2016.

Ohio EPA Compost Report: Food Waste. Food waste tonnage generally increased from 2012 to 2014, then decreased in 2015 and 2016. Tonnage ranged from a low of 927 tons in 2012 to a high of 1,855 tons in 2014. The recent decreases may point to reduced food waste recycling programs or terminated food waste recycling programs at some commercial establishments such as grocery stores. The volume reported for 2016 was held constant until the end of the planning period.

E-Waste Events. In 2014, tonnage reflected volumes collected from the Toledo Zoo Party for the Planet, and a special collection held at Davis College. In 2015, there was not a special collection held at Davis College. The City of Toledo began a program in each of the six council districts to collect electronics annually, although no tonnage statistics were available. In 2016, entities that held special e-waste collection events did not report e-waste data, but a company that processes e-waste from residential events reported a significant increase in tonnage. This data captured tonnage collected from residential events, as well as tonnage collected from consumers at electronics retailers as part of a take-back program. To conservatively estimate the total electronics recycled moving forward, a flat annual projection was made based on the average tonnage collected from 2014 to 2016.

KT/LCB GAC Clothing Drive. Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB) organizes a clothing drive that is operated each year at the Great American Cleanup (GAC). Tonnage collected each year has been consistent. The tonnage for 2017 was calculated at the average tonnage collected from 2014 to 2016. Tonnage was held constant for the rest of the planning period.

Other. Tonnages attributed to the “Other” category are recovered by third party/non-program sources. More thorough data collection efforts in 2015 resulted in a 23% increase in this category for the residential/commercial sector. In 2016, other tonnage increased an additional 25%. The increase between 2015 and 2016 includes approximately 30,000 tons of brush, organics, and yard waste that was managed at non-registered compost facilities and organics that were managed at registered facilities but not included in the Ohio EPA Compost Report because materials were not considered yard waste (i.e. wood waste). The District will continue to work with entities that reported, as well as reach out to new businesses or those that have not previously reported, in order to maintain or improve data collected for annual reporting. Tonnage in the other category is not influenced by District programming and is voluntarily reported. Additionally, due to the other category including materials such as yard waste that can vary significantly from year to year based on weather-related events, the average tonnage from 2014-2016 was used to calculate a flat annual tonnage projection for 2017 to 2032.



APPENDIX F

**INDUSTRIAL SECTOR REFERENCE YEAR
RECYCLING**



APPENDIX F. Industrial Sector Reference Year Recycling

This Appendix presents the reduction and recycling data for the industrial sector in the 2014 reference year. In order to avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as generators, brokers, and scrap yards, will be demonstrated. A historic analysis of the industrial sector's recycling is included in this Appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2015 to the end of the planning period (2032) which are included at the end of this Appendix.

A. Reference Year Recovery Data

The North American Industry Classification System (NAICS) classifies business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. The NAICS industry codes define establishments based on the activities in which they are primarily engaged.

To obtain industrial sector recycling data, the District annually surveys establishments that are classified under the following NAICS codes:

22

- Utilities

31

- Food Manufacturing
- Beverage and Tobacco Product Manufacturing
- Textile and Textile Product Mills
- Apparel Manufacturing
- Leather and Allied Product Manufacturing

32

- Wood Product Manufacturing
- Paper Manufacturing
- Printing and Related Support Activities
- Petroleum and Coal Products Manufacturing
- Chemical Manufacturing
- Plastics and Rubber Products Manufacturing
- Nonmetallic Mineral Product Manufacturing

33

- Primary Metal Manufacturing
- Fabricated Metal Product Manufacturing
- Machinery Manufacturing
- Computer and Electronic Product Manufacturing
- Electrical Equipment, Appliance, and Component Manufacturing
- Transportation Equipment Manufacturing
- Furniture and Related Product Manufacturing
- Miscellaneous Manufacturing

The following tables present the industrial sector recycling data that was used to calculate the total tons recycled during the reference year. These tables include:

- Table F-1, *Industrial Survey Results*, which presents the total tons recycled by material and by NAICS code.
- Table F-2, *Data from Other Recycling Facilities*, which presents the total tons recycled at buybacks, scrap yards, processors, and material recovery facilities (MRFs)
- Table F-3, *Other Recycling Programs/Other Sources of Data*, which presents data from District programs and miscellaneous sources. This table was not applicable to the District.

Table F-1. Industrial Survey Results

NAICS	FW	GI	FM	NFM	OCC	MxP	PI	Tx	W	R	CoM	Other: WG	Other: DCB	Other: Spent Carbon	Other: Powder Paint	Other: Concrete/Soil	Total	Adj.	Adj. Total
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	8	0	662	2	117	0	114	0	0	0	0	0	0	0	902	0	902
32	0	60,403	727	179	2,677	2,826	189	3	454	0	5	0	0	35	0	0	67,498	639	66,859
33	1	54	16,360	4,433	2,094	62	611	136	1,725	2	0	150	3	0	13	826	26,472	16,214	10,257
Total	1	60,457	17,096	4,611	5,433	2,890	917	139	2,293	2	5	150	3	35	13	826	94,872	-16,853	78,019
Adj.	1	0	16,719	0	0	0	0	0	130	0	5	0	0	0	0	0	16,854	0	16,854
Adj. Total	0	60,457	377	4,611	5,433	2,890	917	139	2,163	2	0	150	3	35	13	826	78,018	0	78,018

NAICS = North America Industrial Classification System, FW = food waste, GI = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = corrugated cardboard, MxP = mixed paper, PI = plastics, Tx = textiles, W = wood, R = rubber, CoM = commingled, WG = white goods/appliances, DCB = dry-cell batteries, Adj. = adjustments or adjusted

Source(s) of Information: 2012 – 2014 District Industrial Surveys

Sample Calculations: NAICS 32 Unadjusted Tonnage – Adjustments = NAICS 32 Adjusted Quantities

67,498 tons – 639 tons = 66,859 tons

A significant volume of glass was reported by industries, as demonstrated in Table F-1. While this is atypical compared to other Districts in Ohio, Lucas County has a unique industrial sector which has earned its most populous city, Toledo, the nickname of "Glass City." The Northwest Ohio area has abundant natural gas resources and access to large deposits of high quality sand. Toledo also has a network of railroad and steamship lines, making it an ideal location for glass manufacturers. Two major glass manufacturers operate in the District. One company manufactures glass for use in buildings and vehicles. The other company manufactures glassware (beverage ware, stemware, food storage, dinnerware and serving ware). The majority of the glass recycling reported for NAICS code 32 was reported by these two industries.

Table F-2. Data from Other Recycling Facilities

Source	FM	NFM	OCC	MxP	PI	W	CoM	Total	Adj.	Adj. Total
Buybacks										
None	0	0	0	0	0	0	0	0	0	0
Scrap Yards										
SY1	2,401	422	0	0	0	0	0	2,823	422	2,401
SY2	57,788	795	0	0	0	0	0	58,583	795	57,788
SY3	165	56	0	0	0	20	0	241	76	165
Total	60,354	1,273	0	0	0	20	0	61,647	1,293	60,354
Adj.	0	1,273	0	0	0	20	0	1,293		
Adj. Total	60,354	0	0	0	0	0	0	60,354		
Processors										
PR1	15	0	11	0	0	0	0	26	11	15
PR2	360	125	2,741	1,091	85	0	0	4,402	4,041	360
PR3	85,025	260	0	0	0	0	0	85,325	300	85,025
Total	85,400	385	2,752	1,091	85	0	0	89,753	4,352	85,400
Adj.	0	385	2,752	1,091	85	0	0	4,352		
Adj. Total	85,400	0	0	0	0	0	0	85,400		
MRFs										
MRF1	0	0	55	0	0	25	280	360	80	280
Total	0	0	55	0	0	25	280	360	80	280
Adj.	0	0	55	0	0	25	0	80		
Adj. Total	0	0	0	0	0	0	280	280		
Total	145,754	0	0	0	0	0	280	146,034		

Source(s) of Information: District ADR Calculation Spreadsheets

Sample Calculations:

Unadjusted Scrap Yard Total (61,647) – Adjustments (1,293) = Adjusted Scrap Yard Total (60,354)

A significant volume of ferrous metals was reported by scrap yards and processors, as demonstrated in Table F-2. While the tonnage is higher than Ohio EPA would expect for an average District based on population, one of the scrap yards (SY2) actually reported an 80% decrease in tonnage from the previous year. Decreases from 2013 to 2014 are thought to be based on decreased ferrous metal valuations, which was a nationwide trend in 2014. Ferrous imports to the US from foreign producers, as well as a decreased demand from domestic producers influenced a decrease in ferrous metals recycling. The District has communicated with the survey respondent and Ohio and feels comfortable with the data submitted and utilized for this Plan Update.

Brokers and processors that reported the majority of the ferrous metal tonnage used to calculate the industrial sector's 2014 recycling totals were contacted to verify reported quantities. Survey respondents were asked whether tonnage from auto bodies or construction/demolition debris was included. Survey respondents were also asked whether the quantities reported reflected their company's overall tons recycled, or solely tonnage generated in Lucas County. Tonnage reported in this section reflects only tonnage generated from within the District from industries.

There was no data to report in Table F-3, "Other Recycling Programs/Other Sources of Data." Therefore, this table has been omitted.

Table F-4. Reference Year Industrial Material Recovered

Material	Quantity
Glass	60,457
Ferrous Metals	146,132
Non-Ferrous Metals	4,611
Corrugated Cardboard	5,433
All Other Paper	2,890
Plastics	917
Textiles	139
Wood	2,163
Rubber	2
Commingled Recyclables	280
Other (Aggregated)	1,028
Recycling Subtotals	224,052
Incineration	0
Grand Total	224,052

Source(s) of Information: 2012 – 2014 District Industrial Surveys

Sample Calculations: Food + Glass + Ferrous Metals + Non-Ferrous Metals + Corrugated Cardboard + All Other Paper + Plastics + Textiles + Wood + Rubber+ Commingled Recyclables + Ash + Non-Excluded Foundry Sand + Flue Gas Desulfurization + Other + Incineration = Reference Year Industrial Material Recovered

0 + 60,457 + 146,132 tons + 4,611 tons + 5,433 tons + 2,890 tons + 917 tons + 139 tons + 2,163 tons + 2 tons + 280 tons + 0 tons + 0 tons + 0 tons + 1,028 tons + 0 tons = 224,052 tons

Assumptions:

Adjustments were made to ensure that tonnage reported by industries was not double-counted by using portions of data provided by scrap yards, processors, and MRFs. The Industrial sector recycled a total of 224,052 tons in 2014. Ferrous metals represented approximately 65% of the materials recycled and glass represented approximately 27%.

Table F-5. Quantities Recovered by Program/Source

Source of Industrial Recycling Data	Quantities
Industrial Survey	78,018
Scrap Yards	60,354
Processors	85,400
MRFs	280
Total	224,052

Source(s) of Information: 2014 ADR Calculation Spreadsheets

Sample Calculations:

Industrial Survey + Scrap Yards + Processors + MRFs = 2014 Total

78,018 tons + 60,354 tons + 85,400 tons + 280 tons = 224,052 tons

Assumptions: Due to adjustments identified in Tables F-1 – F-2, the total presented in Table F-5 is assumed to be free of double-counting.

B. Historical Recovery

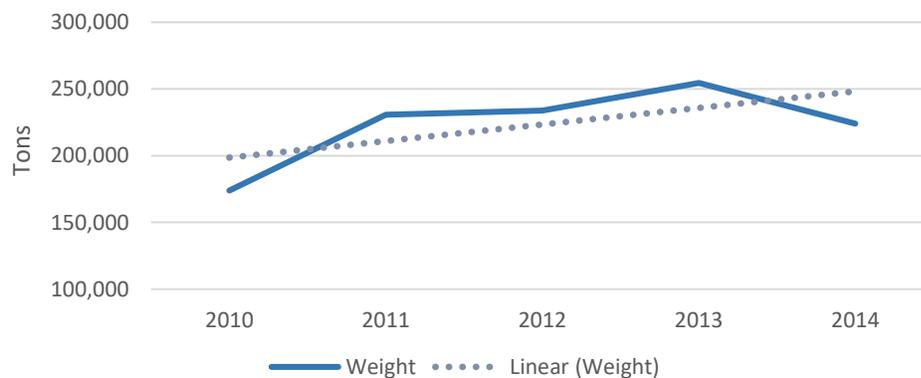
Total recovery includes recycling, composting, and waste reduction from incineration. The District’s historical recovery for the industrial sector over a five-year period spanning from 2010 to 2014 is presented in the following table.

Table F-5b. Historical Recycling Analysis: 2010-2014

Year	Industrial Sector		
	Weight	Annual Percentage Change	Annual Tonnage Change
2010	173,891	-----	-----
2011	230,664	32.65%	56,773
2012	233,826	1.37%	3,162
2013	254,519	8.85%	20,692
2014	224,052	-11.97%	-30,467
2010-2014 Average			
Average Annual Percentage Change			7.72%
Average Tons Over 5 Year Period			223,390
Average Annual Tonnage Change			12,540

An examination of the recovery patterns over the five-year period reveals that in 2013, a high of 254,519 tons were recovered and in 2010, a low of 173,891 tons were recovered. Waste recovery increased from 2010 to 2013, then decreased approximately 12% from 2013 to 2014. Over the five-year period, recovery increased by an average of 12,540 tons, or 7.72%, annually. The District's recovery of 224,052 tons in 2014 was approximately 0.3% greater than the 2010-2014 average of 223,390 tons. The following figure presents the District's historical industrial recovery totals from 2010 to 2014.

Historical Recycling Analysis: Industrial Sector (2010-2014)



Industrial sector tonnage in 2010 was atypically low due to the economic recession. Since planning efforts for this Plan Update began, 2015 statistics became available. The five-year period from 2011 to 2015 portrays more accurate trends since data collected during these years was not as heavily impacted by the economic recession. The District's historical recovery for the industrial sector over a five-year period spanning from 2011 to 2015 is presented in the following table.

Table F-5c. Historical Recycling Analysis: 2011-2015

Year	Industrial Sector		
	Weight	Annual Percentage Change	Annual Tonnage Change
2011	230,664	-----	-----
2012	233,826	1.37%	3,162
2013	254,519	8.85%	20,692
2014	224,052	-11.97%	-30,467
2015	238,535	6.46%	14,483
2010-2014 Average			
Average Annual Percentage Change			1.18%
Average Tons Over 5 Year Period			236,319
Average Annual Tonnage Change			1,968

An examination of the recovery patterns over the five-year period reveals that in 2013, a high of 254,519 tons were recovered and in 2014, a low of 224,052 tons were recovered. Waste recovery increased from 2011 to 2013, then decreased approximately 12% from 2013 to 2014. Over the five-year period, recovery increased by an average of 1968 tons, or 1.18%, annually. The following figure presents the District’s historical industrial recovery totals from 2011 to 2015.

Historical Recycling Analysis: Industrial Sector (2011-2015)



C. Industrial Recovery Projections

According to Ohio EPA’s Plan Format v4.0, if a solid waste district met the industrial reduction/recycling goal of 66% during the reference year, it is acceptable to project a constant quantity of industrial material to be recovered at the reference year quantity throughout the planning period. During the 2014 reference year, the industrial sector exceeded the reduction/recycling goal of 66% and achieved a 94% recycling rate. The District continued to exceed the 66% goal in 2015. Tonnage is projected as a constant rate for the remainder of the planning

period based on 2015 tonnage. Tonnage by program/source were calculated based on reference year ratios. The following table presents the industrial sector recovery statistics and projections from 2014 to 2032.

Table F-6. Industrial Recovery Projections by Program/Source

	Year	Industrial Survey	Scrap Yards	Processors	MRFs	Totals
First Year of Planning Period → X	2014	78,018	60,354	85,400	280	224,052
	2015	83,061	64,255	90,921	298	238,535
	2016	83,061	64,255	90,921	298	238,535
	2017	83,061	64,255	90,921	298	238,535
	2018	83,061	64,255	90,921	298	238,535
	2019	83,061	64,255	90,921	298	238,535
	2020	83,061	64,255	90,921	298	238,535
	2021	83,061	64,255	90,921	298	238,535
	2022	83,061	64,255	90,921	298	238,535
	2023	83,061	64,255	90,921	298	238,535
	2024	83,061	64,255	90,921	298	238,535
	2025	83,061	64,255	90,921	298	238,535
	2026	83,061	64,255	90,921	298	238,535
	2027	83,061	64,255	90,921	298	238,535
	2028	83,061	64,255	90,921	298	238,535
	2029	83,061	64,255	90,921	298	238,535
	2030	83,061	64,255	90,921	298	238,535
	2031	83,061	64,255	90,921	298	238,535
	2032	83,061	64,255	90,921	298	238,535



APPENDIX G

WASTE GENERATION



APPENDIX G. Waste Generation

A. Historical Year Waste Generated

The historical waste generation for the District (years 2010 through 2015) is shown in Table G-1 below. Generation has been calculated based upon the sum of reported disposal and recycling for each year. In general, disposal has been steady with a few years standing out as outliers due to a significant increase or decrease compared to the previous year. Total recycling has fluctuated during this time period. The per capita generation rate for total generation has increased from 9.6 pounds per person per day (PPD) to 11.0 PPD.

Table G-1. Reference Year and Historical Waste Generated

Year	Pop	Residential/ Commercial		Industrial		Total	Per Capita Generation (ppd)	Annual % Change in Total Tons
		Disposal	Recycled	Disposal	Recycled			
2010	441,815	389,406	190,038	19,753	173,891	773,088	9.6	-
2011	440,005	377,754	182,922	61,338	230,664	852,678	10.6	10.3%
2012	437,998	386,465	171,454	16,309	233,826	808,054	10.1	-5.2%
2013	436,990	383,234	167,459	11,874	254,519	817,085	10.2	1.1%
2014	436,468	387,690	181,672	14,476	224,052	807,889	10.1	-1.1%
2015	435,165	414,108	184,865	34,306	238,535	871,814	11.0	7.9%

Source(s) of Information: Ohio EPA Facility Data Reports and ADR Review Forms, Lucas County Annual District Reports.

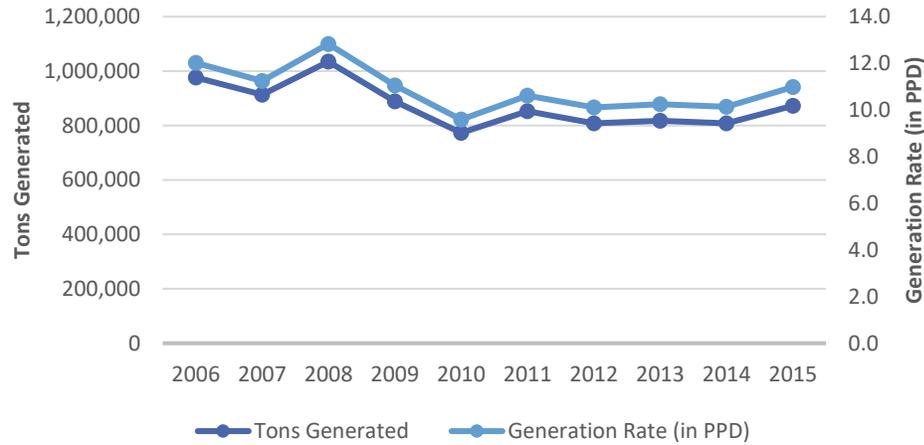
Sample Calculations:

Per capita generation rate = ((tons generated x 2000) ÷ 365) ÷ population)

Annual percentage change = ((New year – old year) ÷ old year) x 100

Figure G-1 shows the District's waste generation over a longer historical period. Both the tons generated and the generation rate have declined since 2006.

Figure G-1. Lucas SWMD Total Generation: 2006-2014



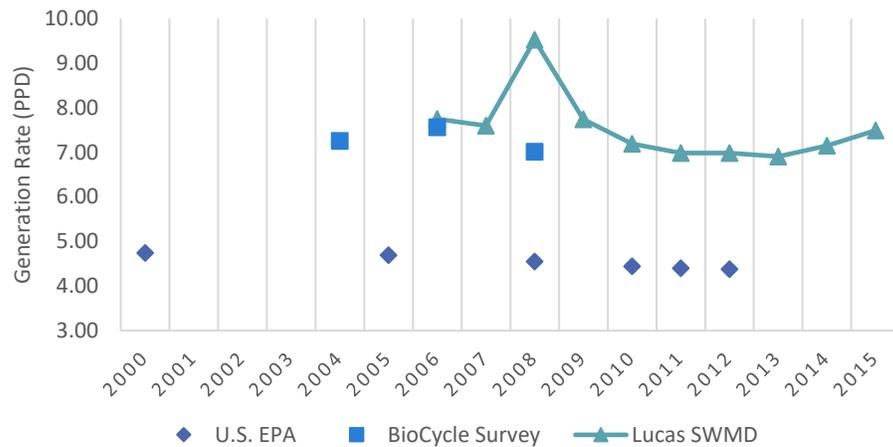
1. Residential/Commercial Waste

The national waste generation rates based upon U.S. EPA documents are much lower than Lucas SWMD’s generation rate or generation rates for the other Ohio urban SWMDs. For example, the national MSW generation rate¹ for 2012 was estimated to be 4.38 PPD while Lucas SWMD’s MSW generation rate for 2012 was 6.98 PPD. At least part of the difference between these rates can be explained based upon the national rate incorporating both urban and rural areas. Rural areas traditionally have lower generation rates than urban areas, and this tendency can be seen in Ohio. Also, the national generation rate relies on a modeling methodology rather than summing disposal plus recycling to determine generation.

National waste generation has also been estimated by *BioCycle Magazine* by surveying State agencies responsible for regulating solid waste. Estimates compiled by *BioCycle* utilized disposal plus recycling for determining generation, and therefore, generation rates are relatively consistent with Lucas generation rates, with the exception of 2008 (see Figure G-2).

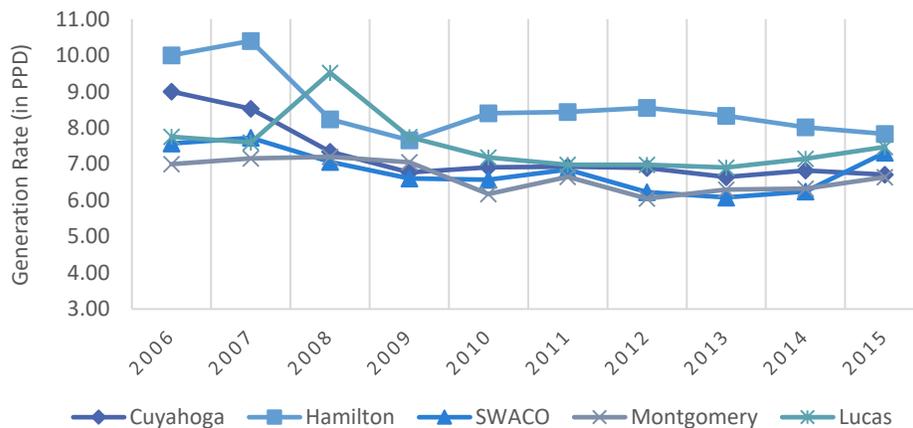
¹ For purposes of this analysis, MSW or municipal solid waste is considered to be synonymous with residential/commercial waste.

Figure G-2. MSW Generation Rates: National vs. Lucas SWMD



The national MSW generation rates have been declining, as illustrated by Figure G-2. MSW generation rates for the District have declined since 2006 and 2007 (and especially 2008), however, Lucas’s generation rate has been increasing since 2013. Although other urban SWMDs in Ohio have experienced falling MSW generation rates since 2006 (apart from Summit), these generation rates have generally leveled-off in the last four or five years, as demonstrated below in Figure G-3.

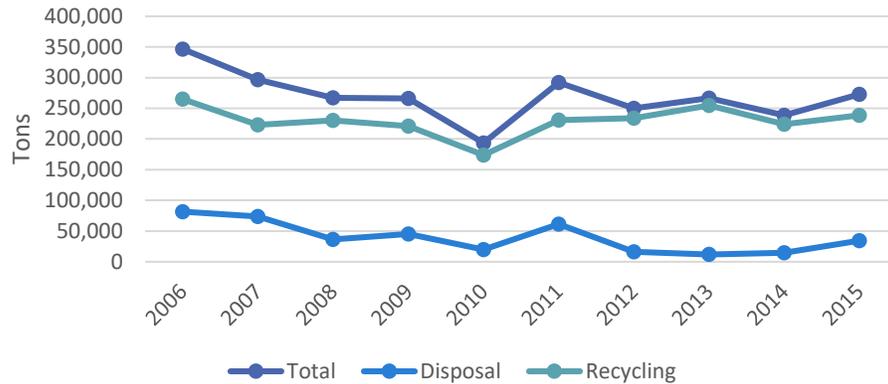
Figure G-3. MSW Generation Rates for Selected Ohio Urban SWMDs



2. Industrial Waste

Total industrial waste generation in the District has declined nearly 74,000 tons since 2006 as illustrated in Figure G-4 below. Although both disposal and recycling tonnage have decreased during this time period, the trend in recycling has been the greater factor in determining total industrial generation.

Figure G-4. Lucas SWMD Industrial Waste Generation



3. Excluded Waste

Excluded waste was less than 10 percent of the total waste disposed in the reference year, and as a result, has not been included in this analysis.

B. Generation Projections

Generation projections for the District have been developed in Appendices D, E and F for disposal and recycling for the residential/commercial and the industrial sector. These projections which are presented in detail in Appendices D, E and F, are summarized below in Table G-2. In general, residential/commercial disposal tonnages are expected to increase through 2018, then decrease through the remainder of the planning period due to decreasing population. Recycling for the residential/commercial sector is projected to increase slightly during the planning period.

Industrial disposal is projected to decrease slightly until year 2022, then remain constant. Industrial recycling is expected to remain constant after 2015.

Table G-2. Generation Projections

Year	Pop.	Residential/Commercial		Industrial		Total (tons)	Per Capita Generation (ppd)	Annual % Change (tons)
		Disposal	Recycle	Disposal	Recycle			
2014	436,468	387,690	181,672	14,476	224,052	807,888	10.14	-----
2015	435,165	414,108	184,865	34,306	238,535	871,814	10.98	7.9%
2016	434,195	418,233	190,010	34,097	238,535	880,875	11.12	1.0%
2017	433,225	422,397	185,188	33,889	238,535	880,009	11.13	-0.1%
2018	432,255	426,601	185,240	33,682	238,535	884,057	11.21	0.5%
2019	431,285	425,643	185,291	33,477	238,535	882,946	11.22	-0.1%

Year	Pop.	Residential/ Commercial		Industrial		Total (tons)	Per Capita Generation (ppd)	Annual % Change (tons)
		Disposal	Recycle	Disposal	Recycle			
2020	430,315	424,686	185,343	33,273	238,535	881,837	11.23	-0.1%
2021	429,349	423,733	185,396	33,070	238,535	880,733	11.24	-0.1%
2022	428,383	422,779	185,448	32,868	238,535	879,630	11.25	-0.1%
2023	427,417	421,826	185,501	32,868	238,535	878,730	11.27	-0.1%
2024	426,451	420,872	185,554	32,868	238,535	877,830	11.28	-0.1%
2025	425,485	419,919	185,608	32,868	238,535	876,930	11.29	-0.1%
2026	424,512	418,959	185,661	32,868	238,535	876,023	11.31	-0.1%
2027	423,404	417,865	185,715	32,868	238,535	874,983	11.32	-0.1%
2028	422,296	416,772	185,770	32,868	238,535	873,944	11.34	-0.1%
2029	421,188	415,678	185,824	32,868	238,535	872,905	11.36	-0.1%
2030	419,945	414,452	185,879	32,868	238,535	871,733	11.37	-0.1%
2031	418,990	413,509	185,934	32,868	238,535	870,846	11.39	-0.1%
2032	417,900	412,433	185,989	32,868	238,535	869,825	11.41	-0.1%



APPENDIX H

STRATEGIC EVALUATION



APPENDIX H. Strategic Evaluation

This Appendix is divided into thirteen (13) separate analyses or sections to address the recommendations and suggestions in Format v4.0. Some of the more extensive sections are further subdivided, such as Section 1. In general, existing District programs (with Program ID) are discussed first within the appropriate section, followed by any additional analysis not necessarily related to an existing program. All existing programs have been evaluated qualitatively in terms of the suggestions included within Format v4.0 and the identified strengths and weaknesses which are summarized at the end of each existing program analysis. For programs which have data available, quantitative evaluations have been incorporated, also. The following table provides a directory for the analyses within Appendix H.

SECTION 1: RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS

A. Drop-off Recycling

The District services publicly-available drop-offs, drop-offs at schools, and drop-offs at businesses and non-profits/organizations which are not available to the public. Each of these programs are discussed below.

1. Drop-off Recycling for Publicly-Available Sites

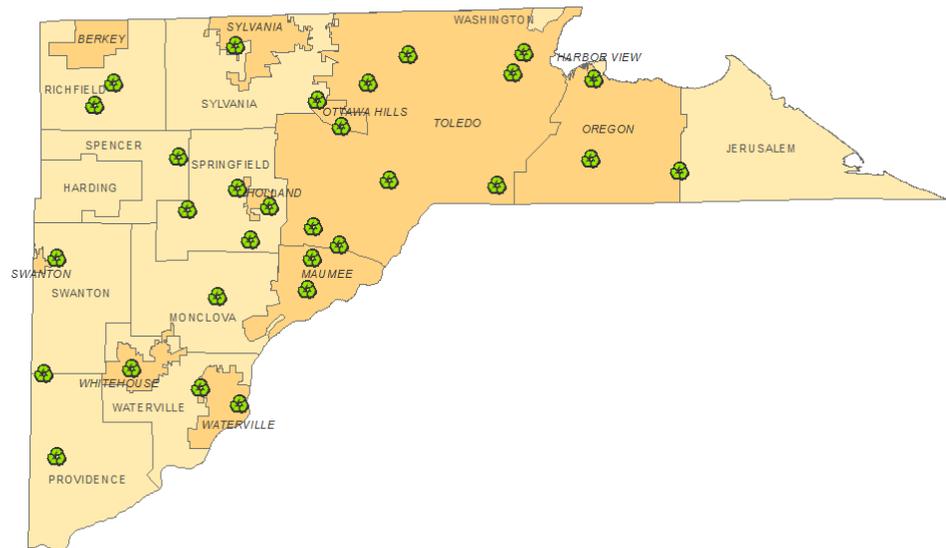
This section discusses the drop-off program for publicly-available sites, and program IDs for these sites are shown in the following table.

Existing Program Type	Existing Program IDs
Drop-off Recycling for Publicly-Available Sites	3765, 2088, 2090, 4277, 2091, 2092, 9139, 2093, 2096, 42, 76, 9141, 9140, 2083, 2078, 2081, 3605, 9142, 5217, 3763, 4278, 3850, 2089, 4279, 2086, 4831, 4832, 4830, 5216, 2079, 2084, 2080, 2082

a. Locations of Drop-off Sites

The District maintains a drop-off recycling collection program throughout Lucas County, with many of the drop-off sites having been established more than 10 years ago. The District's drop-offs are evenly distributed throughout the county as illustrated in the following figure which presents the location of each drop-off that operated during the reference year.

Figure H-1. Location of Recycling Drop-offs: 2014



Drop-offs were located in all District cities, villages, and all but one township during 2014. Residents in both urban and rural areas have convenient access to the drop-off recycling sites. The following table lists the location drop-off sites categorized by political subdivisions, whether they are classified as urban or rural, and the type of residential recycling programs available. (A detailed listing of each drop-off location with Program ID can be found in Appendix B.)

Table H-1. List of Recycling Drop-offs by Political Subdivision

Political Subdivision	Urban or Rural?	At least one Full-Time Drop-off?	Also have Curbside? *
Cities			
Maumee	Urban	✓	Yes, NSC
Oregon	Urban	✓	Yes, NSC
Sylvania	Urban	✓	Yes, NSC
Toledo	Urban	✓	Yes, NSC
Waterville	Urban	✓	Yes, NSC
Villages			
Berkey	Rural	✓	Yes, SC
Harbor View	Rural	✓	Yes, SC
Holland	Rural	✓	Yes, NSC
Ottawa Hills	Rural	✓	Yes, NSC
Swanton	Rural	✓	No
Whitehouse	Rural	✓	Yes, SC
Townships			
Harding	Rural		Yes, SC
Jerusalem	Rural	✓	Yes, SC
Monclova	Urban	✓	Yes, SC

Political Subdivision	Urban or Rural?	At least one Full-Time Drop-off?	Also have Curbside? *
Providence	Rural	✓	Yes, SC
Richfield	Rural	✓	No
Spencer	Rural	✓	Yes, SC
Springfield	Urban	✓	Yes, SC
Swanton	Rural	✓	Yes, SC
Sylvania	Urban	✓	Yes, SC
Washington	Rural	✓	Yes, SC
Waterville	Rural	✓	Yes, NSC

* "NSC" means non-subscription curbside; "SC" means subscription curbside.

Residents in all urban areas throughout the District have access to at least one drop-off and curbside recycling. Even in more rural areas, the majority of communities with access to curbside recycling also have access to a drop-off. This ensures that residents who choose not to participate in curbside recycling can still conveniently utilize the drop-off program. It also ensures that multi-family housing and apartments where curbside is not available have access to recycling. The only township that does not have its own drop-off is Harding Township. Geographically, Harding Township is a small township that is located inside of Spencer Township. Spencer Township does have a drop-off, which is conveniently located for residents of Harding Township.

Compared to the reference year used for the current plan (2008), the extent of the drop-off program has changed very little. In 2008, the District operated 20 full-time urban drop-offs and 10 rural drop-offs. In 2014, the District operated 21 urban drop-offs and 9 rural drop-offs. A total of 30 public drop-offs were available during both reference years.

b. Materials Accepted, Minimum Standards, Size of Containers

The drop-off recycling program accepts a comprehensive mix of materials, which include:

Paper:

- Newspapers
- Ad Inserts
- Junk Mail
- Office Paper
- Magazines
- Catalogs
- Phone Books

- Cardboard: Corrugated
- Cardboard: Cereal board
- Cardboard: Shoe Boxes

Cans/Containers:

- Aluminum Beverage Cans
- Steel, Tin, Bimetal Food Cans
- Foil Wrap and Containers
- Aseptic Containers (Milk, Juice, Broth, and Other Food/Beverage Containers)
- Plastics:
 - #1 and #2 Plastic Bottles
 - Cartons
 - Clear, Green, and Brown Glass Bottles and Jars

All of the District's drop-offs meet the minimum standards to be classified as full-time, full-service drop-offs. Each drop-off is open 24 hours a day, 7 days a week. As stated above, each drop-off accepts a comprehensive list of materials, which exceeds the minimum four materials designated as highly amenable for the residential sector to recycle.

The District's drop-off containers have a capacity of 8 cubic yards. Some sites have multiple containers, based on the availability of space and the volume of materials typically collected at each site. High volume sites are collected daily and lower volume sites are collected twice per week. District staff identifies any issues during each route or during routine inspections, such as problems with over-flow or dumping and reports to the District Manager. The District Manager may decide on corrective actions depending on the given issue(s). The District's phone number is also listed on the drop-off recycling containers for residents to notify the District regarding any problems or issues. The District is confident that drop-off containers are adequately-sized. The District makes changes to drop-off locations and pick-up schedules based on the internal reports which may indicate that either too much or too little capacity is becoming an issue at a particular site.

c. Operation of Drop-off Program

The District operates this program, employing six drivers and one laborer. Although the District has typically owned four to five front-loading packer trucks to service the drop-offs, generally three trucks are used each day for the collection routes. Trucks are used approximately 10,000 hours each year.

Materials are collected as a dual stream: fiber and containers. The fiber stream is currently delivered to Gateway Recycling while the container stream is taken to a Re-Community transfer facility.

d. Education and Awareness

The District provides education and awareness programs to encourage residents to use the drop-offs for recycling, and provides information regarding the types of materials which are acceptable. See **Appendix L** for a discussion of the District's education and awareness programs.

e. Tons Recovered

Although tonnages at individual sites are not available, the District does track the total amount of recyclables collected through the drop-off program each year (see Table 2).

**Table H-2. Lucas SWMD Drop-off Recycling Program
Tonnage: 2008 – 2014**

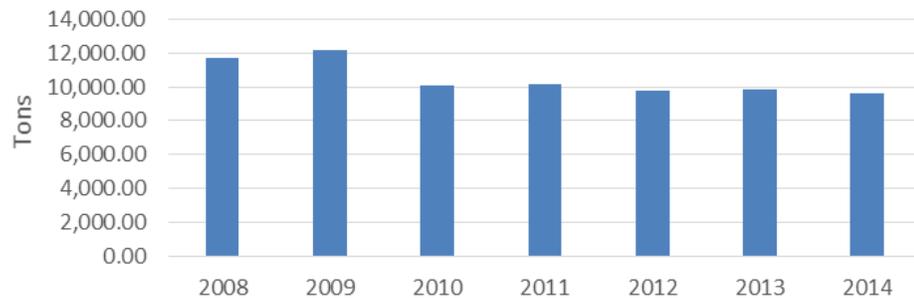
Year	Tonnage	Tonnage Change	Percent Change
2008	11,698.53		
2009	12,160.84	462.30	4.0%
2010	10,080.78	(2,080.05)	(17.1%)
2011	10,169.36	88.58	0.9%
2012	9,774.71	(394.65)	(3.9%)
2013	9,834.48	59.77	0.6%
2014	9,655.35	(179.13)	(1.8%)

Figure 2 is a graphic representation of the data shown in Table 2. The decrease in tons collected through the drop-off program since 2008 is primarily attributed to:

1. The initiation of curbside recycling in the City of Toledo in 2010, and
2. The economic recession which began in 2008.

The number of drop-offs, the hours available to the public, and other operational parameters of the drop-off program have not changed, and therefore, would not help explain the decrease in tonnages. Although the drop-off tonnage has decreased since the advent of Toledo's curbside program, the decrease has not been as substantial as SWACO's experience when the City of Columbus began a curbside recycling program.

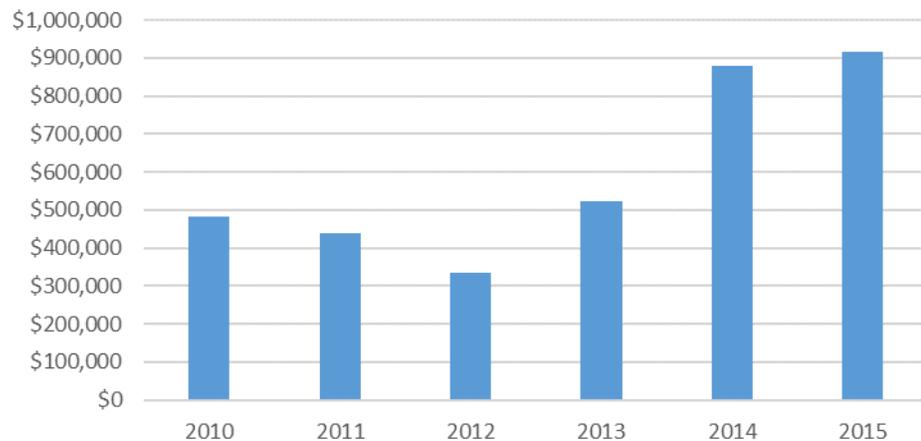
**Figure H-2. Lucas SWMD Drop-off Recycling Program
Tonnage: 2008 – 2014**



The District made an effort to compare the total recovery from the drop-off program with other solid waste districts in Ohio and found that the aggregate tonnage reported from sites in Lucas County is higher. Although many factors could explain the different recovery rates such as the presence and participation in curbside recycling programs, Lucas County’s pounds recycled per household (107 pounds/household/year) was approximately twice as large as the corresponding estimates for SWACO, the Hamilton County Solid Waste District, and Delaware County. The tons recovered per site was also much higher for Lucas County compared to the other SWMDs and Delaware County.

f. Cost of Drop-off Recycling

The cost of the District’s drop-off program was approximately \$880,400 in the reference year; however, it is important to realize that this cost does not include labor expenses for drivers and a laborer. Figure H-3 shows the costs of Lucas County’s drop-off program during the last six years.

Figure H-3. Cost of the District's Drop-off Program: 2010 – 2015

g. Summary of Publicly-Available Drop-Off Program Findings and Challenges

The drop-off program is important because it provides an opportunity for residents and possibly businesses to recycle. The use of drop-off locations (based upon tonnage) is high when drop-offs are located in areas visited frequently by the public, such as sites near grocery stores, community centers, churches, shopping centers, schools, parks, etc. All of the District's drop-off locations have been strategically chosen to maximize the accessibility of each site to the public. A number of drop-offs are also located at township or village halls, fire stations, parks, or recreation centers. The following challenges have been identified by the District during the analysis of this program:

- Determining the appropriate number and location of drop-off sites, and ensuring the long-term availability of sites.
- The cost of the program has risen over the years. The drop-off program is one of the highest expenses for the District.
- There is significant contamination. Approximately three tons of trash is collected at district sites and pulled out of the recycling bins each month by District staff.
- There is sporadic theft of materials such as aluminum.
- Commercial businesses dumping waste at recycling drop-offs has also been a problem on occasion.
- There have been minor complaints of noise from the operation of the trucks in certain areas.
- Littering from the dumping of the containers by District staff has also caused issue in the program.

- The District realizes that a number of residents that live in multi-family housing or apartments utilize the program. The District does not target education and awareness initiatives for multi-family housing residents that are serviced by the private sector.
- The District also understands that the private sector does not provide recycling opportunities at the various multi-family housing areas or apartment complexes.
- A large percentage of drop-off site users also have curbside recycling. The District conducted a survey in 2006 to gather information regarding participation at selected drop-off locations. Drop-off users at three separate sites were surveyed over a period of eight days. The survey responses from 118 participants is summarized in Table 3. Participants brought plastics, newspaper, and cardboard to the drop-off sites more often than any other materials, and 44 percent used the site every week. Not surprisingly, the survey results suggest that it is important to locate drop-offs in a busy shopping area, or a location which is highly visible. In addition, the survey found that 60 percent of the participants use curbside recycling every week or every other week.

Table H-3. Drop-off Survey Results: 2006

Survey Questions	Answer	Response Percentage
What percentage of your trips to the drop-off include delivering plastics, newspaper, cardboard, glass, etc.?	Plastics	59%
	Newspaper	66%
	Cardboard	68%
How often do you use the drop-offs?	Every week	44%
	Once every 2 weeks	28%
How did you find out about the drop-off location?	Where I shop	42%
	Driving by	38%
When do you most often deliver material to the drop-off?	While running other errands	79%

Survey Questions	Answer	Response Percentage
What is the most important factor in choosing which drop-off to use?	Close to home	66%
Highest level of formal education	High school/GED	15%
	College degree	46%

- Some sponsor sites have requested the District to remove the dumpsters. The Kroger Company recently (February 2016) informed the District that drop-offs currently placed in at least one Kroger parking lot will have to be removed in the future, so the District will be evaluating alternatives to address the loss of this site, and possible others. The District does evaluate the general performance of drop-off sites in terms of usage and the problems encountered at the sites, and periodically transfers dumpsters from one site to another when appropriate.
- The potential loss of a number of drop-off locations has prompted the District to begin considering negotiating some type of agreement with drop-off site property owners in order to ensure that the site continues to meet minimum criteria, including availability for a minimum period of time.

2. Drop-offs at Schools

As a part of the existing drop-off program, the District operates two programs for schools. These programs and the programs IDs are shown below.

Existing Program Type	Existing Program IDs
School Paper Recycling	4833
School Recycling Programs (other materials)	8396

During 2014, the District provided and serviced 69 mixed paper recycling dumpsters for 65 schools and bottle/can recycling for 14 schools.

a. Summary of School Recycling Program Findings and Challenges

These programs provide the opportunity to collect mixed paper and bottles and cans at many schools throughout the District. The following challenges have been identified by the District during the analysis of this program:

- Many schools do not have the necessary infrastructure within the buildings (i.e., recycling bins at desks, copiers, in copy rooms, in cafeterias, etc.) which would facilitate and enhance the recovery of recyclables.
- Ensuring that staff within buildings are assigned to, and enabled to empty recycling bins into carts and ultimately into recycling dumpsters at the school is sometimes difficult because of workload and union regulations.
- In 2015, the City of Toledo school system left the drop-off recycling program, so there is currently a large deficit in terms of the number of schools which are served.
- The costs for this program and the tonnage collected are not available since they are included in the data for the drop-offs at publicly-available sites.

3. Non-Public Drop-offs

The District provided collection services to a large number of drop-off sites not open to the public located at a variety of institutional, business, multi-family housing, and non-profit entities. The District provided drop-off containers and serviced 89 recycling dumpsters for 59 separate entities throughout the County.

Existing Program Type	Existing Program IDs
Non-public Drop-off Recycling	2108

Within the last one or two years, the Lucas County Commissioners have determined the need to have recycling services at county-owned buildings throughout Lucas County. The District provides and services 8-cubic yard recycling dumpsters outside nearly 30 buildings. In addition, the District and KT/LCB have provided recycling containers inside these buildings for paper, cardboard, bottles, and cans.

a. Summary of Non-Public Drop-off Recycling Program Findings and Challenges

This program provides the opportunity to collect cardboard and other recyclables at a number of businesses and organizations throughout the District. The following challenges have been identified by the District during the analysis of this program:

- One of the District’s overall philosophies involves designing programs which avoid competing with the private sector. This philosophy creates a challenge for making improvements in some programs, including the non-public drop-offs. However, the District is considering the initiation of a pilot program at multi-family housing complexes under non-public drop-off recycling.
- The costs for this program and the tonnage collected are not available since they are included in the data for the drop-offs at publicly-available sites.

B. Curbside Recycling

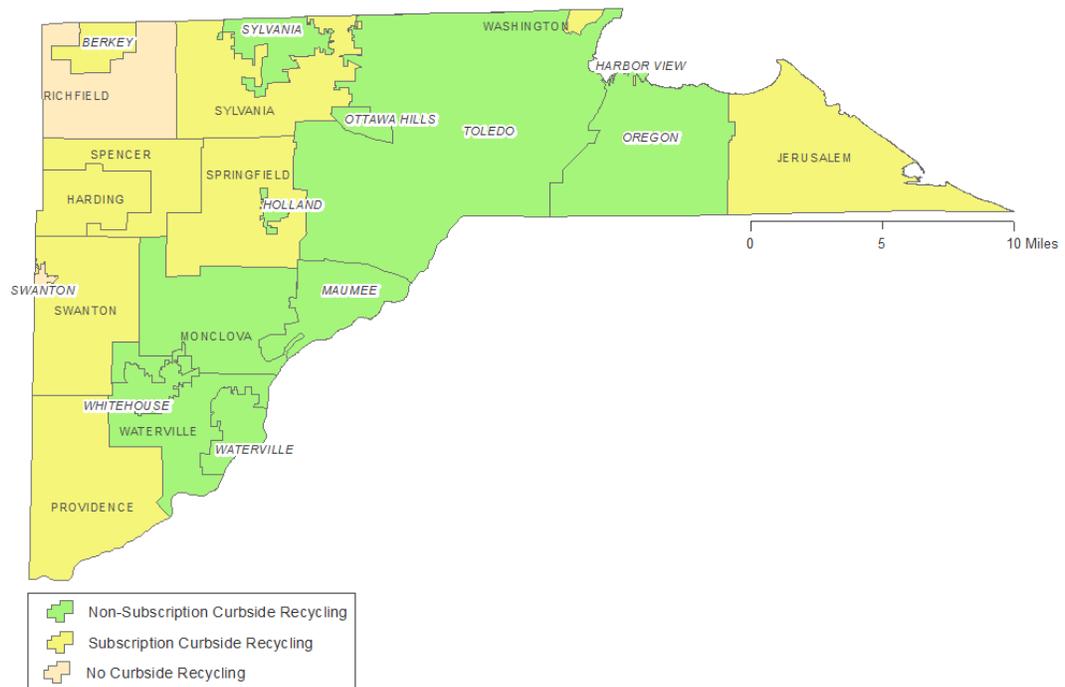
A number of curbside recycling programs operate within the District, including the City of Toledo’s. These programs are discussed below.

Existing Program Type	Existing Program IDs
Curbside Recycling: Non-subscription	2063, 2061, 2057, 2058, 2062, 2059, 2060, 2065, 8450
Curbside Recycling: Subscription	2066, 2067, 2068, 2069, 2071, 9138, 2074, 2075, 2076, 2077

1. Locations of Curbside Recycling Programs

The locations of the communities which offer curbside recycling to their residents is shown in Figure 4.

Figure H-4. Locations of Curbside Recycling Programs in the District



Eight communities offer non-subscription curbside recycling while residents in twelve townships and villages have access to subscription curbside. The list of these communities, the type of program offered, as well as the number of households and population are included in Table H-4.

Table H-4. Curbside Recycling Programs in the District: 2014

Community	Type of Program		# of Households	Population	Pickup Frequency
	NS	S			
City of Maumee	✓		5,500	14,036	Weekly
City of Oregon	✓		6,677	20,196	Once per 2 weeks
City of Sylvania	✓		5,700	18,965	Once per 2 weeks
City of Toledo	✓		95,500	281,031	Once per 2 weeks
City of Waterville	✓		2,013	5,516	Once per 2 weeks
Holland Village	✓		536	1,702	Weekly
Ottawa Hills Village	✓		1,706	4,473	Weekly
Waterville Twp.	✓		550	11,579	Once per 2 weeks
Berkey Village		✓	127	236	DNR
Harbor View Village		✓	70	100	DNR
Harding Twp.		✓	370	728	DNR
Jerusalem Twp.		✓	1,602	3,098	DNR
Monclova Twp.		✓	4,090	12,381	Once per 2 weeks

Community	Type of Program		# of Households	Population	Pickup Frequency
	NS	S			
Providence Twp.		✓	110	3,346	DNR
Spencer Twp.		✓	850	1,875	DNR
Springfield Twp.		✓	7,100	26,151	Varies
Swanton Twp.		✓	1,281	2,981	DNR
Sylvania Twp.		✓	11,000	29,499	DNR
Washington Twp.		✓	1,100	3,254	DNR

NS = non-subscription curbside recycling, S = subscription curbside recycling, DNR = did not report

The political subdivisions that had non-subscription curbside recycling programs in the 2008 reference year of the current Plan have all continued their programs into the 2014 reference year.

The political subdivisions that had subscription curbside recycling in 2008 continued the programs to 2014 with the exception of Richfield Township. The District's major population centers have access to both non-subscription curbside recycling and the drop-off program. Most rural cities and townships have access to either subscription or non-subscription curbside recycling and at least one drop-off.

2. **Materials Accepted**

Curbside recycling programs accept a comprehensive mix of materials, which include:

Paper/Fiber Stream:

- Newspapers
- Ad Inserts
- Junk Mail
- Office Paper
- Magazines
- Catalogs
- Phone Books Corrugated
- Paper board, cereal board

Commingled Cans/Containers:

- Aluminum Beverage Cans
- Steel, Tin, Bimetal Food Cans
- Foil Wrap and Containers
- Paper board
- Clear, Green, and Brown Glass Bottles and Jars

- Aseptic Containers (Milk, Juice, Broth, and Other Food/Beverage Containers)
- #1 and #2 Plastic Bottles

However, there is some variation among programs regarding the types of materials accepted for recycling.

3. Contracting, Contract Management, Operation of Programs

With the exception of the Village of Holland and the Village of Ottawa Hills, all District communities having non-subscription curbside recycling collection programs provide the service through contracts with private sector haulers. The length of these contracts varies from two years to five years, with the hauler providing the collection bins in approximately one-half of the programs.

The District continued to provide technical assistance to communities for collection contracts. The purpose of the program, **District Management of Collection Contracts, Program ID 8395**, is to provide consistent and cost-effective collection services for both trash and recyclables throughout the District. This program includes promoting provisions for recycling incentives, stronger education/outreach services, and increasing the number of materials accepted for recycling. Seven communities have requested assistance in negotiating recent contracts with haulers, and the District is actively working with two communities to explore upgrading their collection service. The largest ongoing effort under this program is directed towards management of Toledo's curbside collection contract.

4. The City of Toledo's Curbside Recycling Program

The District provides direct management of the City of Toledo's curbside trash and recycling program contract with Republic Services. Collection of recyclables by Toledo's curbside program began with the initiation of a pilot program operated by the City in 2008 involving 10,000 households. Eventually service was expanded to the entire City, and the City purchased fully-automated collection trucks. In 2010, the City requested assistance from the District in managing the collection program.

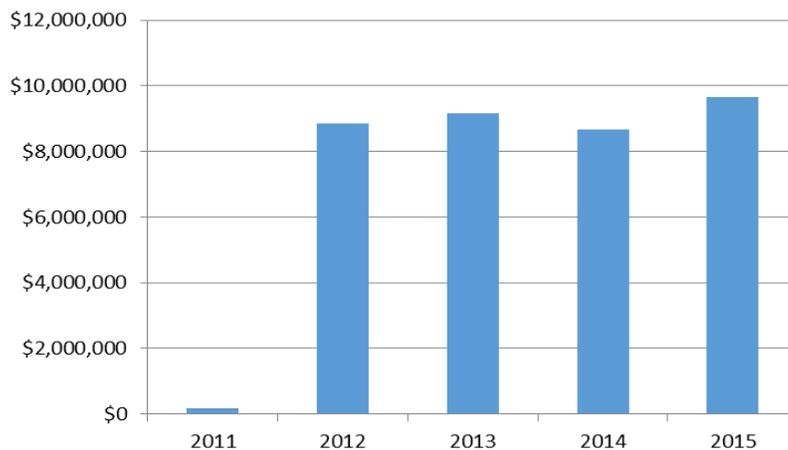
In 2011, bids were solicited for a contractor to provide curbside collection of trash and recyclables in Toledo, with the selected contractor agreeing to purchase the City's 40 collection vehicles. Republic Services was selected as the contractor, to serve 95,500 households. The City purchased the collection carts which were included with RFID tags. The City also agreed to continue billing residents for the service through water bills.

Residents were charged \$8.95 per month for collection of trash and recyclables, except residents qualifying for the homestead exemption who paid \$5 per month. Republic delivers the solid waste to the City-owned Hoffman Road landfill where the City pays for the disposal. Recyclables are transported to the ReCommunity recycling transfer station. The District pays Republic for operating the program with funds provided from the City as a “pass-through.” It was estimated that the 2011 contract with Republic would save the City approximately \$6 million per year.

When Republic began the collection service, they initiated an incentive program called, “My Republic Rewards” or also known as RecycleBank. The incentive program was designed to encourage greater recycling by offering coupons and discounts at local retailers for residents that recycled. Unfortunately, RecycleBank has not been very successful as it has achieved approximately 20 percent participation. Due to the lack of participation and the cost, this program has been suspended and Toledo received a credit with their new rate.

The expenditure for Toledo’s curbside program was approximately \$8.6 million in 2014. Figure H-5 shows the costs for the last five years, which have been relatively steady after the start-up year operating under the contract with Republic.

Figure H-5. Toledo’s Curbside Collection Program Costs: 2011 – 2015



The District believes that Toledo’s curbside program is operating smoothly. In support of this assessment, very few complaints from residents were received regarding their service, which is in contrast to the first month of Republic’s operation when more 8,000 calls from residents were made.

During 2015 and 2016, the District helped negotiate a new contract with Republic since the existing contract expires in 2016. As of 2016, the terms of the new contract, which expires August 31, 2026, include:

- Base rate per month per household, with fuel adjustments (increase if over \$4 and decrease if under \$3) and annual adjustments ($\leq 3\%$).
- Twelve bulk pickups per year for households which is a new service.

The District also included a requirement in the contract for Republic to provide participation data. The Contract requires Republic to report the following performance criteria for both trash and recycling services on a monthly basis:

- Participation rates
- Set-out rates
- Cart replacements

5. Other Communities: Participation in Curbside Programs, Problems

The District conducted a survey of other communities during March 2016 to obtain information regarding curbside programs, use of drop-offs, and problems associated with their collection service. The results of this survey are shown in Table H-5, and show that there is some interest in possibly upgrading existing collection systems. Some communities have also identified litter and contamination as problems associated with their service.

Table H-5. Survey of Lucas County Communities: Recycling Collection

Community Name	Type of Recycling Program	Is curbside (or would it be) best option?	How are recyclables collected?	Concerns/problems?
City of Oregon	Non-Subscription Curbside program and Drop-off Recycling (bi weekly 6,500 households)	Yes, Easiest for residents	Single Stream (64 gallon - owned by Oregon)	No Issues
City of Sylvania	Non-Subscription Curbside Program and Drop-off Recycling (5,741 households)	Yes	Single Stream	None
City of Waterville	Non-Subscription Curbside Program (2,036 households)	Yes	Single Stream (residents given 1 tote; can buy another or use one of their own)	N/A

Community Name	Type of Recycling Program	Is curbside (or would it be) best option?	How are recyclables collected?	Concerns/problems?
Jerusalem Township	Subscription Waste Only (WM 3yr, expires 8/2018) and Drop off Recycling	N/A	limit 2 bags or 2 cans, additional fee for bulk items	No Problems, Happy
Maumee	Non-Subscription Curbside Programs and Drop-off Recycling (5,500 Households)	Yes. The best option would be to provide totes and get rid of combined bins. This will keep recyclables from littering the streets and strong winds blowing material out of bins.	Single Stream (trying to get 96 gallon containers with new contract; right now only have 16 gallon bins)	Litter associated with residents' putouts or during collection, lack of education for residents, and expense of program
Monclova Township	Subscription Curbside program and Drop-off Recycling (1,667 households)	Yes	Single Stream (96 gal provided by Republic)	None
Ottawa Hills	Non-Subscription Curbside Program (in-house)	Yes	Dual Stream (weekly), 18-gallon container provided	Too Much sorting required by residents, may consider single steam but would need new equipment.
Providence Township	Drop-Off Recycling	No	N/A	N/A
Richfield Township	Drop-Off Recycling	No, Curbside would be too expensive and residents like idea of township paying for service.	N/A	Expense of Program, hinders curbside option
Spencer Township	Drop-Off Recycling	N/A	N/A	Have dumping problem related to recycling - need assistance dollars
Springfield Township	Drop-Off Recycling	No	N/A	obstacle to bundling services is trustees think it would be too expensive

Community Name	Type of Recycling Program	Is curbside (or would it be) best option?	How are recyclables collected?	Concerns/problems?
Sylvania Township	Subscription Curbside Program (11,000 households)	Yes, but political issue to bundle services.	N/A	Cost savings to residents and township through road maintenance
Village of Holland	Non-Subscription Curbside Program (weekly 550 households)	Yes	Single Stream	Litter associated w/ residents' putout or during collection. Contamination of materials in recycling stream.
Village of Whitehouse	Drop-Off Recycling	No, residents don't want additional cost of curbside. Looking to outsource.	N/A	N/A
Washington Township	Subscription Curbside program, Waste Hauling, and Drop-off Recycling	No	N/A	N/A
Waterville Township	Non-Subscription Curbside Program (bi-weekly)	Yes	Single Stream (any size)	unlimited bags, bulk items are paid for by home owners, they call for pickup. Bi-weekly w/ recycling.

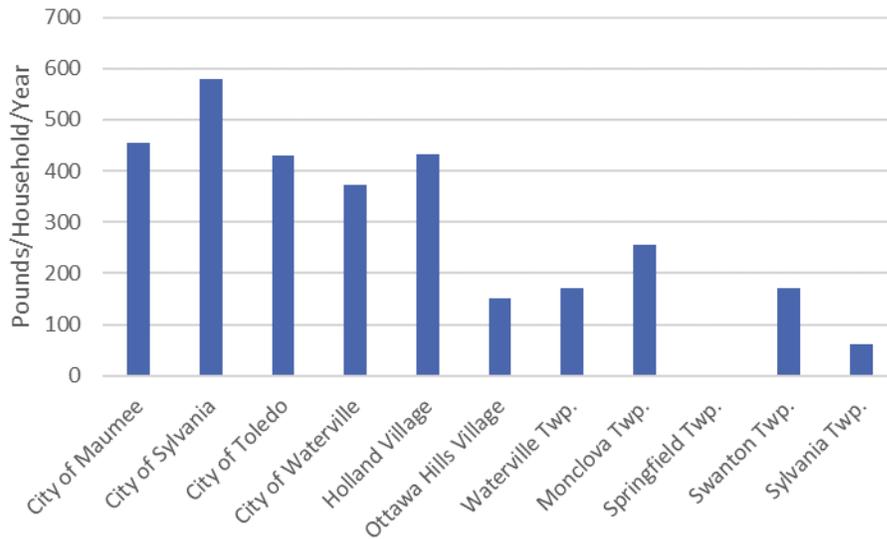
6. Education and Awareness

The District provides education and awareness initiatives and programs which encourage residents to use curbside recycling services. This includes information on the District's web site about where to obtain detailed information on curbside recycling by community as well as various promotional and outreach activities. See **Appendix L** for a discussion of Education and Awareness programs within the District.

7. Tons Recovered

Appendix B shows the tons of recyclables recovered from curbside recycling for communities which reported this information. In general, the non-subscription programs had much higher recovery rates than subscription programs. (See Figure H-6 below.)

Figure H-6. Tons Recovered by Curbside Program



Five communities with non-subscription service experienced recovery rates above (or near) 400 pounds/household/year. The Recycling Partnership, estimates that programs using carts which “...collect a common suite of materials, [have] strong outreach, and other BMPs [best management practices] can recover 400 to 450 pounds/household/year.”¹ This information suggests that some communities in Lucas County could improve their recovery rate, while others are performing well.

The low recovery rates for two of the non-subscription programs were due to only partial reporting. The Village of Ottawa Hills tonnage includes only cardboard and newspaper and the remaining recyclables were delivered to a drop-off site. For Waterville Township, their contract provider changed during the reference year, and tonnage reflects only the last seven months of the year.

8. Municipal Assistance Program (Curbside Recycling Collection)

Existing Program Type	Existing Program IDs
Municipal Assistance Program	2109

This program is designed to provide assistance to any community to improve their curbside collection services. The assistance can include, but is not limited to, helping with service provider contracts for trash, recycling, and yard waste collection, bundling multiple services into one contract, and designing economic incentive collection programs. This program has the

¹ “A Guide to Implementing a Cart-Based Recycling Program,” The Recycling Partnership, 2015.

potential of greatly improving the service received by residents in the County, and possibly lowering costs as well. However, no communities requested assistance in 2014.

9. Summary of Curbside Recycling Program Findings and Challenges

As shown in the map for this section, curbside collection programs are offered throughout Lucas County, and provide many residents with a convenient method of recycling. Ten communities currently provide non-subscription recycling, including the largest political jurisdiction, the City of Toledo. Toledo's program is operating well as evidenced by the lack of complaints from residents. The following challenges have been identified by the District during the analysis of this program:

Municipal Assistance Program

- The challenges involve finding ways to promote the program which eventually lead to meetings with local community leaders and residents.

Curbside Recycling Program

- At least two of the townships currently with subscription curbside may be better served with non-subscription programs based upon the number of households in their jurisdictions.
- Although joint contracting through the formation of consortiums to obtain better pricing and contract terms, it appears to be a challenge based on past experience by the District staff.
- No subscription recycling data is provided to the District by either the haulers or the communities.
- Economic incentive based programs are not prevalent throughout the District.
- The following table summarizes the concerns and challenges that are specific to a community:

Table H-6. Survey of Lucas County Communities: Concerns/Problems

Community Name	Concerns/Problems
Maumee	Litter associated with residents' putouts or during collection, lack of education for residents, and expense of program
Ottawa Hills	Too Much sorting required by residents, may consider single stream but would need new equipment.
Richfield Township	Expense of Program, hinders curbside option
Spencer Township	Have dumping problem related to recycling - need assistance dollars
Springfield Township	Obstacle to bundling services is trustees think it would be too expensive
Sylvania Township	Cost savings to residents and township through road maintenance
Village of Holland	Litter associated w/ residents' putout or during collection. Contamination of materials in recycling stream.
Waterville Township	Unlimited bags, bulk items are paid for by home owners, they call for pickup. Bi weekly w/recycling.

C. Special Events

Existing Program Type	Existing Program IDs
Special Event Recycling	2136, 8400, 2134

The District participates in a number of special events each year for recycling. These events are listed in Table 7 below and provides the name of the event and the sponsors or partners which host the event. (**Section 6, Restricted or Difficult to Manage Waste Streams** includes additional special events for collection of e-waste, scrap tires, and household hazardous wastes.) Keep Toledo/Lucas County Beautiful (KT/LCB) assists with a number of the special collection events. These events provide an excellent opportunity to educate the public, and improve awareness with regard to solid waste management issues. The District's role in these events is typically providing recycling dumpsters, servicing the dumpsters,

and in some cases, providing the recycling bins or containers which collect the materials from event participants.

Table H-7. Special Collection Events for Paper, Cardboard, Bottles, Cans, and Prescription Drugs

Event Name	Event Sponsors/Partners	Program Description
Trash Toss Program	KT/LCB, The Andersons	Distribution of boxes for collection of waste and recyclables
National Prescription Drug Take Back Event	KT/LCB, Toledo Police Dept., University of Toledo, Toledo/Lucas County Health Dept., Lucas County Coroner's Office	Multiple prescription drug drop-off boxes for residents
Toledo Zoo Party for the Planet	District, Toledo Zoo	Collection event for paper, cardboard, cans, and e-waste is collected. More than 44,000 pounds collected in 2014.
German American Festival	District	District provides assistance
Pollyball	District	District provides assistance
St. Joseph's Sylvania	District	District provides assistance
Toledo Botanical Art Festival	District	District provides assistance
St. Patrick's Heatherdowns	District	District provides assistance
Lucas County Fair	District	District provides assistance
Sylvania Chamber of Commerce Event	District	District provides assistance
Beer Festival	District	District provides assistance
Wine Festival	District	District provides assistance

1. Summary of Special Events Recycling Findings and Challenges

Special events are an important aspect of the District's participation in recycling programs in Lucas County. These events offer a good opportunity to recycle materials which would otherwise be disposed as well as educate the public with regard to the importance of recycling and other District

programs. The following challenges have been identified by the District during the analysis of this program:

- Contamination of trash and non-recyclable material is evident in the collections.
- Coordination of the special events is very time consuming for the District's limited staff.

D. Multi-Family Housing

Residents in multi-family housing units that typically do not have access to curbside recycling have access to the District's drop-off recycling program. Drop-offs are located in every city, village, and almost every township in Lucas County. Drop-offs are convenient for residents because they are located in areas that residents frequent, such as grocery stores, and in some cases, these drop-offs are located very close to multi-family housing units.

The District promotes its drop-off recycling opportunities to residents but does not specifically target residents in multi-family housing units, unless a MFH unit residents calls the District and requests assistance towards increasing recycling. The District could work more closely with property managers of multi-family housing units by compiling a list of apartment complexes and developing printed materials identifying drop-off site locations nearby to each apartment building. This information could be distributed to new residents upon moving-in.

Another alternative to promote multi-family housing (MFH) recycling involves the provision of some type of financial assistance to communities or property management companies. The Hamilton County Solid Waste District has a very successful grant program which pays for the first six months of recycling at a MFH unit, if the property management company agrees to fund the next 18 months. The Lorain County Solid Waste Management District is initiating a similar program, and is also offering a second grant program through local communities for MFH.

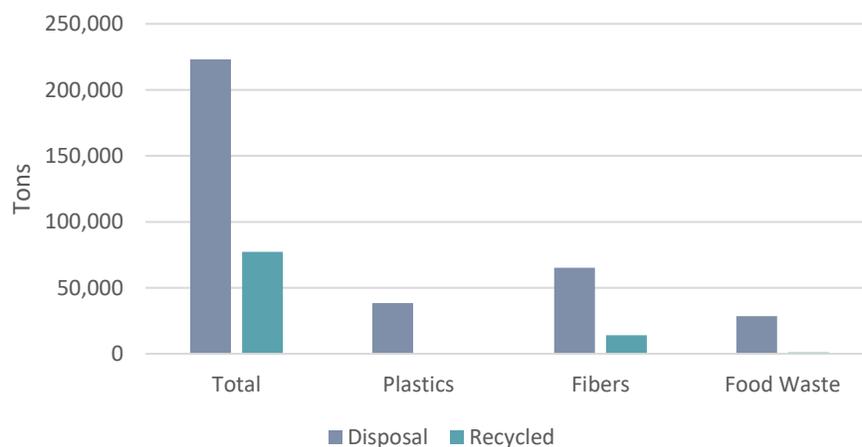
The following challenges have been identified by the District during the analysis of this program:

- The District does not specifically target residents in multi-family housing units, unless a MFH unit residents calls the District and requests assistance towards increasing recycling for education and awareness initiatives.
- The private sector does not provide recycling services to multi-family housing.

SECTION 2: COMMERCIAL SECTOR ANALYSIS

The District does not have data to determine the amount of commercial waste which is disposed since landfills are only able to characterize waste disposed in terms of residential plus commercial waste. However, the District estimated that roughly 59 percent of the residential/commercial waste stream sent to landfills can be categorized as commercial. Applying this percentage to the total Lucas SWMD residential/commercial disposal tonnage results in an estimated 223,000 tons of commercial waste disposed in 2014. Using the results of a 2013 waste characterization study conducted in Central Ohio and multiplying the percentages from the study times the estimated commercial disposal total yields approximate amounts of plastics, fibers, and food waste from the commercial sector which were disposed in 2014 (See Figure H-6).

Figure H-7. Estimated District Commercial Disposal and Recycling: 2014



Although the various amounts being disposed from the commercial sector are admittedly very rough estimates, the District believes that this analysis shows the magnitude of the materials continuing to be disposed. The recycled tonnages shown in Figure H-6 were determined by subtracting tonnages from total residential/commercial recycling which were clearly (or thought to be primarily) generated in the residential sector, such as yard waste, curbside recyclables, and drop-off recyclables. Of the total commercial recycling estimate shown in Figure H-7 (77,300 tons), more than 85 percent is represented by metals reported by salvage yards in Lucas County.²

One of the conclusions of this analysis suggests that substantial amounts of materials from the commercial sector continue to be sent for disposal. And at least some of these materials could potentially be recovered for recycling.

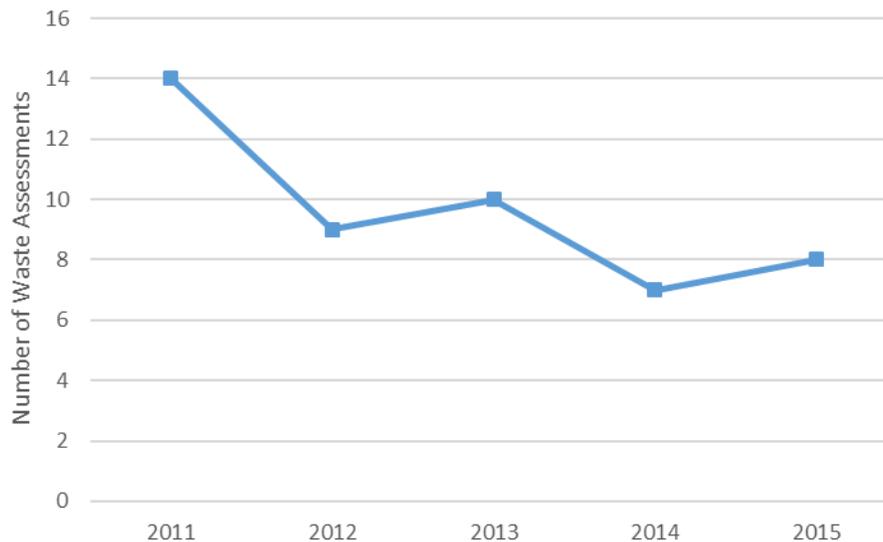
² Although the source of some of this material may be the residential sector, it is likely that the majority of the metals come from the commercial sector.

Lucas County includes a number of large commercial businesses and institutions which could be the focus of greater recycling within the District. Table H-8 lists a number of companies and institutions, with the number of employees based upon 2014 data.

Table H-8. Largest Commercial/Institutional Employers

Employer	Nature of Activity	City	Number of Employees
ProMedica Health Systems	Medical Facilities	Toledo	15,000
University of Toledo University & Health Science	Campus/Hospitals	Toledo	8,929
Mercy Health Partners	Hospitals	Toledo	7,052
Toledo Public Schools	Education	Toledo	3,665
Lucas County	Government	Toledo	3,511
Kroger, Inc. Retail	Grocery	Toledo	2,924
City of Toledo	Government	Toledo	2,775
Wal-Mart Retail	Sales	Toledo	2,375
The State of Ohio	Government	Toledo	2,083
Andersons (HQ)	Grain Storage/Process/Retail	Maumee	1,672
Meijer, Inc.	Retail Grocery	Toledo	1,608
United Parcel Service	Mail Service	Maumee	1,597
U.S. Postal Service	Postal/Government	Toledo	1,587
HCR Manor Care (HQ)	Health Care Services	Toledo	1,463
YMCA of Greater Toledo	Organization	Toledo	1,313
Lott Industries	Packaging Services	Toledo	1,200
Toledo Edison Co., A FirstEnergy Co.	Public Utility	Toledo	1,200
Toledo Clinic, Inc.	Medical Clinic	Toledo	1,040
Hollywood Casino	Casino	Toledo	944
Washington Local Schools	Education	Toledo	860

The District has an ongoing program with the University of Toledo (UT) which performs waste assessments and energy audits for companies within Lucas County. Figure H-8 shows the number of waste assessments for commercial businesses and organizations which have been conducted by UT since 2011. It is possible that additional resources could be used to fund this program, and more companies could benefit from cost savings and recycling. This program is discussed in greater detail within Section 3: Industrial Sector Analysis.

Figure H-8. Number of Commercial Waste Assessments

The following challenges have been identified by the District during the analysis of this program:

- Although the District does offer recycling drop-off containers to commercial and institutional entities, there is still a potential to offer more services to increase recycling, whether by the private sector or the District.
- The District does not engage with certain stakeholders in the County represented by the commercial sector including property management companies, small and large box stores and retail outlets, restaurants and office complexes when it comes to recycling services as the District's policy is to not compete with the private sector.

SECTION 3: INDUSTRIAL SECTOR ANALYSIS

In 2014, District industries recycled approximately 224,000 tons of waste, while disposing only 14,500 tons. This pattern is consistent with each of the last three years resulting in a recycling rate above 90 percent. The tons of industrial waste disposed and recycled, including the types of materials recycling, are discussed in some detail in Section 7, Diversion Analysis.

Lucas County is home to a number of large manufacturers which are listed in Table H-9. Automotive manufacturing or automotive-related manufacturing as well as glass manufacturing represent the largest industrial employers in the County.

Table H-9. Largest Industrial Employers in Lucas County

Employer	Nature of Activity	Number of Employees
Chrysler Toledo Complex	Automotive Mfg.	5,137
***Chrysler Holdings - Toledo North Assembly Plant	Automotive Mfg. - 2,475	
***Toledo South Wrangler Plant (Kuka-30)	Automotive Mfg. - 2,394	
General Motors/Power Train	Automotive Mfg.	1,845
Toledo Molding & Die, Inc.	Injection & blow molded components	1,570
Libbey, Inc. (HQ)	Glass Mfg.	1,318
Owens-Corning (HQ)	Glass Mfg.	1,229
Johnson Controls	Batteries & Auto Parts	1,026
Dana Holding Corp	Automobile Parts & Supplies-Mfrs	500
BP	Oil Refinery	550

A. Waste Minimization Assessments

As mentioned in Section 2, the District provides funding to the University of Toledo to conduct waste minimization assessments and energy audits for commercial and industrial businesses, institutions, and organizations (see following table).

Existing Program Type	Existing Program IDs
District/University of Toledo Commercial/Industrial Outreach Program - waste minimization assessments, material exchanges	2121

This program provides an important service for the commercial/institutional and industrial sectors, with a number of businesses and institutions requesting assistance each year. Figure H-9 shows that the number of commercial businesses and institutions requesting waste assessments has varied between seven and 14 during the last five years, while UT has conducted one to three assessments for industry. Many (if not all) of the assessments for the commercial/institutional sector are generally less complicated and shorter than those conducted for industry.

Figure H-9. Waste Assessments Conducted by the University of Toledo

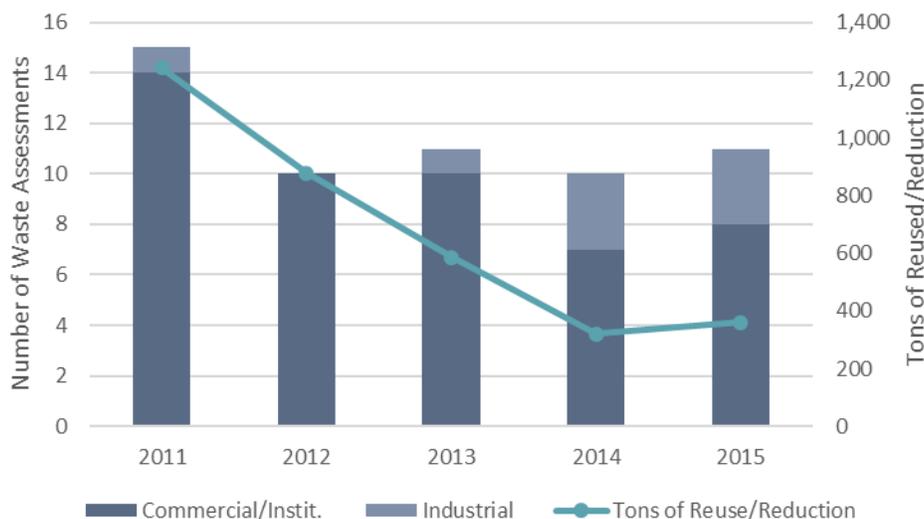


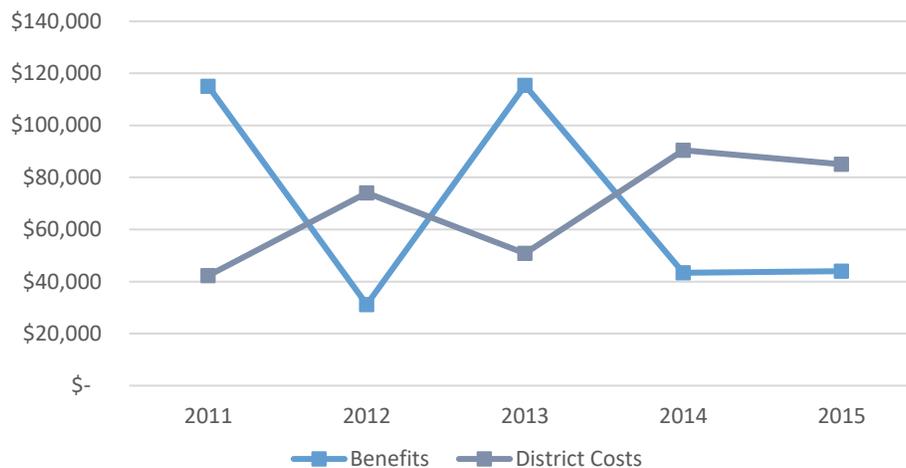
Figure H-9 also shows the total estimated tonnage of materials identified for reuse and waste reduction. As expected, the tonnage decreases as the number of assessments decrease. Many of the largest opportunities for reuse, waste reduction, or recycling was identified during waste assessments for government institutions, schools, medical facilities, and non-profits.

In addition to the waste assessments, UT has provided other beneficial services to companies and institutions through this program. During the last five years, these services have included:

- 20 energy waste audits resulting in more than 993,000 kilowatt hours identified for reduction;
- 28 additional projects in support of the District such as assistance in used oil surveys, annual reports, landfill audits, analysis of plastics-to-oil project tonnage, and commingled commodity pricing assessment.

As part of the program, UT has estimated the annual monetary benefit potential for companies and other entities participating in the program. Figure H-10 shows these benefits³ as well as the cost to the District to fund the program.

³ Additional financial benefits accrue to the District from other UT activities which include used oil surveys, annual reports, landfill audits, analysis of plastics-to-oil project tonnage, and commingled commodity pricing assessment. Although a specific monetary value is difficult to ascertain, these activities do represent a positive financial benefit to the District considering the alternative costs which would be required to use other sources (consultants or other groups) to perform these services.

Figure H-10. Waste Assessments Benefits vs. Program Cost

Companies and institutions become aware of the waste assessment program mostly by “word-of-mouth.” In addition, the Toledo-Lucas County Sustainability Commission, which is discussed in detail in Section 10, includes a large number of companies located in Lucas County. The Commission often refers companies to UT in order to take advantage of this program. Nevertheless, it is possible that more companies, institutions, and non-profits would seek assistance for waste assessments and energy audits if a more systematic approach were to be developed to promote and advertise the program. In addition, it is possible that the District could direct more funding towards this program. The District recently signed a new five-year contract with UT to continue the waste assessments and energy audits.

1. Summary of Waste Assessment Program Findings and Challenges

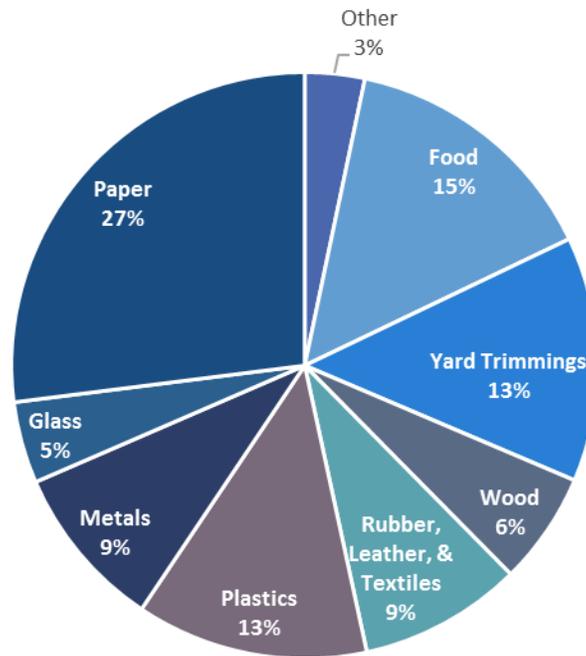
The waste assessment program funded by the District and implemented through the University of Toledo offers many benefits, including identifying waste reduction and reuse opportunities for companies, institutions, and organizations participating, and providing a chance for greater education with regard to solid waste management issues. The following challenges have been identified by the District during the analysis of this program:

- The waste assessment program needs greater awareness and promotion.
- Certain problematic waste streams such as thermos-set plastics, glass and food waste are difficult for the industrial sector to manage and recycle.
- Industrial sector businesses do not take advantage of the market development grant opportunities that the State of Ohio EPA offers. More promotion of this grant is needed.
- Lack of consortium contracting of solid waste services to save money and add services.

SECTION 4: RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS

According to U.S. EPA, paper (which includes cardboard), food, yard waste, and plastics are the categories comprising the highest percentage of the residential/commercial waste stream before any recycling takes place (see Figure H-11).

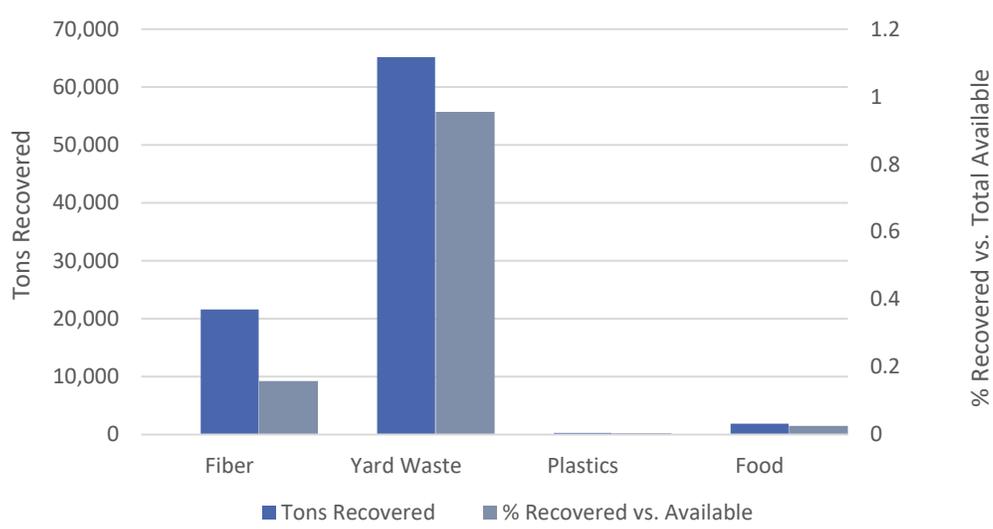
Figure H-11. U.S. Residential/Commercial Waste Composition: 2013



In 2014, the District recovered more than 21,000 tons of fiber (i.e., cardboard and all other paper), and more than 65,000 tons of yard waste. Small amounts of plastics and food were recovered for recycling or composting. (See Figure H-12.) Applying the national waste composition percentages to total R/C generation provides estimates of the total tonnage potentially available for recovery in the District.⁴ Figure H-12 shows the percentage of materials recovered based upon the tons recovered divided by tons potentially recoverable. Approximately 16 percent of the available fiber and 96 percent of available yard waste was recovered from the waste stream in 2014, while small percentages of available plastics and food was recovered. Lucas County’s recovery of food waste has increased since 2010, the recovery of fiber and yard waste has been variable from year to year, the recovery of plastics has decreased.

⁴ These estimates very likely overstate the tonnage which could reasonably be recovered from the R/C waste stream due to contamination and other factors.

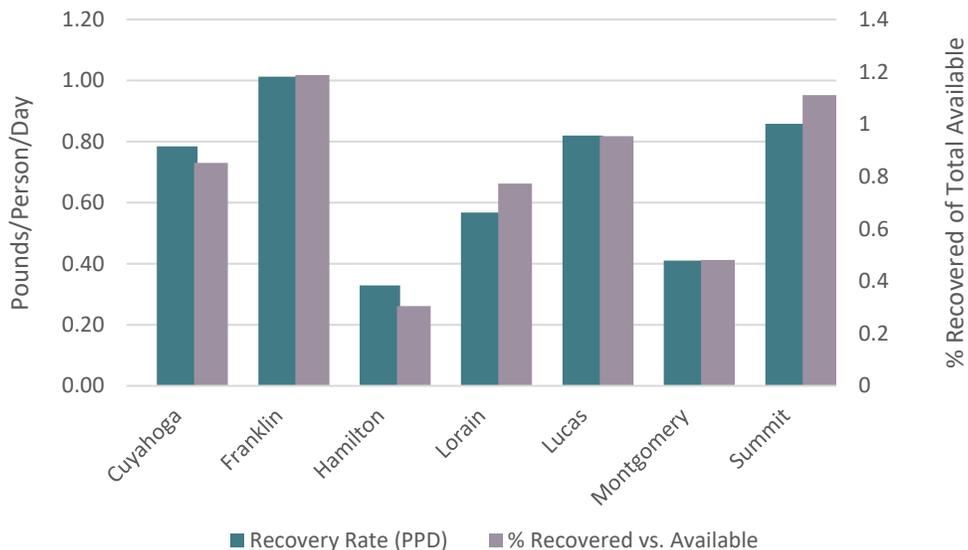
Figure H-12. District Recovery of Fiber, Yard Waste, Plastics and Food



A. Yard Waste

The recovery rate for yard waste in the Lucas County SWMD was at the higher end of the recovery rate range compared to recovery rates in Ohio’s other urban SWMDs.

Figure H-13. Recovery Rates of Yard Waste for Ohio Urban SWMDs: 2014



The District’s recovery rate for yard waste in 2014 was approximately 0.82 pounds per person per day, with only SWACO having a significantly higher recovery rate. Based on the national average composition percentage, Lucas County recovers nearly all of the yard waste which is available in the residential/commercial waste

stream. The District continued three programs in 2014 related to yard waste management. (See table below.)

Existing Program Type	Existing Program IDs
Municipal Leaf Collection Programs	5211
Municipal Yard Waste Collection Programs	8404
Technical Assistance to communities	4841

The first two programs are implemented through local municipalities and townships. A number of communities provide collection of yard waste as shown in Table H-10. Much of this effort is focused on the collection of leaves in the fall.

Table H-10. Community Yard Waste Collection Programs

Community Name	Yard waste management...collection offered?	Types of YW collected
Providence Township	No	N/A
Waterville Township	Yes, fall Leaf collection and brush drop off	Leaves and brush
Springfield Township	Yes, fall Leaf collection over 8 weeks. Have Clean Wood Recycling Cards for residents. Storm Cleanup for significant storms only.	Leaves
Ottawa Hills	Yes, fall leaf collection and subscription yard waste program. Storm cleanup as needed.	Leaves
Spencer Township	Yes, fall leaf collection in specific areas	Leaves
Jerusalem Township	Yes, Leaf collection and brush trimmings	Leaves and brush
Washington Township	Yes, fall leaf collection and Storm Cleanup as needed.	Leaves
City of Sylvania	Yes, Parks and Forestry pickup bi-weekly and residents can purchase a can or sticker to use all year. Fall Leaf Collection. And Storm Cleanup as needed.	Grass, Leaves, and Brush
City of Oregon	Yes, fall leaf collection and Storm Cleanup as needed.	Leaves
Village of Holland	Yes, fall leaf collection and Storm Cleanup as needed.	Leaves, and free cards to drop off at Clean Wood
Village of Whitehouse	Yes, leaf collection and can request a 1-ton truck overnight and it's delivered to Ohio Compost.	Leaves, other materials that go to Ohio Compost.

Community Name	Yard waste management...collection offered?	Types of YW collected
Monclova Township	Yes, Fall leaf collection Ohio Compost for large volumes and storm cleanup (limited)	Leaves on in fall
Maumee	Yes, Fall Leaf collection and can purchase compost bags from Republic or take to Ohio Compost. Also, Storm Cleanup as needed.	Leaves, Grass, and Brush
Richfield Township	No, residents compost or burn on property	N/A
City of Waterville	Yes. Fall leaf collection, also has a contract with Clean Wood Recycling. Storm Cleanup as needed.	Grass, Leaves, and Brush
Sylvania Township	Yes, and storm cleanup as needed. Curbside collection bi-annually.	Brush and Leaves

In addition to the yard waste collection information shown in the table above, the City of Toledo’s Division of Streets Bridges & Harbor collects an annual average of 300,000 cubic yards of loose leaves in the City of Toledo to prevent them from clogging the sewer system and creating unsafe driving situations. Typical leaf collection programs run from November 1st until the first major snowfall in December. Every zip code in the City of Toledo receives leaf pick up at least once during the fall season. Also, cleanups due to storms are provided as needed. Other yard waste is not picked up separately in the City, however, residents are encouraged to use local compost facilities.

1. Summary of Yard Waste Program Findings and Challenges

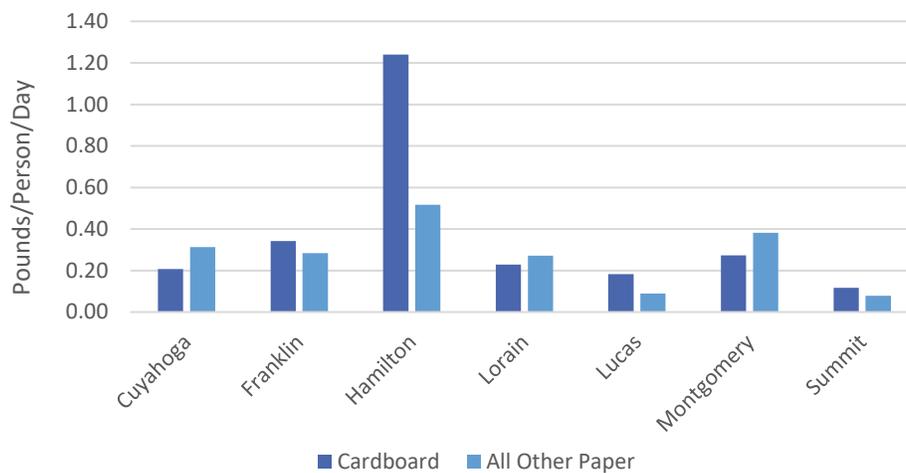
Using national composition percentages, it appears that most of the yard waste generated in Lucas County is currently being recovered. Many communities have existing collection programs and a number composting facilities report to Ohio EPA each year, providing the tons of yard waste processed. The following challenges have been identified by the District during the analysis of this program:

- Most communities do not offer yard waste collection at the curb other than fall leaf collection.

B. Cardboard and Paper

In terms of the recovery rate for cardboard and other paper, Lucas County experienced a somewhat lower per capita rate than most of the other urban SWMDs in Ohio during 2014. This information is based on reported recycling data. (See Figure H-14 below.)

Figure H-14. Recovery Rates of Cardboard and Paper for Ohio Urban SWMDs: 2014



Lucas County reported recovery rates of 0.18 pounds per person per day (PPD) for cardboard and 0.09 PPD for all other paper. Only the Summit/Akron Regional Authority reported lower recovery rates for these materials. According to the previous figure, 16 percent of available fiber (cardboard and all other paper) was recovered in Lucas County in 2014.

The following challenges have been identified by the District during the analysis of this program:

- The District's cardboard and paper recycling data from the commercial sector is primarily based on reported data from a voluntary recycling survey. The results of the reported survey data potentially skew the comparison with other urban districts.
- The District currently does not compete with the private sector on commercial recycling, therefore the District does not have any programs which specifically target the recovery of cardboard and paper. The District could explore the possibility of developing one or more programs to promote recovery of greater amounts of cardboard and paper, especially within the commercial sector.

C. Food Waste

Lucas County generators from the residential/commercial sector reported recycling approximately 1,860 tons of food waste in 2014, which is estimated to be 2.5 percent of the total amount of food waste available for recovery in the waste stream. Obviously, food waste represents a large potential for additional recycling or waste recovery.

The District does not currently have any programs which target food waste. However, there is interest in developing a program to collect food waste and deliver it to the Lucas County Water Resource Recovery Facility (WRRF), which is Lucas County's POTW (publicly-owned treatment works). The interest by the District in this area is twofold, first food waste is not directly addressed by current District programming and second, the WRRF operated by the Lucas County Sanitary Engineer's office is modifying the facility with the potential to accept food waste in the future. The Sanitary Engineer plans to upgrade the existing anaerobic digesters and will be looking for a variety of feedstocks from the region to support the volatile solids loading needed to increase biogas production.

The food waste would be co-digested with biosolids from the WRRF for increased electrical production to reduce dependency on the electrical grid.

Tables including major District employers in Chapter 2 list several possible generators of large amounts of food waste and other organics. ProMedica Health Systems, the University of Toledo, Mercy Health Partners, Toledo Public Schools, Kroger's, and Walmart are some of the entities which may be able to provide food waste for the WWTP. Food manufacturers in Lucas County may also be a good source of material for this project, and the ten largest of these companies (in terms of employees) are shown in Table H-11.

Table H-11. Largest Food Manufacturers and Food Distributors in Lucas County

Company Name	City	Food Product Category	# of Employees
The Andersons	Maumee	Grain Elevators-Equip & Supplies (Whls)	500
Hickory Farms	Maumee	Gourmet Shops	850
Frostbite Brands	Toledo	Ice Cream & Frozen Desserts (Mfrs)	300
Honeybaked Ham	Holland	Ham Specialty Stores	200
Pepsi Beverages Co.	Toledo	Beverages (Whls)	180
Coca-Cola Bottling Co.	Toledo	Bottlers (Mfrs)	150
J M Smucker Co.	Toledo	Preserves, Jams & Jellies (Mfrs)	150
Rexam Beverage Can Americas	White-house	Can-Manufacturers	150

Company Name	City	Food Product Category	# of Employees
Granite City Food & Brewery	Maumee	Restaurants	115
Sautters Food Center	Sylvania	Food Markets	100
Kraft Foods	Toledo	Food Products (Whls)	95
Seven-Up Bottling Group-Toledo	Toledo	Beverages (Whls)	95
Maumee Bay Brewing Co.	Toledo	Restaurants	60
A & M Cheese	Toledo	Cheese Processors (Mfrs)	50
Original Tony Packo's	Toledo	Food Products & Manufacturers	50
Bassett Nut Co.	Holland	Nuts-Edible-Wholesale & Processing	40
Oasis Mediterranean Cuisine	Toledo	Food Products & Manufacturers	40
Consumer Guild Foods	Toledo	Pickled Fruits/Vegs & Dressings (Mfrs)	27
Natural Foods	Toledo	Dried/Dehydrated Fruits Vegetables	25
Arbor Foods	Toledo	Food Products & Manufacturers	20
Center For Innovative Food Technology	Toledo	Food Products & Manufacturers	20
Middle Eastern Delites	Toledo	Food Products & Manufacturers	20

The following challenges have been identified by the District during the analysis of this program:

- The District does not have any programs targeted for food waste collection and processing.

D. Plastics

The District currently recycles a small amount of plastics from the residential/commercial sector. In 2014, 278 tons were recovered while the estimated tons available for recycling is nearly 65,000 tons. The following challenges have been identified by the District during the analysis of this program:

- The District does not have any programs targeted for plastic recycling other than the drop-off program. Since the District’s policy is to not compete with the private sector on recycling, the District produces a recyclers list on the District’s web site that includes many locations that accept plastics as well as other materials.

SECTION 5: ECONOMIC INCENTIVES ANALYSIS

Existing Program Type	Existing Program IDs
Community Grant - Recycling Incentive Program	2112
Market Development	2150
Municipal Assistance	5221

The District currently offers three programs which directly or indirectly provide economic incentives for greater recycling or waste reduction. The Community Grant Program has been in existence since 2005, and has been designed to assist the District in meeting the Solid Waste Plan objectives and goals. Grant funds have been awarded to communities, upon District approval, that meet District criteria and complete a grant application. Programs that improve the District’s achievement of Goal #2 have received priority funding – consistent with the objectives identified in the District’s Municipal Assistance program, combining directed technical assistance with the financial incentive provided by the grants. All communities that received grant funding have been required to submit a grant report at the end of the fiscal year outlining a description of how the grant money was allocated, program goals, qualitative and quantitative data (including how many households participated and the tons of recyclables diverted from the landfill) as part of the grant funded program.

Grants have not been awarded under this program since 2010 due to a lack of funding initially, and then a change of priorities. (Funds are currently being reserved in anticipation of building and operating a material recovery facility.) However, when grants were available, they were allocated primarily for the purchase of equipment, including trucks used for recycling collection programs. The District continues to assist communities in securing loans and grants to enhance recycling programs.

Market development grants are available through Ohio EPA to support projects which include the use of recycled materials in product development and promote greater recovery of recyclables. The District has provided assistance to local businesses in obtaining grants by helping with preparation of grant applications. As an example, Clean Wood Recycling has been assisted in obtaining a \$130,000 grant for promoting greater recovery and processing of glass from bars and restaurants and special events. The District has also assisted in preparing applications for Habitat for Humanity for a de-construction project, and food waste composting at ProMedica Health Systems.

The Municipal Assistance Program (program ID 5221), which is essentially the same overall program as Program ID 2109, includes the implementation of economic incentive based collection programs. Economic incentive based programs provide economic incentives to residents to recycle more. By recycling more, the resident pays less for their trash bill. Five communities in Lucas County currently offer economic incentive based curbside collection.

Summary of Economic Incentive Programs Findings and Challenges

Each of the programs discussed above in this section have the potential to improve recycling and waste reduction within the District. The following challenges have been identified by the District during the analysis of this program:

- The primary challenge for both the market development grant program and the municipal assistance program is developing greater interest from companies and local communities.

SECTION 6: RESTRICTED AND DIFFICULT TO MANAGE WASTE STREAMS ANALYSIS

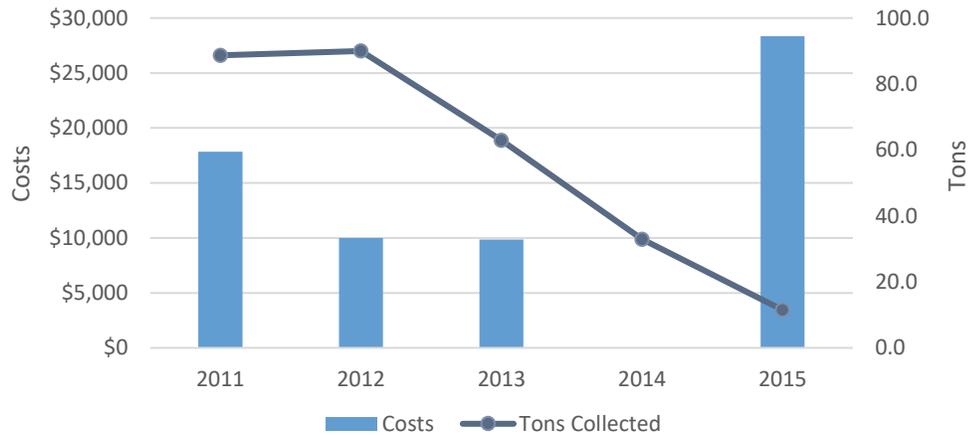
A number of materials, while not typically found in solid waste in large quantities, are not desired in a landfill. These materials include scrap tires, household hazardous wastes, lead-acid batteries, E-waste (or electronics), appliances, household batteries, and bulk items such couches and mattresses. The District or local communities have programs designed to address each of these materials.

A. Scrap Tires

Existing Program Type	Existing Program IDs
Scrap Tire Collections	2128

The District has been sponsoring scrap tire collections each year, funded with Community Recycling and Litter Prevention grants from Ohio EPA. The costs for these collections as well as the tons collected are shown in Figure H-15. Although the District obtained a grant in 2014 and held three collection events, no costs are shown for this year since the District was not invoiced for expenses until 2015.

Figure H-15. Scrap Tire Collections: 2011 – 2015



Tire collected through District-sponsored events in 2015 decreased substantially from the year before due to six collection events held by the City of Toledo. The District assisted with the City events, and moved the District-sponsored events to locations outside of City limits.

According to the Toledo-Lucas County Health Department, the dumping of scrap tires has been a problem both now and in the past. The Health Department believes that the collection events help residents properly dispose of the tires, and suggest that most of the scrap tires illegally dumped are discarded by illegal transporters.

The District also provides education to the public on its website regarding locations for tire recycling and proper disposal of tires. Further discussion of this program can be found in **Appendix L**.

1. Summary of Scrap Tire Collection Program Findings and Challenges

The District has obtained grants to assist with scrap tire collections for many years and these events continue to be successful. In 2015, the City of Toledo also held scrap tire collections with funding from the State of Ohio. The following challenges have been identified by the District during the analysis of this program:

- Scrap tires collection and processing are expensive.
- Residents do not always turn in their old tires at dealers when purchasing new tires.
- Identification of illegal tire transporters is difficult.

B. Household Hazardous Wastes (HHW)

Existing Program Type	Existing Program IDs
Evaluation of HHW collection program	2137
HHW collection program	2134

Residents in Lucas County have some options for disposing of household hazardous wastes. The District lists these businesses on their website and in the “Recycler’s List” compiled by Keep Toledo/Lucas County Beautiful (KTLCB). Fees are associated with the disposal of some types of materials.

Collection of latex paint has been very successful through a company called E-Paint Recycling, LLC, which charges residents \$1 per can to drop off left-over paint. This company is also considering collecting oil-based paint.

The District completed an evaluation for the collection of HHW in 2012. One conclusion from the evaluation was that a permanent collection facility for Lucas County is not financially feasible. However, the District is currently considering the possibility of making necessary improvements to their Matzinger Road facility so that HHW could be accepted and processed at this location. The proposal being evaluated would allow acceptance of materials for approximately one-half day, two days per week. One of the unresolved issues at present involves the building upgrades which will be necessary to satisfy the local fire department requirements.

The District also provides education to the public on its website and through flyers regarding organizations and businesses which accept HHW. Further discussion of this program can be found in **Appendix L**.

1. Summary of HHW Program Findings and Challenges

Residents have some options available for safe disposal of HHW. In addition, the District is currently exploring the possibility of establishing a drop-off site for HHW at the Matzinger Road facility. The following challenges have been identified by the District during the analysis of this program:

- The District does not have a permanent collection for HHW materials that do not have a local recycling or management option.

C. Lead-Acid Batteries

Existing Program Type	Existing Program IDs
Lead-Acid Battery Recycling	2149

The District provides information on its website and in paper flyers which list numerous businesses that accept lead-acid batteries. U.S. EPA estimates that 99 percent of lead-acid batteries are recycled, and the District is not aware of any problems with recovery of these batteries in Lucas County.

D. E-Waste

Existing Program Type	Existing Program IDs
Electronics Collection	2136

Numerous opportunities exist in the District for residents to dispose of electronics (or e-waste), and these businesses, organizations, and collection events are listed on the District’s website and in the “Recycler’s List.” Several collection events were held in the District during 2014 as well. (See Table H-12.)

Table H-12. Collection Events for Electronics: 2014

Event Name	Sponsor(s)	Description	Pounds Collected
eCycle Day	The Andersons	Five collection events in 2014, each at a different location	N/A
Toledo Zoo Party for the Planet	Toledo Zoo, District	Collection event	43,416
e-waste drive	Davis College	Collection event	4,000
Electronics Collection	City of Toledo	Collections in each of 6 council districts	N/A

1. Summary of E-Waste Program Findings and Challenges

The District believes that the opportunities for e-waste disposal are very sufficient within Lucas County and will continue to be. As evidence, the District receives very few phone calls from residents regarding electronics, with the exception of calls about TVs. The following challenges have been identified by the District during the analysis of this program:

- Adequate options for collection of TVs do not currently exist within the District.

E. Appliances

The District does not have a program which specifically targets the collection of appliances. However, the District maintains a list of companies which accept small appliances on their website and in the “Recycler’s List.” Companies available for

Freon removal services are also provided. In 2014, more than 4,000 tons of appliances were reported recycled from the residential/commercial sector.

F. Household Batteries

Similar to appliances, the District does not have a program which specifically targets the collection of household batteries. However, the District maintains a list of companies which accept household batteries on their website and in the “Recycler’s List.” Four tons of household batteries were recycled from residential/commercial sources in 2014.

G. Bulk Items

Most communities have some type of bulk pickup for residents as a part of the collection contract with the service provider. Residents are typically required to call and schedule for pickup of a bulk item. The current contract negotiations with Republic for the City of Toledo includes a proposal to increase the number of bulk pickups in an effort to minimize a dumping problem associated with these materials.

SECTION 7: DIVERSION ANALYSIS

The table below shows the amounts which were disposed and diverted from disposal through recycling from 2010 to 2014. Overall, diversion in the residential/commercial (R/C) sector has decreased slightly since 2010. Recycling in the industrial sector has been relatively stable since 2011, with the largest amount reported recycled in 2013.

Table H-13. Disposal and Recycling in the Lucas County SWMD: 2010 – 2014

Year	Pop	Residential/Commercial		Industrial		Total	Per Capita Generation (ppd)	% Change in Total Tons
		Disposal	Recycled	Disposal	Recycled			
2010	441,815	389,406	190,038	19,753	173,891	773,088	9.6	-
2011	440,005	377,754	182,922	61,338	230,664	852,678	10.6	10.3%
2012	437,998	386,465	171,454	16,309	233,826	808,054	10.1	-5.2%
2013	436,990	383,234	167,459	11,874	254,519	817,085	10.2	1.1%
2014	436,468	387,690	181,672	14,476	224,052	807,889	10.1	-1.1%

A. Residential/Commercial Sector

The District’s R/C recycling (or diversion) rate during the past five years has fluctuated between 23 and 32 percent. (See Table 14.) With the exception of 2011, the District has met Goal #2 for 25 percent recycling in the R/C sector. The per capita diversion rate as measured in terms of pounds per person per day (PPD) decreased slightly from 2010 to 2014.

Table H-14. Residential/Commercial Diversion Rates: 2010 – 2014

Year	Diversion Rate	
	Percent (%)	Per Capita
2010	29.62%	2.36
2011	22.73%	2.28
2012	28.02%	2.14
2013	30.07%	2.10
2014	32.47%	2.28

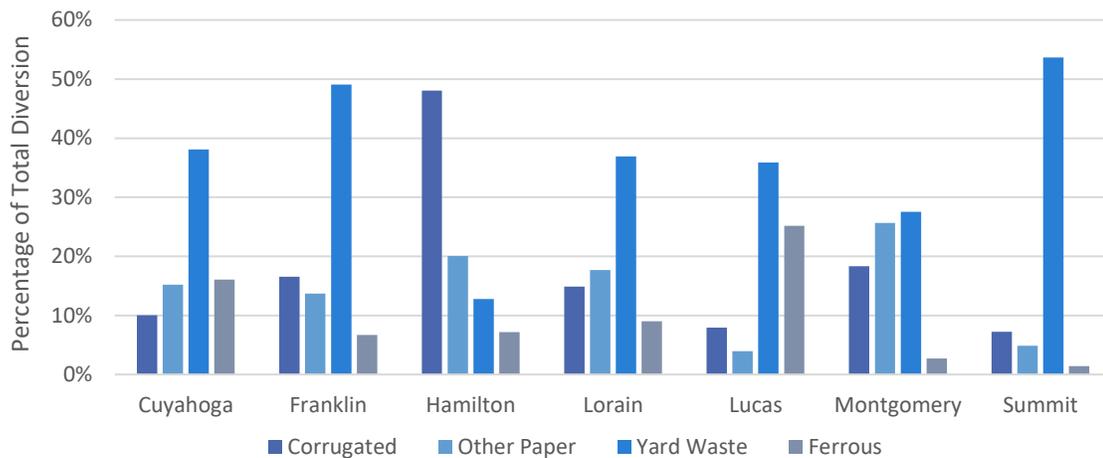
Compared to other urban SWMDs in Ohio, the diversion rate for the Lucas County SWMD is at the high end of the range for both the percentage recycled and per capita recycled. (See Table H-15.) Only Franklin County (or SWACO) had a higher percentage recycling rate, and the Hamilton SWMD achieved a slightly higher per capita recycling rate. From 2010 through 2014, the statewide R/C percentage recycling rate increased slightly to 28.6 percent, while the per capita recycling rate increased from 1.66 to 1.81 PPD, so the Lucas SWMD is well above the statewide averages.

Table H-15. R/C Diversion Rates for Ohio Urban SWMDs: 2014

SWMD Name	Diversion Rate	
	Percent (%)	Per Capita
Cuyahoga	30.2%	2.06
Franklin	32.7%	2.06
Hamilton	32.1%	2.58
Lorain	28.3%	1.54
Lucas	32.5%	2.28
Montgomery	23.6%	1.49
Summit	28.0%	1.60

The types of materials which are generally recovered for recycling from the R/C sector in Ohio's urban SWMDs are illustrated in Figure H-16 below. The chart shows that yard waste comprises a very significant percentage of total diversion for all of these solid waste districts, especially in Summit and Franklin. To a lesser extent, corrugated and other paper also make up a substantial portion of total diversion for most of these districts. For the Lucas County SWMD, the majority of materials recycled was yard waste, however, ferrous metals also contributed much of the total (25 percent).

Figure H-16. Types of R/C Materials Recycled in Ohio’s Urban SWMDs: 2014



While the Lucas County SWMD experienced a modest decrease in the R/C tonnage recycled in 2010 compared to 2014, the disposal tonnage also decreased to a much greater extent. (This dataset contains too few data points to determine a statistically significant relationship between recycling and disposal.)

The current Plan projected 106,114 tons of R/C recycling and 59,050 tons of composting for 2014, for a total of 165,164 tons. The R/C rates projected in the current plan for 2014 were 23.7 percent and 2.05 PPD. As shown above, the actual percentage diversion rate is much higher than the projected value, and the actual per capita rate is somewhat higher. One reason that the actual recycling rates are higher is the reported recycling of large amounts of yard waste as compared to the projections in the plan.

B. Industrial Sector

The industrial recycling rates in the District for 2010 through 2014 is shown in Table H-16. The District has consistently achieved an industrial recycling rate well above the percentage goal for the industrial recycling established in the *State Solid Waste Management Plan*.

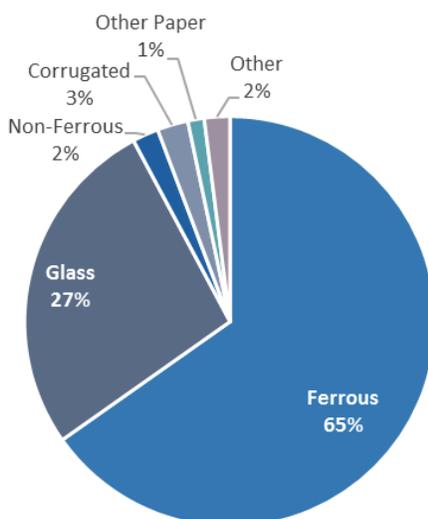
Table H-16. Industrial Recycling Rates for Lucas County SWMD: 2010 – 2014

Year	Diversion Rate	
	Percent (%)	Per Capita
2010	89.80%	2.16
2011	78.99%	2.87
2012	93.48%	2.93
2013	95.54%	3.19
2014	93.93%	2.81

Compared to the current Plan which projected 213,239 tons of industrial recycling for 2014, the actual amount diverted in the reference year is slightly higher. The current Plan also projected an industrial recycling rate of 73.9% for 2014, which is substantially lower than the actual recycling rate.

Ferrous metals and glass represent the two material types recycled in greatest amounts. (See Figure H-17.) Years 2010 through 2013 show similar relationships concerning the types of materials recycled from the industrial sector.

Figure H-17. Industrial Material Types Recycled in Lucas SWMD: 2014



The District’s industrial recycling rate for 2014 was considerably higher than other urban SWMDs similar in population. The Lorain SWMD reported 65 percent industrial recycling, Montgomery reported 86 percent, while the Summit SWMD achieved 48 percent as can be seen in the following table.

Table H-17. Industrial Diversion Rate Comparison

SWMD Name	Industrial Diversion Rate
Cuyahoga	80.5%
Franklin	79.9%
Hamilton	77.1%
Lorain	64.6%
Lucas	93.9%
Montgomery	85.8%
Summit	48.4%

SECTION 8: SPECIAL PROGRAM NEEDS ANALYSIS

Format v4.0 defines Section 8 as programs which are specifically funded under the authority granted in Ohio Revised Code Section 3734.57(G)(3) through (9). These

program areas of allowable uses for SWMD funds collected under ORC Section 3734.57 are as follows:

- Section 3734.57(G)(3). Boards of Health, Solid Waste Enforcement
- Section 3734.57(G)(4). Counties, Road/Facility Maintenance
- Section 3734.57(G)(5). Boards of Health, Water Well Sampling
- Section 3734.57(G)(6). Out-of-state Waste Inspection
- Section 3734.57(G)(7). Enforcement of Anti-littering
- Section 3734.57(G)(8). Boards of Health, Training & Certification
- Section 3734.57(G)(9). Cities and Townships, Road maintenance, public services, etc.

The District has provided funding under allowable use #4 (County Assistance, Providing other public services) to Lucas County for a number of years. In 2010 through 2012 and in 2014, the District allocated \$30,000 to this use, \$5,000 in 2013, and \$80,000 in 2015.

Allowable use #9, Cities and Townships Assistance, is the only other expenditure area in which the District has allocated funds. However, the expenditures included in this use on the District's quarterly fee reports are actually the pass-through money which is paid to Republic Services for Toledo's curbside recycling program.

The District does anticipate the need to allocate monies under any of the other allowable uses applicable to this section.

SECTION 9: FINANCIAL ANALYSIS

The financial analysis has been divided into three parts: Revenues, Expenses, and District Fund Balances.

A. Revenues

The nature of the District's revenue has changed considerably during the past six years (2010 through 2015). In 2010, the majority of District revenue consisted of the generation fee, and contracts negotiated with solid waste facilities in Michigan which remit fees in exchange for the right to receive District waste through designation agreements. The curbside recycling program for the City of Toledo began in 2011, and since the District manages the service contract with Republic for this program, the City provides funds to the District which then pays Republic for their services. The revenue from this program is shown in Figure H-18 as "Reimbursements."

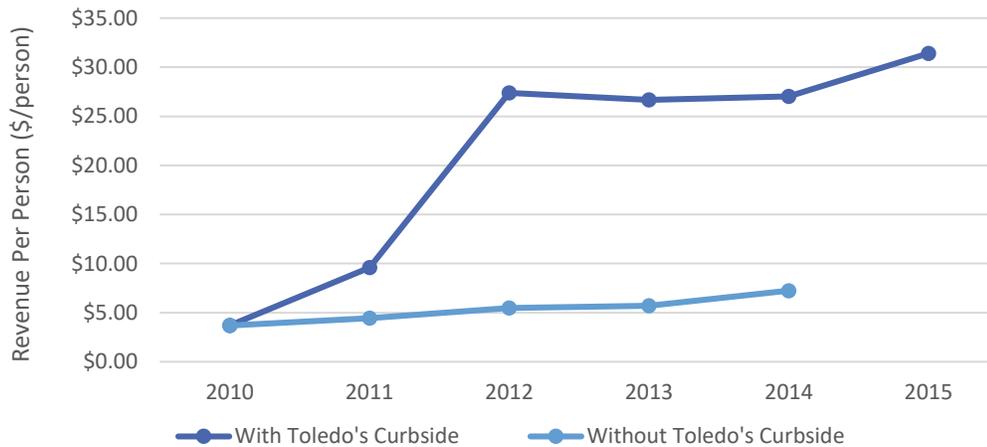
Figure H-18. Sources of Revenue for the District: 2010 – 2015



In 2014, the District added “Rates and Charges” to their sources of revenue, and has collected between \$700,000 and \$800,000 each of the last two years from this funding source. The generation fee fund is the only revenue stream which has remained relatively constant since 2010, ranging from approximately \$398,000 in 2013 to \$520,000 in 2010, and averaging \$467,000 per year.

On a per person basis, the District collected approximately \$27 per capita during 2012 through 2014, then roughly \$31 per capita in 2015. However, when the reimbursement revenues for Toledo’s curbside program are not included, the per capita revenues collected are much lower and have shown a modest increase each of the last six years. (See Figure H-19.) The District’s per capita revenue totals for 2014 without the reimbursement funds from the City Toledo were slightly lower than per capita revenues for the Lorain Solid Waste Management District (\$8.01 per capita) and higher than per capita revenues for the Summit/Akron Regional Authority (\$4.53 per person), two solid waste districts which are similar to Lucas County in population.

Figure H-19. Revenues Collected Per Capita: 2010 – 2015



The District's current Plan projected that \$13,226,000 would be collected in revenues during 2014. The actual amount collected, including the reimbursement funds, was \$11,801,000, or approximately \$1.4 million less than projected. However, the actual revenues for 2015 (\$13,668,000) were very close to the amount projected for 2014.

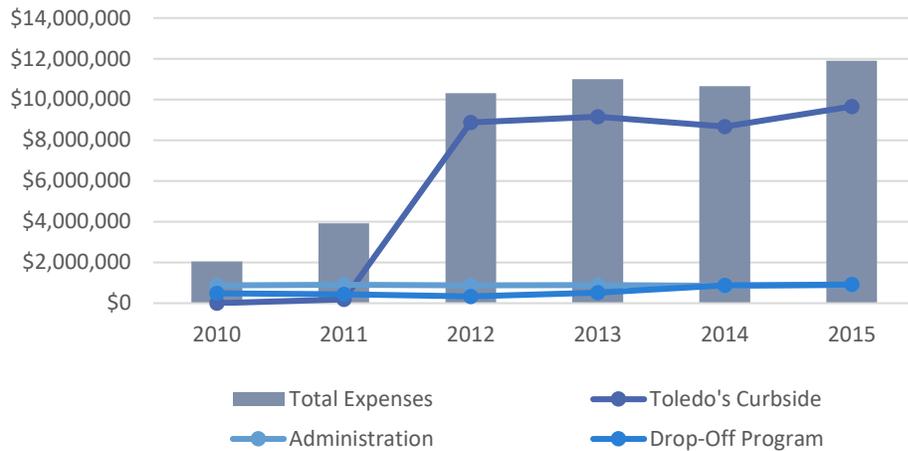
In summary, the District's major revenue streams appear to be very stable and should continue to provide sufficient money for operations. In addition, the solid waste facilities providing most of the contract and generation fee revenue are expected to continue operating and receiving District waste for many years.

B. Expenditures

The major categories of expenditures for the District since 2010 have been administrative costs, the drop-off recycling program, and the pass-through money for Toledo's curbside program beginning in 2011. (See Figure H-20 below.) While administrative costs have remained relatively constant during the last six years, there has been some variation in the expenditures for drop-off recycling, primarily associated with the purchase of new collection vehicles.

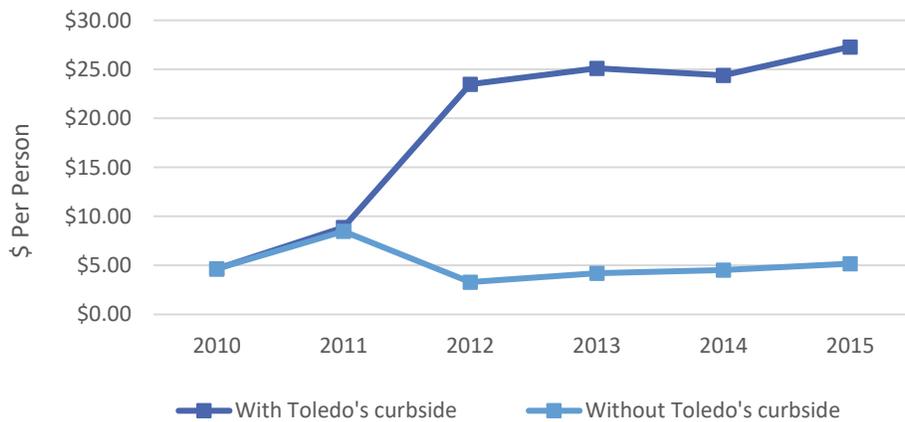
Compared to expenditure projections in the current plan for 2014 (\$292,000), the actual expenditures for administration were much higher and the costs for the drop-off recycling program were lower. The differences between projected and actual expenditures can be attributed primarily to the fact that labor costs for the drop-off program have been included in the actual expenditure totals for administration.

Figure H-20. District Expenditures: 2010 – 2015



District expenditures per person increased dramatically with the implementation of Toledo’s curbside program. Figure H-21 shows the trend of per capita expenditures, with and without the cost of Toledo’s program. Using the estimates without including Toledo’s curbside, the District spent \$4.53 per person in 2014, while the Lorain SWMD and the Summit/Akron Authority spent \$7.51 and \$4.45 per capita, respectively.

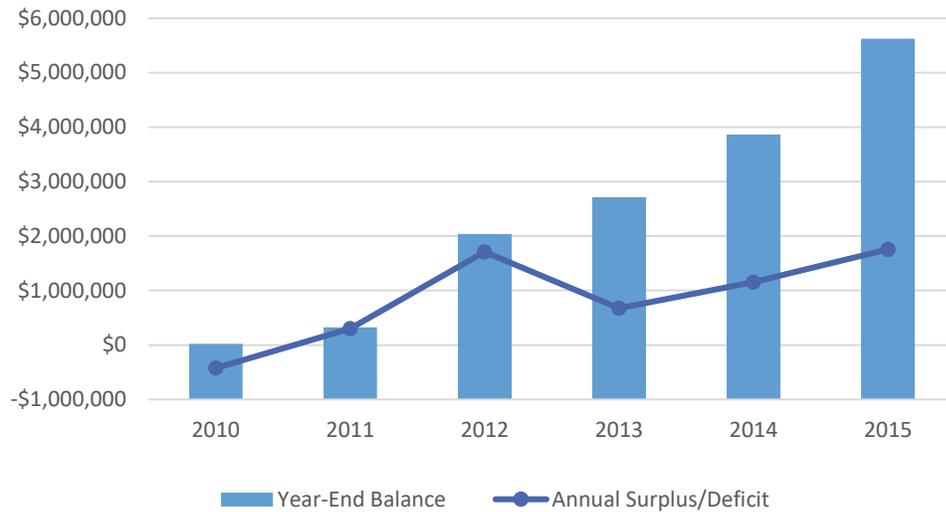
Figure H-21. District Expenditures Per Capita: 2010 – 2015



C. Balances

During each year of the last six-year period except 2010, the District has ended the year with a surplus of funds. In addition, the amount of the surplus has steadily increased with the exception of 2013, which has led to increasing fund balances every year. (See Figure H-22.)

Figure H-22. District Annual Surplus/Deficit and Year-End Balances



The current Plan projected a carry-over or year-end balance for 2014 of approximately \$480,000 which is much lower than the actual balance. The actual balance has grown substantially during the last two to three years, primarily because the District has not yet moved forward with the construction and operation of a new material recovery facility as previously anticipated. (See the discussion in Section 13.)

SECTION 10: REGIONAL ANALYSIS

Existing Program Type	Existing Program IDs
Sustainability Program	8401

The Toledo-Lucas County Sustainability Commission is a group of representatives from local businesses, governments, and non-profit organizations that work to promote and educate with regard to sustainability issues in the Lucas County region. The Toledo-Lucas County Sustainability is housed out of the Board of Lucas County Commissioners Office.

The vision of this group is, "... to enhance the health of ecological, social, and economic systems to produce vibrant, sustainable communities and happy, healthy citizens." The mission is, "...centered on three directives - to educate, to engage, and to act throughout the region around all issues connecting, natural, social, and economic systems. Using the Going Beyond Green Sustainability Plan as our framework, we support and tell the story of sustainability efforts for our region."

The Commission focuses on three areas: Natural, Social & Economic Systems. The District made the Commission possible by funding the first effort to define what sustainability meant to Lucas County in 2008. Until that point, recycling was equated to

being sustainable. Over the years, the scope of the Commission has grown to include efforts in all three of the defined focus areas. *Going Beyond Green*, a regional sustainability plan, was finalized in 2014, and now is used as the guiding document for the Commission.

The Sustainable Business Recognition program was created to recognize businesses that are taking steps to reduce their negative impact on the environment, while also being a socially responsible business. The program aims to also help those that are interested in incorporating more sustainable practices into their business. An option for those interested in the program is to have a free sustainability assessment conducted. This assessment is provided in partnership with the Lucas County Solid Waste District and the University of Toledo Engineering Program for this Toledo-Lucas County Sustainability Commission program. A team of engineering students conduct on-site energy use and waste management practices assessments and provide a report detailing their findings. Implementing their changes could make a facility more sustainable. The following statement can be found on the Commission's website:

"...Whether you employ 30 or 300 people, the Toledo-Lucas County Sustainability Commission is interested in helping your business become more environmentally, socially, and economically sustainable. We are also thrilled to recognize the practices you are already engaging in."

The District remains involved in the full Commission in an advisory capacity and through the direct involvement of KT/LCB in Commission programs. The District continues to fund the Commission's efforts, providing \$80,000 each of last six years.

Summary of Sustainability Program Findings and Challenges

The Toledo-Lucas County Sustainability Commission provides an excellent opportunity for businesses, organizations, and institutions to share information and explore ways of promoting policies which will lead to greater recycling, waste reduction, and saving resources. One of the goals of the Commission is to identify regional partnership opportunities that go beyond the borders of Lucas County. Such partnerships with neighboring solid waste districts in both Ohio and Michigan could begin initially with meetings to investigate common goals and program needs, and eventually determine if shared program implementation is feasible and/or desirable.

SECTION 11: POPULATION ANALYSIS

Population projections for this Plan Update were developed using documents published by the Ohio Development Services Agency. The District does not believe there is any reason to expect significant changes in the Lucas County population on an annual basis. In addition, no available population projections for the County predict significant annual changes. The projections for the planning period developed as a part of Appendix C show annual decreases slightly less than 1,000 in the total District population. (See

Appendix C for further discussion regarding specific documents and assumptions used for the projections.)

SECTION 12: DATA COLLECTION ANALYSIS

Existing Program Type	Existing Program IDs
Data Reporting Program	5225

The District collects data each year from entities located both within Lucas County and outside the county. Disposal data is reported to the District by solid waste facilities located in Ohio which are subject to the generation fee. Facilities in Michigan, which are under contract to the District, also report the amount of tons received, the type of waste, and remit the required amount of money.

Each year the District also conducts a survey to obtain recycling data, composting data, and hauling information as a part of preparing the annual district report to be submitted to Ohio EPA. Some of the details of collecting this information are listed in Table 18 shown below.

Entities in all three sectors – residential, commercial, and industrial – are sent paper surveys using U.S. mail. Both District information and an online database are used to compile the mailing lists. The ReferenceUSA database which is used to initially compile the list of commercial and industrial businesses is a leading provider in business and consumer research. The database listings are typically phone verified and quality checked approximately every 6 months by ReferenceUSA. Commercial and industrial businesses under a certain size in terms of number of employees are not sent surveys in order to reduce the scale of the survey effort, and in an effort to capture data from companies more likely to recycle the majority of the waste in Lucas County. In 2014, the District mailed survey forms to 368 manufacturing industries, 1,038 commercial or institutional entities, 21 composters, nine municipalities, and 15 haulers.

Follow-up phone calls are made as needed to businesses and municipalities. For example, a follow-up would be made in the case of an incomplete survey which was returned, or information included on the survey which was questionable (i.e., a very large quantity or an amount which was very different from a survey returned from the same respondent in a previous survey).

The response rates for the paper survey in 2014 were as follows:

- 13 percent for the industrial sector;
- 8 percent for the commercial sector;
- 100 percent for composters;
- 15 percent for processors/haulers;
- 80 percent for municipalities; and
- 0 percent for strictly haulers.

Table H-18. Data Collection Methods Used by the District

Methods Used to Obtain Data	Sector		
	Residential	Commercial	Industrial
Paper Survey	yes	yes	yes
Type of entities surveyed	haulers, municipalities	haulers, processors, MRFs, compost facilities, other commercial enterprises	manufacturing enterprises
How are entities to be surveyed identified?	District information, online database	online database, District information, Ohio EPA data	online database
Filtering of survey mailing list	no	yes; surveys sent to companies with 25 or more employees in 2015	yes; surveys sent to companies with 5 or more employees in 2015
Follow-up	yes, phone calls as needed	yes, phone calls as needed	yes, phone calls as needed
Published Reports	no	yes; Ohio EPA documents	no
Websites	check as needed to verify addresses, or to ensure that hauler is still in business.	check as needed to verify addresses, or NAICS/SIC code, or to ensure that entity is still in business.	check as needed to verify addresses, or NAICS/SIC code, or to ensure that entity is still in business.

The potential for double-counting materials is addressed by comparing responses from generators with processors and material recovery facilities. Each commercial business and industry is asked to provide the processor receiving their materials. Assume that a business reports recycling 200 tons of cardboard and also reports that this material was sent to ABC Processor. Assume as well that ABC Processor responded to the survey and reported received 1000 tons of cardboard from the District. In this case, only the amount reported by ABC Processor would be included in the District’s recycling totals, and not the 200 tons from the business.

The District uses Ohio EPA’s Material Recovery Facility and Commercial Recycling Data Report, Compost Facility Report Data Report, and Scrap Tire Data Report that are published annually. Data in these reports is cross-referenced with data reported through District surveys (when possible). Discrepancies between Ohio EPA’s data and data

reported from other sources has been identified on occasion. When issues are identified, they are addressed with Ohio EPA and resolved.

Summary of Program Findings and Challenges

The District has a relatively successful data collection program, including survey response rates which are very respectable for efforts of this type. Data is collected from entities within Lucas County each year so businesses can expect to receive survey forms in the early part of every calendar year. The following challenges have been identified by the District during the analysis of this program:

- Changes could be made towards improving data collection (better response rates, more accuracy, etc.) such as establishing a program which would contact a certain number of businesses each year through a phone call or a face-to-face meeting.

SECTION 13: RECYCLABLE MATERIAL PROCESSING CAPACITY ANALYSIS

Existing Program Type	Existing Program IDs
Matzinger Road Facility - District is authorized to fund and/or operate	8397
Single-stream MRF	8398

The District has maintained an interest in developing a material recovery facility in Lucas County for several years. The District issued a Request for Proposals (RFP) in 2008 to assist the District in development and operation of a material recovery facility (MRF) at the Matzinger Road location. The RFP anticipated that fiber from the District’s drop-off program and single-stream recyclables from Toledo’s curbside recycling program would be delivered to the facility. The drop-off program total tonnage was expected to be 15,000 tons in 2015, with the long-term projection for Toledo’s curbside at 25,000 to 40,000 tons per year. The RFP also included a requirement for “...significant revenue share to the District on recyclable materials processed by the operation, recognizing the District’s investment in delivering materials and in capitalizing the facility, both short and long term.”

The following paragraph in the current District Plan partially explains the events which took place after the issuance of the RFP:

“In 2008, the District purchased a Material Recovery Facility (MRF) located at 1011 Matzinger Road. The District spent much of 2008 upgrading and refurbishing the facility to process dual stream materials – commingled papers and commingled containers. In 2009, the District began processing commingled papers on a small scale with private operators. On January 18, 2010, the District entered into a contract with Fondessy Enterprises, Inc. to operate said facility, and to provide material recycling processing and marketing services associated with the collection of recycled materials from the District operated drop-off recycling program.”

The contract with Fondessy Enterprises, Inc. extended to December 31, 2014.

In early 2012, the District issued another RFP, once again with the intention securing assistance to "...the District and the City of Toledo in receiving, transferring and processing recycling materials that will be delivered to the District's recycling facility at 1011 Matzinger Road, Toledo, Ohio or other location in Toledo, Ohio." At this time, the District was expecting the facility to process single stream recyclables from the City of Toledo, commingled bottles and cans from the District, and potential host recyclables. The RFP required the selected vendor to begin processing Toledo's single-stream recyclables and bottles and cans from the District's drop-off program by the end of 2012.

During the evaluation of the submitted proposals from the 2012 RFP process, the District began negotiating with several of the respondents. At the time of the development of this document, no decision has been made.

In 2015, the District also explored the option of operating the Matzinger Road facility as a recycling transfer station. Several discussions with the City of Toledo, and several processing facilities has occurred into 2016. No decision has been made on this option.

Consideration of two recycling facility operations in 2015 and 2016 included the following:

- Full service single stream recycling facility, either publicly or privately operated, developed at either the existing District location on Matzinger Road or some other location that would include the required equipment and space to process at least 35,000 tons or more of incoming materials to satisfy the capacity needs of the District.
- Recycling transfer facility with partial processing capabilities for service single stream materials either publicly or privately operated, developed at either the existing District location on Matzinger Road or some other location that would include the required equipment and space to transfer and process at least 35,000 tons or more of incoming materials to satisfy the capacity needs of the District.

With 35,000 plus tons of recyclable processing capacity needed between the District's programs and the City of Toledo and other communities in the District, recycling processing at the local level is clearly needed. There is plenty of recycling capacity in the region both in Ohio and Michigan and numerous interested parties to provide recycling services the District. With this said, the District anticipates that one of the above options (single stream recycling facility or recycling transfer station) will be addressed either before this Plan Update is completed or during the implementation of this Plan Update.

Attachment A. Example of Drop-off Site Agreement

Right Of Entry

I / we the undersigned, Walden Woods lessor(s) or owner(s) of the real property located at 3095-3177 Griggsvlew Ct. Col 5 OH 43221 for our heirs, executors, administrators, assigns, and successors in interest, in consideration for good and valuable consideration from the Solid Waste Authority of Central Ohio (SWACO), does hereby grant to SWACO or its authorized representative the right of entry upon the subject premises for the purpose of placing of a recycling container(s), servicing said container and maintaining said container and for all other purposes necessary in connection with the provision of recycling collection of the aforementioned recycling container(s).

The undersigned also agree(s) that SWACO or its authorized representative may take any action required of it by ensure compliance with the Columbus City Codes and other applicable laws, ordinances and regulations. Any such actions necessary shall be at the sole cost and expense of SWACO.

Nothing in this agreement shall be deemed to grant any right of possession by SWACO in the premises except as explicitly described herein.

Nothing in this Release and Waiver of Claims shall be deemed to abrogate or waive any remedies SWACO may have under Ohio Revised Code Chapter 2744 or the common law of Ohio, nor shall it constitute an admission of any liability to Grantor for any damage, loss, or claim whatsoever nature related to any interruption or cessation of domestic water well service.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed the day and year described below.

DATE: Dec. 10, 2014

Grantor:
M Kadwilec

Witness:
[Signature]



APPENDIX I

**CONCLUSIONS, PRIORITIES, AND
PROGRAM DESCRIPTIONS**



APPENDIX I. CONCLUSIONS, PRIORITIES, & PROGRAM DESCRIPTIONS

Making decisions about the Lucas County Solid Waste Management District's programs offered during the planning period required valuable input and analyses depicted in Appendix H. The policy committee used the program evaluations detailed in Appendix H to draw conclusions. These conclusions represent what was learned about the District's structure, abilities, strengths and weaknesses, operations, existing programs, outstanding needs, and available resources. The overall list does not necessarily represent the programs or initiatives which the District will commit to implement during the subsequent planning period.

The District reviewed the list of potential initiatives and programs and prioritized the list focusing on the actions which were determined to be most important and those which would require less difficulty in implementing. The step-by-step process which the District used to prioritize the list was as follows:

- The ranking consisted of the District assigning a value of between 1 and 5 to each initiative with 5 being the highest priority and 1 being the least.
- The priority ranking defined whether the District felt an initiative or program would be implemented under the following criteria:
 - ✓ Ranking of 1 – No implementation
 - ✓ Ranking of 2 – No implementation
 - ✓ Ranking of 3 – Possible implementation with direction from Policy Committee
 - ✓ Ranking of 4 – Implement
 - ✓ Ranking of 5 – Implement
- The District then prioritized the results from the above step.
- The list of prioritized possible actions was then presented to the Policy Committee with discussion from District personnel and the District's consultant focusing on the initiatives or programs ranked as a 3 from the criteria above.
- The Policy Committee was then asked to assist the District to decide if the initiatives ranked as a 3 should or should not be implemented in the new Plan Update.
- The Policy Committee was also asked to confirm that all initiative ranked as a 4 or 5 should be implemented as recommended by the District and that initiatives ranked 1 or 2 should not be implemented as recommended by the District.
- The results of this prioritization process and the programs/initiatives developed or continued are detailed in Chapter V of this Plan Update.

The Section B presents the initiatives and programs that will be implemented in the planning period.

From these conclusions, a list of action items was developed that were further refined into priorities to be addressed during the planning period.

A. Conclusions from Appendix H/L and Prioritization of Potential Initiatives

The list of possible actions or programs identified through the evaluations conducted in Appendix H are presented below and are organized per the program categories included in the Format v4.0 under Appendix I.

Table I-1. Summary of Suggestions for Improvement

Program Category	Action or Program Name	District Priority	Policy Committee Decision
Residential Recycling Infrastructure			
Curbside Recycling Services	Continue existing programs	5	Continue, work with communities on improving contamination
	Endeavor to expand Community Curbside Solid Waste and Recyclables Technical Assistance Program (formerly Municipal Assistance Program)	4	Implement
	Facilitate implementation of non-subscription curbside collection in 2 townships	5	Implement
	Facilitate the formation of collection consortiums	4	Implement
	Attempt to obtain recycling data from subscription recycling programs	4	Implement
	Facilitate implementation of economic incentive based programs	2	No implementation but assist communities if requested
Drop-off Recycling: Publicly-Available Sites	Continue existing program	5	Continue
	Determine the appropriate number and location of drop-off sites	4	Implement
	Evaluate cost containment options (e.g., single-stream vs. dual-stream)	4	Implement
	Minimize contamination and littering	5	Implement
	Minimize theft of recyclables	5	Implement
	Update participation study	2	No implementation
Drop-off at Schools	Ensure long-term availability of sites by considering agreements w/ property owners	4	Implement
	Continue existing program	5	Continue
	Provide or facilitate placement of recycling bins within new schools not serviced by District or private sector	4	Implement

Program Category	Action or Program Name	District Priority	Policy Committee Decision
	Continue to work with schools on assignment of responsibility within buildings for emptying recycling bins, maintenance of program, etc.	4	Implement
	Bring City of Toledo Schools back into program	2	No implementation but assist schools if requested
Non-Public Drop-offs	Continue existing program	4	Continue
	Delineate costs and tonnage for program	4	Implement
	Consider pilot program for multi-family housing units	4	Implement
Special Events	Continue existing program	5	Continue
	Minimize contamination and littering	5	Implement
	Reduce staff resources associated with event planning	2	No Implementation
Multi-Family Housing	Expand education/awareness program	4	Implement
	Facilitate provision of recycling services through private sector	4	Implement
	See "Non-Public Drop-offs"	4	Implement
Commercial/Institutional Sector Reduction/Recycling			
Drop-off Recycling	Expand availability of drop-offs	2	No implementation unless businesses request
Education/Awareness	Enhance program to target greater recycling	5	Implement
Other	See "Other Material Specific Programs" and "Data Collection"	3	See below
Industrial Sector Reduction/Recycling			
Waste Assessments	Continue existing program	5	Continue
	Expand awareness	5	Implement
	Develop greater emphasis on difficult to manage waste streams	5	Implement
	Devote more resources into program	4	Implement
Other	Promotion of market development grant opportunities	4	Implement
	Facilitate the formation of collection consortiums	3	No implementation unless businesses request

Program Category	Action or Program Name	District Priority	Policy Committee Decision
Restricted/Difficult to Manage Wastes			
Yard Waste	Facilitate curbside yard waste collection	3	Implement through Municipal Assistance Program based on need
Scrap Tires	Explore ways of reducing collection event costs	3	Add scrap tire collection to permanent HHW program with user fee
	Encourage residents to turn in old tires at dealers	5	Implement
	Identify illegal tire transporters	4	Implement
HHW	Establish a permanent collection site	5	Implement
E-Waste	Develop options for collection of TVs	5	Promote private sector options
Other Material Specific Programs			
Cardboard and Paper	Develop collection program for commercial sector	3	No implementation
Food Waste	Explore co-digestion of food waste and biosolids at Lucas County Water Resource Recovery Facility	4	Implement
	Target food waste collection and processing	4	Implement
Outreach, Education, Awareness, and Technical Assistance			
Covered in Appendix L	See table below	n/a	See below
Funding/Grants			
Community Grant	Continue existing program	4	Continue
	Consider alternatives to enhance this program	4	Implement
Economic Incentives			
Economic Incentive Based Programs	Continue existing program (Municipal Assistance Program)	2	Implement through Municipal Assistance Program based on need
	Expand awareness of program	2	Implement through Municipal Assistance Program based on need
Market Development			
	Continue existing program	4	Continue

Program Category	Action or Program Name	District Priority	Policy Committee Decision
Market Development	Expand awareness of Ohio EPA grant program, assist businesses with grant applications	4	Implement
Feasibility Studies			
Evaluations	Evaluate a cost-effective collection solution for food waste from restaurants and bars.	5	Evaluate
	Evaluate hard to manager materials for recycling	5	Evaluate
Facilities			
Recyclables Processing	Facilitate development of single-stream recycling processing facility, or transfer station w/recycling processing (hybrid MRF)	5	Implement as soon as possible
Data Collection			
Data Collection	Target commercial and institutional entities	5	Implement
	Contact set number of businesses annually	4	Implement

The following table summarizes the District’s and Policy Committee’s priorities for implementation of the possible list of actions by program for education and outreach that were discussed in Appendix L:

Table I-2. Policy Committee Prioritization of Possible Actions for Education and Outreach

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
District website	Improve branding and visual presentation.	5	Implement
	Obtain a more user-friendly URL such as “LucasCountyRecycles.com” and redirecting the link to the existing homepage.	5	Implement
	Track the number of visits to the website and the total subscribers to the District’s notification system and other metrics.	4	Implement
Printed Publications	Evaluate the use of bilingual options for targeted publications	2	Implement, use County policies as a basis for implementation

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
	Measure the success of printed publications through tracking distribution, availability and if a direct correlation to increased diversion or other result from the printed materials.	2	Implement based on clear project specific initiatives, not for general publications
Participation in Community Events	Increase participation	4	Implement
	Focus on changing behavior at community events by using facetime with residents to gather information about recycling habits and why people do/do not recycle. This new initiative would be modeled after Example B, "Aligning Existing Program with Social Marketing" in Ohio EPA's Plan Format 4.0 Attachment L-1.	4	Implement
Lending Library	Measure the success of the lending library through tracking distribution, availability and if a direct correlation to increased diversion or other result from the materials loaned.	3	Continue, improve as needed
Presentations	Measure effectiveness of behavior change based on presentation objectives.	5	Implement
	Increase presentations to targeted schools based on District priorities (i.e., single stream recycling and contamination)	5	Implement
Outreach	Evaluate low or no cost options for transportation options for tour and field trips.	3	Evaluate for implementation when MRF is developed
	Apply for grants to fund field trips and tours for targeted outreach priorities.	3	Evaluate for implementation when MRF is developed
Waste Assessment Program	Follow-up with companies to determine if projected tons recycled or reduced to actual after implementation of recommendations.	5	Implement

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
District Management of Collection Contracts	Measuring success of District involvement vs baseline statistics such as cost, diversion, level of service, materials accepted, etc.	4	Implement
Community Curbside Solid Waste and Recyclables Technical Assistance Program (formerly Municipal Assistance Program)	Increase promotion of program to non-participating communities.	4	Implement
	Measure success of programs and projects District provided assistance.	4	Implement
Market Development Grant Technical Assistance	Increase promotion of the grants to targeted commercial and industrial businesses and institutions.	4	Implement
	Measure the success of grant projects that were awarded based on metrics such as tons diverted, tons reduced or products produced.	3	General follow-up but no direct measurement unless business initiates
Toledo-Lucas County Sustainability Commission	Measure the effectiveness of the District's involvement through achievements of the Commission.	5	Implement

B. Program Descriptions

This section outlines the programs available to residents, communities, businesses, and institutions during the reference year (2014) that are current and to be implemented during the planning period. These are based on the results of the ranking exercise discussed in Section A of this Appendix, as well as from comments received by stakeholders. Please note that some programs were discussed after the ranking was completed and may not appear in the ranking tables above. Descriptions for continuing existing programs are referenced as well as new programs or changes to existing programs are fully described below.

1. **Commercial/Institutional Reduction and Recycling Programs**

Table I-2. Summary of Programs for Commercial/Institutional Sector

ID	Name	Start Date	End Date	Goal(s)
2121	District / University of Toledo Commercial/Industrial Outreach Program-waste minimization assessments-materials exchanges	2005	Ongoing	Goal 3, Goal 4
2150	Assist local businesses	2005	Ongoing	Goal 7
2108	Non-public recycling drop-offs (institutional, mutli-family, non-profit, etc.)	Existing	Ongoing	Goal 2
4833	School Paper Recycling Collection Programs	2001	Ongoing	Goal 2
8396	School Recycling Programs: UBCs & other materials in addition to paper	2011	Ongoing	Goal 2, Goal 3
No ID	Service New Schools	2019	Ongoing	Goal 2
No ID	Engage Private Sector to Develop MFH Unit Recycling Solutions	2021	2022	Goal 2
No ID	Pilot Program for MFH Units	2022/2023	2023/2024	Goal 2

District/University of Toledo Commercial/Industrial Outreach Program-waste minimization assessments-materials exchanges

The District continues to provide funding to University of Toledo Business Waste Reduction Assistance Program (UT Commercial/Industrial Outreach Program). UT completes solid waste assessments. These assessments identify solid waste diversion and annual cost savings for local businesses. In addition, UT also completes energy audits that identify kilowatt hours of energy reduction and cost savings for Lucas County businesses. In addition, journal papers and conference papers are published that are related to waste reduction and sustainability efforts in Lucas County to protect the environment and reduce waste. To improve the waste assessment program, the District will implement the following initiative:

- Follow-up with companies to determine if projected tons recycled or reduced to actual after implementation of recommendations.

Assist local businesses

The District assists local businesses with the development of recycled products through 'Market Development Grants' offered through the State of Ohio. Grants support projects for research and development of products utilizing recycled materials in their products.

Non-public recycling drop-offs (institutional, mutli-family, non-profit, etc.)

The District provided services to a variety of institutional, business, multi-family and non-profit recycling drop-off locations throughout the County for its residents and businesses.

Delineate Program's Cost and Tonnage

The District will put forth effort to estimate the costs and recycling tonnage projected to be collected. Currently, these metrics cannot be determined since the costs and tons collected for all District-operated drop-off programs are lumped together.

School Paper Recycling Collection Programs

The District provides and services mixed paper recycling dumpsters for schools throughout the County. A portion of the schools also collect cardboard and/or commingled bottles and cans. Since the school sites are collected in unison with the District's drop-off program, a total tonnage cannot be provided for this program.

School Recycling Programs: Expand Materials Accepted

The District provides and services cardboard recycling dumpsters and bottle/can recycling dumpsters for schools. Some of the schools participating in the School Paper Recycling Collection Program also collected bottles and cans; one of the participating schools also collected cardboard. Collection containers for cardboard and mixed bottles and cans are provided and serviced to some schools that did not participate in the School Paper Recycling Collection Program.

The District will continue to help schools to establish responsibilities within buildings for emptying recycling bins, processing materials, and providing other program maintenance.

Service New Schools

The District may facilitate the placement of containers at schools currently without recycling services. The District would first determine if the school desires to have recycling services through a survey or engagement process (2019). The District would then determine if a private sector service provider is able to provide the service (2019). If the school desires the service and there is no private sector option available, the District may work with the school to provide the service if funds are available and the school fits into one of the District recycling routes (ongoing).

Engage Private Sector to Develop MFH Unit Recycling Solutions

The District may contact private haulers serving Lucas County and solicit input regarding the obstacles to providing greater recycling services for this sector. The District may also solicit input from property management companies regarding recycling services are their locations based on the targeted survey results discussed above. The District may use this information and other sources of information to facilitate the provision of recycling services through contracting with the private sector.

Pilot Program for MFH Units

The District may strive to identify one or more multi-family housing units for a recycling pilot program. The District currently services some multi-family locations on a case by case basis. The pilot program could be District operated or private sector operated depending on the results of the engagement processes listed above with the residents and property management entities. The operation of the pilot program may be based on an evaluation of other Ohio solid waste district programs. Any pilot or permanent program will be required to provide data back to the District for planning purposes.

2. Industrial Sector Reduction and Recycling Programs

Table I-3. Summary of Programs for Industrial Sector

ID	Name	Start Date	End Date	Goal(s)
2121	District / University of Toledo Commercial/Industrial Outreach Program-waste minimization assessments-materials exchanges	2005	Ongoing	Goal 3, Goal 4
No ID	Expand awareness of Ohio EPA grant program, assist businesses with grant applications	2019	Ongoing	Goal 8

District University of Toledo Commercial/Industrial Outreach Program; Waste Minimization Assessments; Materials Exchanges

The District continues to provide funding to University of Toledo Business Waste Reduction Assistance Program (UT Commercial/Industrial Outreach Program). UT completes solid waste assessments. These assessments identify solid waste diversion and annual cost savings for local businesses. In addition, UT also completes energy audits that identify kilowatt hours of energy reduction and cost savings for Lucas County businesses. In addition, journal papers and conference papers are published that are

related to waste reduction and sustainability efforts in Lucas County to protect the environment and reduce waste.

Waste Assessments/Audits

The waste assessment/waste audit program which is a collaboration between the District and the University of Toledo will continue. The following three new initiatives intended to enhance this program will also be considered:

i. Promote Program

The District may take steps to expand the awareness of this program by increasing the promotion of the program through advertisements, handouts, or other targeted promotional activities throughout the planning period.

ii. Develop Greater Emphasis on Difficult to Manage Waste Streams

The District and the University may identify particular waste streams generated within Lucas County which are especially challenging in terms of proper/sustainable management. These waste streams may be targeted or emphasized when selecting companies and organizations for waste assessment and waste audits.

iii. Devote More Resources to Program

More resources may be devoted to this program in the future to achieve the initiatives listed above. These resources may include District staff, KTLB staff, and University of Toledo staff working together to achieve the goals of the program.

Expand awareness of Ohio EPA grant program; Assist Businesses with Grant Applications

The District will continue to provide assistance to local businesses in obtaining grants by helping with preparation of grant applications. The main issue identified in Appendix H was a lack of awareness and/or interest in the grant opportunities. To address this, the District will identify key candidates for market development grants and make targeted outreach efforts. The District will also increase its advertisement of the program on the website and through other means, as well as cross-promoting opportunities to the industrial sector. For example, the District will reach out to industries that have completed waste audits/assessments through the District's program if they are good candidates for the grant. The District may also promote grant opportunities by including a promotional handout with

the annual survey that is sent to commercial and industrial businesses each year for the Annual District Report.

3. Special Waste Streams

Table I-4. Summary of Programs for Special Waste Streams

ID	Name	Start Date	End Date	Goal(s)
2136	Electronics Collection	2010	Ongoing	Goal 3,4,5 (2001 State Plan)
2134	HHW Collection Program	2005	Ongoing	Goal 5 (2001 State Plan)
2149	Lead-Acid Battery Recycling	2005	Ongoing	Goal 5 (2001 State Plan)
8397	Matzinger Rd. Facility	2011	Ongoing	Goal 2
8398	Single-Stream MRF	2011	Ongoing	Goal 2
2128	Scrap Tire Collections	2005	Ongoing	Goal 5
5211	Municipal Leaf Collection Programs	Existing	Ongoing	Goal 2, 5
8404	Municipal Yard Waste Collection Programs	Existing	Ongoing	Goal 2, 5
No ID	Develop a Recycling Processing Facility	2019*	Ongoing	Goal 2
No ID	Conduct Food Waste Collection Study	2019	2020	N/A
No ID	Evaluate Conducting a Feasibility Study for Managing Hard-to-Manage Materials	2019	2020	Goal 5
No ID	Explore Co-Digestion of Food Waste and Biosolids	2019	2020	N/A
No ID	Identify Illegal Tire Transporters	2019	2020	Goal 5
No ID	Encourage Residents to Discard Old Tires at Tire Retailers	2019	Ongoing	Goal 5
No ID	Establish a Permanent HHW Collection Site	2019	Ongoing	Goal 5
No ID	Engage Private Sector to Develop MFH Unit Recycling Solutions	2019	Ongoing	Goal 1
No ID	Consider Pilot Program for MFH Units	2019	Ongoing	Goal 1

*Development of the hybrid MRF or Full Service Single Stream MRF may develop sooner than 2019.

Electronics Collection

The District continues year-round computer and electronics recycling program for residents. Residents make appointments to schedule e-waste drop-offs at District program partners.

- The District has assisted with sponsoring the Toledo Zoo Party for the Planet, which accepted many items for recycling including electronics. Davis College operated an e-waste drive that collected electronics. KT/LCB was the beneficiary of funds donated for the event.
- The City of Toledo also began a program in all 6 of its council districts to collect electronics annually as a special event.

Additionally, the District promoted a variety of organizations and businesses that collect electronics within the County. These organizations and businesses are listed on the District's website and within paper flyers available for residents and municipalities. Businesses that operate e-waste "take back" programs are also promoted.

The District will publicize the collection of electronic equipment and TVs (by private recyclers) at various events held each year within Lucas County and private sector recyclers.

HHW Collection Program

The District continues to promote a variety of organizations and businesses that collect HHW within the County. These organizations and businesses are listed on the District's website and within paper flyers available for residents and municipalities.

- The City of Toledo also began a program in all 6 of its council districts to collect HHW annually as a special event.
- A National Prescription Drug Take Back event has been held in the District.
- KT/LCB partners with the Toledo Police Department to provide multiple prescription drug drop-off boxes for residents to safely dispose of unused, unwanted, or outdated medications 24/7. The locations of the drop-off sites are contained on the KT/LCB's web site.

Lead-Acid Battery Recycling

The District promotes a variety of businesses that take back or accept lead-acid batteries throughout the County. These businesses are listed on the

District's website and within paper flyers available for residents and municipalities.

Matzinger Road Facility

The District sent out an RFQ in September of 2014. The District had two respondents and is currently in active discussions with Re-Community regarding the facility.

Single-Stream MRF

The District sent out an RFQ in September of 2014. The District had two respondents and is currently in active discussions with Re-Community regarding the facility.

Scrap Tire Collections

Tire collection events are made possible through an Community Recycling and Litter Prevention Grant from OEPA.

Municipal Leaf Collection Programs

The District anticipates that all of the yard waste programs which operated during the reference year (Municipal Leaf Collection Programs, Municipal Yard Waste Collection Programs, and Technical Assistance to Communities) will continue. No new initiatives are planned. District annually reports list of active programs and tonnage data obtained from the programs.

Municipal Yard Waste Collection Programs

The District anticipates that all of the yard waste programs which operated during the reference year (Municipal Leaf Collection Programs, Municipal Yard Waste Collection Programs, and Technical Assistance to Communities) will continue. No new initiatives are planned. District annually reports list of active programs and tonnage data obtained from the programs.

Develop a Recycling Processing Facility

The District may develop a facility for processing single-stream recyclables upon finalization of any contingencies listed below. The facility could be developed and operated as a full service single stream recycling facility or as a hybrid MRF/recycling transfer station with the capability of processing some recyclables while removing contaminants. The ownership of either facility would be that of the District while the operation of the facility could

be with District staff, a private sector operator or a combination of both. The facility may be implemented before this Plan Update is finalized. The District had already planned the development of the recycling facility in the previous solid waste plan and therefore reserves the right to carry forward that planned activity into this Plan Update prior to the official start of the implementation of this Plan Update which is schedule for 2018 and or the projected timeline for development presented in this Plan Update.

The implementation of this facility is contingent on the City of Toledo committing their single stream recyclables to the District for management and processing. If the City does not commit their recyclables in writing (memorandum of understanding agreement) and a City Council approved resolution, the District may scale down the facility to a hybrid recycling transfer station operation for primarily District drop-off generated recyclables or some other option of management not including the development of a facility. The implementation of this facility is also contingent on the ability of the District to obtain sufficient capital (bonds and/or loans) and the purchase, lease or other site management option for the siting of the recycling facility.

If the facility is not developed because of the conditions listed above or some other unforeseen circumstances, the District reserves the right to redirect previous agreed upon funding mechanisms for the facility to other District programs covered in this Plan Update. A separate budget has been prepared for both scenarios discussed above and is represented in Appendix O and Chapter 6.

Conduct Food Waste Collection Study

The District will consider conducting a feasibility study to evaluate cost effective options for collecting food waste, either directly or indirectly through the private sector from establishments such as restaurants and bars. The food waste would be delivered to the Lucas County Water Resource Recovery Facility or a Class II compost facility. The Study is budgeted for 2019.

Evaluate Conducting a Feasibility Study for Managing Hard-to-Manage Materials

The District may conduct a feasibility study during the planning period to identify possible permanent solutions for hard to manage materials that are not currently accepted by the District's HHW program.

Explore Co-Digestion of Food Waste and Biosolids

The District is interested in exploring the possibility of co-digesting food waste with biosolids at the Lucas County Water Resource Recovery Facility.

The facility is planned to be designed to include anaerobic digester modifications which may be able to process food waste. This facility may create the opportunity to accept food waste from specific commercial entities. This facility is sponsored and operated by the Lucas County Sanitary Engineer’s office. The District does not support or provide funding to this facility.

Identify Illegal Tire Transporters

Implementing this initiative may involve working with the Lucas County Health Department to assist with identifying illegal tire haulers.

Encourage Residents to Discard Old Tires at Tire Retailers

The District will encourage residents to recycle or dispose scrap tires at the retail establishment where they purchase their new tires. Implementing this initiative may involve developing a handout explaining the consequences of mismanaging scrap tires. The handout may be placed at tire retailers throughout the District and/or on the District’s web site.

Establish a Permanent HHW Collection Site

The District conducted a study on permanent HHW programs in 2016 and 2017. The Study indicated that it was feasible to use the District’s Matzinger Road facility to operate a permanent HHW facility. The District plans to use this facility as a permanent HHW collection site. The facility is scheduled to begin operation in 2017 under the following operational objectives:

- Participants will be required to schedule an appointment
- Appointment days will be available throughout the year on specific days and times
- Add scrap tires to acceptable items with a user fee required

4. Outreach, Education, Awareness

Table I-5. Summary of Outreach, Education, and Awareness Programs

ID	Name	Start Date	End Date	Goal(s)
2123	District Web Site	2005	Ongoing	Goal 3, Goal 4
8399	Education and outreach in partnership with KTLCB. Semi-annual outreach	2011	Ongoing	Goal 3, Goal 4

ID	Name	Start Date	End Date	Goal(s)
2135	Education Program for HHW, Electronics, and LA Batteries.	2005	Ongoing	Goal 5 (2001 State Plan)
8401	Toledo-Lucas County Sustainability Commission	2009	Ongoing	Goal 3
2120	Lending Library	2011	Ongoing	Goal 3, Goal 4
2115	School Outreach and Education	Existing	Ongoing	Goal 3, Goal 4
8402	Social Networking	2011	Ongoing	Goal 3
2130	Tire public education, outreach, website	2005	Ongoing	Goal 5
No ID	Improve Targeted MFH Unit Education/Outreach	2020	Ongoing	Goal 4
No ID	Facilitate Implementation of Non-Subscription Curbside Recycling in Two Townships	2018	Ongoing	Goal 1 Goal 2
No ID	Facilitate the Formation of Collection Consortiums	2018/2019	Ongoing	Goal 1
No ID	Obtain Recycling Data from Subscription Recycling Programs	2018	Ongoing	Goal 9
No ID	Reducing Curbside Recycling Contamination Levels	2019	2020	Goal 4
No ID	Determine Appropriate Quantity and Location of Drop-Off Sites	2018	Ongoing	Goal 1
No ID	Evaluate Cost Containment Options	2019	2019	N/A
No ID	Minimize Contamination and Littering	2018	Ongoing	N/A
No ID	Minimize Theft of Recyclables	2019	2020	N/A
No ID	Update and Perform Participation Study	2018	2019	N/A
No ID	Ensure Long-Term Availability of Drop-Off Sites	2018	2019	Goal 1
No ID	Printed Publications	Ongoing	Ongoing	Goal 4
No ID	Participation in Community Events	Ongoing	Ongoing	Goal 4

District Website

The website is used to promote various programs and education. The District's website is available at: <http://www.co.lucas.oh.us/749/Solid-Waste-Management>. The welcome page features a calendar of the District's events and activities, FAQs, quick links, contact information, instant access to the current Solid Waste Management Plan Update, and program information. The District also assists with updates for Keep

Toledo/Lucas County Beautiful's website (www.KTLCB.org) and the University of Toledo's Business Waste Reduction Assistance Program (www.homepages.utoledo.edu/mfranch/ecml.html). The District will implement the following initiatives to improve the website:

- Improve branding and visual presentation
- Obtain a user-friendly URL such as "LucasCountyRecycles.com"
- Track the number of visits to the website and the total subscribers to the District's notification system and other metrics

Education and outreach in partnership with KT/LCB. Semi-annual outreach

The District continues to partner with KT/LCB on education and outreach activities. The District provides funding to KT/LCB for financial support.

Toledo-Lucas County Sustainability Commission

The District will continue to support and contribute to the Toledo-Lucas County Sustainability Commission. The program provides a source of recognition for entities within Lucas County. It also facilitates a forum for the discussion of sustainability issues. In 2014, the Commission announced a public comment period it's Going Beyond Green regional sustainability plan. The Plan, finalized and launched on Earth Day in April of 2014, is available online at: www.goingbeyondgreenplan.com/wp-content/uploads/2014/04/GoingBeyondGreen.04.22.2014.pdf.

The District will measure the effectiveness of this program through the achievements of the Commission.

Lending Library

KT/LCB provides a lending library which houses a wide variety of environmental education books, videos, activities and informational brochures that are available to teachers and educators throughout the District. This program is advertised on the District's website.

School Outreach and Education

The District continues to partner with KT/LCB on education and outreach activities. KT/LCB's full-time Education Specialist conducts the classroom presentations and teacher workshops in accordance with the State of Ohio's educational standards. To improve the effectiveness of the presentations, the following initiatives will be implemented:

- Measure effectiveness of behavior change based on presentation objectives.
- Increase presentations to targeted schools based on District priorities (i.e., single stream recycling and contamination)

Social Networking

The District regularly updates its Facebook account. Updates were used to promote special District and community recycling drives, sustainability events, and other environmentally-related content. The District's Facebook page is available at: www.facebook.com/pages/Lucas-County-Solid-Waste-Management-District/156293251078902.

Additionally, Keep Toledo/Lucas County Beautiful (KT/LCB) also maintains a Facebook page. This site supported the District's waste reduction and recycling activities. KT/LCB's Facebook page is available at www.facebook.com/pages/Keep-ToledoLucas-County-Beautiful-Inc/167085956670756.

Improve Targeted MFH Unit Education/Outreach

The District may develop an education and awareness program, which specifically targets the residents of multi-family housing units. This program may involve the following:

- Targeted advertisements and outreach for multi-family housing units that are near District recycling drop-off locations to encourage use of the drop-off program and how the program works.
- Targeted surveying to residents in multi-family housing to determine their interest or support in a recycling program being offered by their management company.
- Targeted surveying of multi-family housing property management entities to determine the level of interest in developing a recycling program and contracting of solid waste services either independently or in a consortium of other property management entities.

Facilitate Implementation of Non-Subscription Curbside Recycling in Two Townships

A technical assistance and an engagement process may be provided by the District for two townships (Sylvania and Springfield and/or others if interested) for the possible development of non-subscription curbside recycling services in 2018 and beyond. The ultimate decision for these two townships or any other township, village or city to develop a non-subscription or any other type of curbside recycling program will be made by the political subdivision directly. The District will not guarantee the

development nor require any community to develop curbside recycling programs in this *Plan Update*. Sylvania Township and Springfield Township were identified by the District as ideal candidates due to their population. They are currently the two most populated townships that do not have non-subscription recycling service.

Facilitate the Formation of Collection Consortia

The District has encouraged the formation of collection consortia in recent years, however, with this *Plan Update*, the District may re-emphasize this tool by conducting a special consortium meeting that may be conducted in either 2018 or 2019. The meeting is anticipated to be offered to all political subdivisions and may be designed as an introduction to the consortium concept and to serve as a question and answer forum. The District may hold additional meetings as needed. Any formation of consortia will occur or be initiated by the communities and not the District. The District will offer technical assistance with any consortium (if requested or desired by the communities) that is initiated by the community or communities throughout the planning period. Technical assistance may include, but not limited, to the following:

- Community meetings to educate on the value of contracting for curbside residential services (2018/2019 or as needed)
- RFP development assistance (as needed)
- Contract development assistance (as needed)
- Contract management assistance (as needed)

Obtain Recycling Data from Subscription Recycling Programs

The District will initiate efforts to obtain recycling data from haulers and/or communities being served by subscription curbside recycling. This data will enable the District to better evaluate the performance of these programs. In order to obtain this data, the District will submit an annual survey to local and regional haulers asking for subscription curbside recycling data by community starting in 2018 with the Annual District Report (ADR) process.

Reducing Curbside Recycling Contamination Levels

This initiative was not included in the original program ranking. Rather, it was identified as part of the District's "outreach priority" which is discussed in Appendix L.

This initiative may include working with the communities that have high contamination to provide education and outreach assistance and technical assistance. The District will not be the sole provider of education and outreach assistance to the affected community but will either compliment

the efforts of the community to reach out to the residents or provide assistance to the community in developing education and outreach messaging and engagement platforms. This initiative will be ongoing throughout the planning period as needed and may include, but not be limited to, any of the following initiatives or tasks:

- Technical assistance and planning
- Education and outreach messaging on District website
- Education and outreach messaging through advertisements, door hangers, mailers, handouts
- Other initiatives as determined by District

Determine Appropriate Quantity and Location of Drop-Off Sites

Formalize drop-off site evaluation (2018 and ongoing). The District will continue to determine the appropriate number and location of drop-off sites as needed throughout the planning period. This ongoing evaluation is expected to help allocate District resources more efficiently, and may result in moving some sites, eliminating sites, adding sites, or increasing the number of containers at some locations. This ongoing evaluation will also identify problematic sites for contamination, littering and theft. This ongoing evaluation will be conducted, as needed, to ensure an effective delivery of drop-off services is being achieved.

Evaluate Cost Containment Options

The District may evaluate the various costs associated with the drop-off program, and identify potential areas in which costs may be reduced. One programmatic aspect that may be evaluated is whether the drop-off program should be single-stream or dual-stream.

Minimize Contamination and Littering

This initiative was part of the original program ranking and it is also part of the District's "outreach priority" which was identified in Appendix L.

The District may determine if contamination and littering is associated with certain drop-off sites based on the results of the drop-off site evaluation discussed above (or widespread throughout the program). Then, steps may be developed and implemented to reduce these problems. The steps may include, but are not limited to the following:

- Improved signage at some or all sites
- Increased education and outreach initiatives
- Enforcement actions as needed

- Use of permanent or portable surveillance cameras
- Elimination of problematic sites if appropriate

Minimize Theft of Recyclables

The District may develop a plan for minimizing theft of recyclables at drop-off sites. This Plan may be developed in concert with the ongoing drop-off site evaluation and may include may of the initiatives listed under the contamination and littering section above.

Update and Perform Participation Study

In the ranking table, the Policy Committee voted this initiative as one that would not be implemented. Their concerns about implementing the initiative were related to the time commitment and cost to conduct the study. The District feels that obtaining new user data for the drop-off program would yield worthwhile information. For this reason, the District is including this initiative as implementable, with the stipulation that it will only be implemented if the District can obtain a no-cost labor source to complete the study, such as a volunteer/civic group.

Ensure Long-Term Availability of Drop-Off Sites

Long-term availability of sites (2018-2019). The drop-off site properties are owned by private companies or local communities. In order to ensure that these locations are available for an extended time period, the District intends to develop a model agreement (or memorandum of understanding) which defines the terms of the drop-off site use. Property owners would be encouraged to sign the agreement.

The drop-off site properties are owned by private companies or local communities. In order to ensure that these locations are available for an extended time period, the District intends to develop a model agreement (or memorandum of understanding) which defines the terms of the drop-off site use. Property owners would be encouraged to sign the agreement.

Printed Publications

The District will continue to update and make available printed publications containing educational information and information about District programming. The following initiatives will be implemented to improve the District's printed publications:

- Per Lucas County's policies, the District will evaluate the use of bilingual options for targeted publications.

- Measure the success of printed publications through tracking distribution, availability, and if a direct correlation to increased diversion or other result from the printed materials. This initiative will be implemented based on clear project specific initiatives (not for general publications).

Participation in Community Events

The District will continue to participate in community events. To make this program more effective, the following two initiatives will be implemented:

- Increase the number of events in which the District participates.
- Focus on changing behavior at community events by using facetime with residents to gather information about recycling habits and why people do/do not recycle. This new initiative would be modeled after Example B, “Aligning Existing Program with Social Marketing” in Ohio EPA’s Plan Format 4.0 Attachment L-1.

5. Economic Incentives

Table I-6. Summary of Economic Incentive Programs

ID	Name	Start Date	End Date	Goal(s)
5221 2109	Community Curbside Solid Waste and Recyclables Technical Assistance Program (formerly Municipal Assistance Program)	2005	Ongoing	Goals 1,2,3,5,6
2112	Community Grant - Recycling Incentive Program	2005	Ongoing	Goal 1, 2, 3, 5
8395	District management of collection contracts for participating local units	2011	Ongoing	Goal 1
4841	Technical assistance to communities to add/improve Yard Waste collection programs.	2011	Ongoing	Goal 2, 5 (2001 State Plan)

Community Curbside Solid Waste and Recyclables Technical Assistance Program (formerly Municipal Assistance Program)

The District will provide assistance to municipalities to convert to PAYT or include PAYT in bundled services. The District provides technical assistance to any community upon request. This technical assistance that is provided to communities can include, but is not limited to assisting with service provider contracts for trash, recycling and yard waste services,

bundling multiple services together and pay-as-you through (PAYT) assistance.

The District continues to provide technical assistance to communities for collection contracts for participating local units by contracting for service delivery and directly billing either generators or participating local units. The purpose of the program is to provide consistent levels of both waste management and reduction services throughout the District over time while improving contracts by including provisions for recycling incentives, stronger education/outreach services, and increasing the materials accepted. The District does provide direct management of the City of Toledo curbside trash and recycling program via a contract with Republic Services.

The District has encouraged the implementation of economic incentive based collection services through its Municipal Assistance Program (which provides technical assistance to communities such as contract assistance) and District Management of Collection Contracts program, which are discussed in Appendix H. Both of these programs provide similar services to the communities. To reduce redundancies, these programs will now fall under a new program name called Community Curbside Solid Waste and Recyclables Technical Assistance. This program will continue. To improve the program, the following initiatives will be implemented:

- Increase promotion of program to non-participating communities.
- Measure success of programs and projects District provided assistance.
- Measuring success of District involvement vs baseline statistics such as cost, diversion, level of service, materials accepted, etc.

Community Grant - Recycling Incentive Program

The District has offered a community grant program since 2005 to provide an incentive for greater recycling in the District. The District has not awarded a grant under this program since 2010 as District priorities changed during that period. The District is interested in attracting communities to apply for this grant to develop new curbside recycling programs and to upgrade existing curbside programs utilizing the following curbside hierarchy:



To accomplish this, the new initiative includes:

Develop Alternatives to Enhance Program

During the planning period, additional financial resources may be devoted towards this program to attract communities to apply. In addition, the District may change the existing grant program to a one-time grant for communities that either create a new qualifying curbside recycling program or upgrade their existing curbside recycling program to a new qualifying program. The District may also expand this grant to schools and other institutions so that they may be eligible for a one-time incentive grants to develop and implement a recycling program.

The District may create a specific grant manual that will contain the details of the program and the application forms in 2018 then offer the grants to District communities from 2019 to 2022.

Technical assistance to communities to add/improve Yard Waste collection programs.

The District provides technical assistance to any community interested in adding or improving yard waste collection programs upon request.

6. Special Needs Programs

Table I-7. Summary of Special Needs Programs

ID	Name	Start Date	End Date	Goal(s)
2154	Partnership with KT/LCB & "Adopt-A-Road"	2001	Ongoing	Goal 7
5225	Data Reporting Program	2010	Ongoing	Goal 8
8400	Special Event Container Loan Program	2011	Ongoing	Goal 2 Goal 3
No ID	Minimize Contamination and Littering at Special Events	2019	Ongoing	N/A

Partnership with KT/LCB & "Adopt-A-Road"

KT/LCB organizes multiple litter collection programs each year. KT/LCB also partnered with the City of Toledo Department of Neighborhoods to conduct community clean-ups through their Beautification Action Team.

The Great American Cleanup is a national cleanup event sponsored by Keep America Beautiful. Local activities were managed by KT/LCB. KT/LCB also provided materials to volunteers for Global Youth Service Day.

Data Reporting Program

The District performs an annual surveying of commercial and industrial businesses, municipalities, haulers, processors, brokers, and compost facilities. The District aims to improve survey response and will target commercial and institutional entities. Therefore, two new initiatives may be implemented:

1. Target New Commercial/Institutional Entities

The District will target new commercial and institutional entities to submit recycling data. This initiative may involve researching commercial and institutional business directories to determine if there are entities not being captured by the current mail list provider for surveying purposes.

2. Contact Set Number of Businesses Annually

The District may establish a goal of contacting a set number of businesses each year. The businesses may be contacted by phone or in-person, and the intent of these interactions would be to obtain more and better data on their recycling operations or to determine why they are unable to submit data. The District may also work with key material recovery facilities and/or processors on improving their survey responses as well.

Special Event Container Loan Program

KT/LCB continues to partner with the Andersons on the Trash Toss Program to distribute boxes to groups to collect waste and recycling from special events. When applicable, the District assists with the large scale events of collection of recyclables.

Minimize Contamination and Littering at Special Events

Special event recycling for large venues is expected to continue. The District will explore implementing a new initiative to support this program:

In order to reduce the contamination of collected recyclables and the littering associated with special event recycling, the District may develop specific signage and educational messaging requirements/suggestions for large venue events that include recycling. In addition, for targeted events, the District may work with the event organizer in advance of the event to engage the food and beverage vendors to try and reduce non-recyclable container and packaging products from being offered at the event. This process may take several years of effort to incorporate into the targeted events.



APPENDIX J

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL I



APPENDIX J. REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL 1

The District is committed to achieving Goal 1 of the 2009 State Plan. This Appendix demonstrates the District's achievement of Goal 1 in the reference year and the programs that will help maintain the achievement of Goal 1 throughout the planning period.

A. Residential Sector Opportunity to Recycle

The following table presents the curbside and drop-off recycling opportunities in the reference year and year 5, 10, and 15 of the planning period, as well as the population credit received for each location. Many locations show a credit of zero because the municipality where the drop-off is located has curbside recycling. Municipalities are not permitted to have population credits exceeding 100%.

Table J-1. Opportunity to Recycle: Curbside and Drop-Off Programs

ID #	Lucas	2014		2022 (Year 5)		2027 (Year 10)		2032 (Year 15)	
	Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Non-subscription curbside									
NSC1	City of Maumee	14,035	14,035	13,775	13,775	13,615	13,615	13,438	13,438
NSC2	City of Oregon	20,195	20,195	19,821	19,821	19,591	19,591	19,336	19,336
NSC3	City of Sylvania	18,965	18,965	18,614	18,614	18,397	18,397	18,158	18,158
NSC4	City of Toledo	281,031	281,031	275,825	275,825	272,619	272,619	269,076	269,076
NSC5	City of Waterville	5,516	5,516	5,414	5,414	5,351	5,351	5,281	5,281
NSC6	Holland Village	1,702	1,702	1,670	1,670	1,651	1,651	1,630	1,630
NSC7	Ottawa Hills Village	4,473	4,473	4,390	4,390	4,339	4,339	4,283	4,283
NSC8	Waterville Twp.	1,666	1,666	1,635	1,635	1,616	1,616	1,595	1,595
NSC9	Monclova Twp.	12,381	12,381	12,152	12,152	12,010	12,010	11,854	11,854
Subscription curbside									
SC1	Berkey Village	236	59	232	58	229	57	226	56
SC2	Harbor View Village	100	25	98	25	97	24	96	24
SC3	Harding Twp.	728	182	715	179	706	177	697	174
SC4	Jerusalem Twp.	3,098	775	3,041	760	3,005	751	2,966	742
SC6	Providence Twp.	3,346	837	3,284	821	3,246	811	3,204	801
SC7	Spencer Twp.	1,875	469	1,840	460	1,819	455	1,795	449

ID #	Lucas	2014		2022 (Year 5)		2027 (Year 10)		2032 (Year 15)	
	Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
SC8	Springfield Twp.	24,449	6,112	23,996	5,999	23,717	5,929	23,409	5,852
SC9	Swanton Twp.	2,837	709	2,784	696	2,752	688	2,716	679
SC10	Sylvania Twp.	29,499	7,375	28,953	7,238	28,616	7,154	28,244	7,061
SC11	Village of Whitehouse	4,405	1,101	4,323	1,081	4,273	1,068	4,218	1,054
SC12	Washington Twp.	3,254	814	3,194	798	3,157	789	3,116	779
Full-time, urban drop-off									
FTU1	605 Fassett St. Toledo, OH 43605	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU2	Andover Apartments 2555 Eastgate Rd. Toledo, OH 43614	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU3	Arrowhead Fire Station 450 W Dussel Dr. Maumee, OH 43537	14,036	0*	13,776	0*	13,616	0*	13,439	0*
FTU4	City of Waterville 25 N. Second St. Waterville, OH 43566	5,516	0*	5,414	0*	5,351	0*	5,281	0*
FTU5	Kroger 8730 Waterville Swanton Rd. Waterville, OH 43566	5,516	0*	5,414	0*	5,351	0*	5,281	0*
FTU6	Hoffman Rd. Landfill 3962 Hoffman Rd. Toledo, OH 43611	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU7	Jewish Community Center/YMCA 2440 South Ave. Toledo, OH 43609	281,031	0*	275,825	0*	272,619	0*	269,076	0*

ID #	Lucas Community	2014		2022 (Year 5)		2027 (Year 10)		2032 (Year 15)	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FTU8	Kroger 4633 Suder Ave. Toledo, OH 43611	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU9	7556 King Rd. Sylvania, OH 43560	18,965	0*	18,614	0*	18,397	0*	18,158	0*
FTU10	Montclova Twp. 4335 Albon Rd. Monclova, OH 43542	12,381	5,000	12,152	5,000	12,010	5,000	11,854	5,000
FTU11	Pearson Metropark 4600 Starr Rd. Oregon, OH 43616	20,196	0*	19,822	0*	19,592	0*	19,337	0*
FTU12	Ottawa Hills Village & Sylvania Twp. 2125 Richards Ottawa Hills, OH 43606	33,972	5,000	33,343	5,000	32,955	5,000	32,527	5,000
FTU13	Springfield Twp. 1414 Spring Meadows Holland, OH 43528	26,151	5,000	25,667	5,000	25,368	5,000	25,038	5,000
FTU14	Springfield Twp. Fire Station #2 1534 S. Crissey Rd. Holland, OH 43528	26,151	5,000	25,667	5,000	25,368	5,000	25,038	5,000
FTU15	Springfield Twp. Fire Station #3 7145 S. Garden Rd. Maumee, OH 43537	26,151	5,000	25,667	5,000	25,368	5,000	25,038	5,000
FTU16	Springfield Twp. Hall 7616 Angola Rd. Holland, OH 43528	26,151	5,000	25,667	5,000	25,368	5,000	25,038	5,000

ID #	Lucas Community	2014		2022 (Year 5)		2027 (Year 10)		2032 (Year 15)	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FTU17	The Andersons 530 Illinois Maumee, OH 43537	14,036	0*	13,776	0*	13,616	0*	13,439	0*
FTU18	Toledo Kroger 5109 Glendale Ave. Toledo, OH 43614	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU19	Toledo Kroger 4533 Monroe St. Toledo, OH 43613	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU20	Toledo Kroger 4925 Jackman Rd. Toledo, OH 43613	281,031	0*	275,825	0*	272,619	0*	269,076	0*
FTU21	Wildwood Metropark 5100 W. Central Toledo, OH 43615	281,031	0*	275,825	0*	272,619	0*	269,076	0*
Part-time, urban drop-off									
	None	0	0	0	0	0	0	0	0
Full-time, rural drop-off									
FTR1	Harbor View Village 4421 Bayshore Rd. Oregon, OH 43616	100	0*	98	0*	97	0*	96	0*
FTR2	Jerusalem Twp. 9501 Navarre Rd. Oregon, OH 43616	3,098	0*	3,041	0*	3,005	0*	2,966	0*
FTR3	Providence Fire Dept. Neapolis Rd. Swanton, OH 43558	2,981	0*	2,926	0*	2,892	0*	2,854	0*

ID #	Lucas Community	2014		2022 (Year 5)		2027 (Year 10)		2032 (Year 15)	
		Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
FTR4	Providence Twp. 13344 Perry Rd. Grand Rapids, OH 43522	3,346	2,500	3,284	2,500	3,246	2,500	3,204	2,500
FTR5	Richfield Twp. 3951 Washburn Rd. Berkey, OH 43504	236	2,500	232	2,500	229	2,500	226	2,500
FTR6	Secor Metro Park 10000 West Central Berkey, OH 43504	236	2,500	232	2,500	229	2,500	226	2,500
FTR7	Spencer Twp. 630 N. Meilke Rd Holland, OH 43528	1,875	2,500	1,840	2,500	1,819	2,500	1,795	2,500
FTR8	Swanton Twp. P. Conway Dr. Swanton, OH 43558	2,981	2,500	2,926	2,500	2,892	2,500	2,854	2,500
FTR9	Whitehouse Village 6625 Providence St. Whitehouse, OH 43571	4,405	2,500	4,323	2,500	4,273	2,500	4,218	2,500
Part-time, rural drop-off									
N/A	None	0	0	0	0	0	0	0	0
Mixed municipal waste material recovery facility									
N/A	None	0	0	0	0	0	0	0	0
Total County Population		436,468		428,383		423,404		417,900	
Total Population Credit		423,421		416,411		412,094		407,322	
Percent of Population		97%		97%		97%		97%	

Source(s) of Information: Ohio Development Services Agency, 2014 Population Estimates by County, City, Village, and Township, May 2015.

Note: *Drop-offs that show a credit of zero are located in a political subdivision that has curbside recycling. Political subdivisions are not permitted to have population credits exceeding 100%.

The District will continue to exceed Goal 1 for each year of the planning period. All curbside programs and drop-offs operating during the reference year are expected to continue. All of the District's drop-off recycling sites meet the criteria to be eligible for access credit toward achieving Goal 1. Many sites in the table are listed with a population credit of zero. These sites are located in cities, villages, or townships that provide non-subscription curbside recycling access. Communities with non-subscription curbside recycling programs have a population credit equal to 100% of the total population; therefore, additional population credit for drop-offs cannot be counted toward achieving Goal 1 because the access credit would exceed the total population of the political subdivision. The following table summarizes the percentage of residents with access to recycling opportunities by program for the reference year and year 5, 10, and 15 of the planning period.

Table J-1b. Summary Table for Opportunity to Recycle

Year	Population Data	County
		Lucas
2014	Total County	436,468
	Credit for:	
	Curbsides	378,421
	% Access	86.7%
	Drop-offs	45,000
	% Access	10.3%
	Total	423,421
	% Access	97.0%
2022 (Year 5)	Total County	428,383
	Credit for:	
	Curbsides	371,411
	% Access	86.7%
	Drop-offs	45,000
	% Access	12.1%
	Total	416,411
	% Access	97.21%
2027 (Year 10)	Total County	423,404
	Credit for:	
	Curbsides	367,094
	% Access	86.7%
	Drop-offs	45,000
	% Access	10.6%
	Total	412,094
	% Access	97.33%
2032	Total County	417,900

Year	Population Data	County
		Lucas
(Year 15)	Credit for:	
	Curbsides	362,322
	% Access	86.7%
	Drop-offs	45,000
	% Access	12.4%
	Total	407,322
	% Access	97.47%

Source(s) of Information: Ohio Development Services Agency, 2014 Population Estimates by County, City, Village, and Township, May 2015.

Tables J-2 and J-3 are not applicable to the District and have been omitted.

B. Commercial Sector Opportunity to Recycle

Table J-4. Infrastructure Demonstration for the Commercial Sector

Service Provider	Recycling Service Provided	Cardboard	Office Paper	Mixed Paper	Steel Cans	Pallets/ Packaging
Lucas						
N&R&G	Hauler Collection, Scrap Yard				✓	
Certified Document Destruction	Hauler Collection		✓	✓		
Metal Management of Ohio	Hauler Collection				✓	
Republic Services	Hauler Collection	✓	✓	✓	✓	
Waste Management	Hauler Collection	✓	✓	✓	✓	
Gateway	Hauler Collection	✓	✓	✓	✓	
OmniSource Corporation	Hauler Collection, Scrap Yard				✓	
State Paper & Metal Co.	Hauler Collection, Scrap Yard, Buy Back, Drop-Off	✓	✓	✓	✓	
Toledo Shredding	Hauler Collection, Scrap Yard				✓	
Accushred	Hauler Collection		✓	✓		

Service Provider	Recycling Service Provided	Cardboard	Office Paper	Mixed Paper	Steel Cans	Pallets/ Packaging
AllShred	Hauler Collection		✓	✓		
Container Compliance Corp.	Hauler Collection				✓	
Industrial Hardwood	Pallet Refurbisher					✓
Lott Industries	Drop-Off	✓	✓	✓	✓	
Pallet World	Hauler Collection, Pallet Refurbisher					✓
Phoenix Pallet	Hauler Collection, Pallet Refurbisher					✓
Midtown Pallets	Hauler Collection, Pallet Refurbisher, Buy Back, Drop-Off					✓
Shred-It	Hauler Collection		✓	✓		
Steven's Disposal	Hauler Collection	✓	✓	✓	✓	
Superior Packaging of Toledo	Buy Back, Pallet Refurbisher	✓	✓	✓	✓	✓
Tri-State Pallet	Pallet Refurbisher					✓
Pinnacle Recycling	Hauler Collection, Buy Back	✓	✓	✓		
Lumber Jacks	Drop-Off					✓

Table J-4, “Infrastructure Demonstration for the Commercial Sector,” presents drop-offs, buy backs, scrap yards, haulers, and pallet refurbishers that provide recycling opportunities to the commercial/institutional sector. The total number of recycling opportunities in the District’s jurisdiction for five materials designated for the commercial sector to demonstrate compliance with Goal 1 are as follows:

- Cardboard: 8
- Office paper: 12
- Mixed paper: 12
- Steel cans: 12
- Wood pallets and packaging: 7

C. Demonstration of Meeting Other Requirements for Achieving Goal 1

1. ***Residential/Commercial Waste Reduction and Recycling Rate***

In the 2014 reference year, the District's residential/commercial sector achieved a 31.9% waste reduction and recycling rate, which exceeds the 25% requirement to achieve Goal 1. The waste reduction and recycling rate for the residential/commercial sector is projected to exceed the 25% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, MRFs, retailers that report to Ohio EPA, scrap tire recyclers, the drop-off recycling program, curbside recycling programs, and organics diversion facilities.

2. ***Industrial Waste Reduction and Recycling Rate***

In the 2014 reference year, the District's industrial sector achieved a 93.9% waste reduction and recycling rate, which exceeds the 66% requirement to achieve Goal 1. The waste reduction and recycling rate for the industrial sector is projected to exceed the 66% requirement throughout the planning period based on anticipated volumes of recycling from scrap yards, processors, and MRFs.

3. ***Encouraging Participation***

The District will encourage residents and commercial generators to participate in available recycling infrastructure using a variety of outreach, education, and incentive programs, including the following:

- **Business Outreach:** The District encourages company waste assessments and assists with development of company programs and participation to increase recycling waste reduction efforts.
- **Education and Awareness Initiatives:** The District has devoted resources to implementing multiple education and awareness initiatives that target greater recycling amongst specific demographics.
- **Resource Guide:** The District updates the "Recyclers' List" periodically, and this document is a comprehensive compilation of all the locations accepting various types of recyclable and reusable materials within Lucas County.
- **Website:** The District regularly updates its website. The District will implement new initiatives to improve the website, such as improving the branding and presentation, obtaining a user-friendly URL, and

developing user metrics to evaluate the use of the site and make informed decisions regarding its future improvements.

- **Funding and Grants:** Additional financial resources will be devoted towards this program to attract communities to apply for community grants to develop new curbside recycling programs and to upgrade existing curbside programs.
- **District Partnership with KT/LCB:** The District will continue its partnership with KT/LCB, which provides education, outreach, and technical assistance on issues related to recycling.

Appendices I and L include detailed information about each program.



APPENDIX K

**WASTE REDUCTION AND RECYCLING
RATES AND DEMONSTRATION OF
ACHIEVING GOAL 2**



APPENDIX K. WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL 2

Even though it has chosen to demonstrate compliance with Goal 1 of the *State Plan*, the District will strive to achieve Goal 2 as well, which states that the District will recycle or reduce at least 25 percent of the solid waste generated by the residential/commercial sector, and at least 66 percent of the solid waste generated by the industrial sector. Table K-1 below shows the waste reduction and recycling rates for the residential/commercial sector in the reference year and projected for the planning period. Slight increases in the waste reduction and recycling rate (WRR) is projected from 2016 through 2032.

Table K-1. Annual Rate of Waste Reduction: Residential/Commercial Solid Waste

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate	Per Capita Waste Reduction & Recycling Rate (ppd)
2014	2014	436,468	181,672	387,690	569,361	31.91%
2015	2015	435,165	184,865	414,108	598,973	30.86%
2016	2016	434,195	190,010	418,233	608,243	31.24%
2017	2017	433,225	185,188	422,397	607,585	30.48%
2018	2018	432,255	185,240	426,601	611,840	30.28%
2019	2019	431,285	185,291	425,643	610,935	30.33%
2020	2020	430,315	185,343	424,686	610,029	30.38%
2021	2021	429,349	185,396	423,733	609,128	30.44%
2022	2022	428,383	185,448	422,779	608,228	30.49%
2023	2023	427,417	185,501	421,826	607,327	30.54%
2024	2024	426,451	185,554	420,872	606,427	30.60%
2025	2025	425,485	185,608	419,919	605,527	30.65%
2026	2026	424,512	185,661	418,959	604,620	30.71%
2027	2027	423,404	185,715	417,865	603,581	30.77%
2028	2028	422,296	185,770	416,772	602,541	30.83%
2029	2029	421,188	185,824	415,678	601,502	30.89%
2030	2030	419,945	185,879	414,452	600,330	30.96%
2031	2031	418,990	185,934	413,509	599,443	31.02%
2032	2032	417,900	185,989	412,433	598,422	31.08%

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix E, Table E-4 (for reference year) and Table E-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)

- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)
- Population: Appendix C, Table C-1 (for reference year) and Table C-2 (for planning period)

Sample Calculations:

2014 Waste Reduction & Recycling Rate = (2014 Waste Reduced & Recycled ÷ 2014 Waste Generated) x 100

31.91% = (181,672 tons ÷ 569,361 tons) x 100

2014 Per Capita Waste Reduction and Recycling Rate = ((2014 tons recycled x 2,000) ÷ 365) ÷ population

2.3 ppd = ((181,672 tons x 2,000) ÷ 365 days/year) ÷ 436,468 residents

Table K-1 demonstrates that the District exceeds the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the reference year and anticipates exceeding the requirements of Goal 2 for the entirety of the planning period.

Table K-2 shows that the District exceeds the requirements of Goal 2 to reduce and recycle at least 66% of the solid waste generated by the industrial during the reference year. The District anticipates slight increases throughout the planning period, surpassing the industrial sector requirements of Goal 2 each year of the planning period.

Table K-2. Annual Rate of Waste Reduction: Industrial Solid Waste

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate
2014	224,052	14,476	238,527	93.93%
2015	238,535	34,306	272,841	87.43%
2016	238,535	34,097	272,632	87.49%
2017	238,535	33,889	272,424	87.56%
2018	238,535	33,682	272,217	87.63%
2019	238,535	33,477	272,012	87.69%
2020	238,535	33,273	271,807	87.76%
2021	238,535	33,070	271,604	87.82%
2022	238,535	32,868	271,403	87.89%
2023	238,535	32,868	271,403	87.89%
2024	238,535	32,868	271,403	87.89%
2025	238,535	32,868	271,403	87.89%
2026	238,535	32,868	271,403	87.89%
2027	238,535	32,868	271,403	87.89%
2028	238,535	32,868	271,403	87.89%
2029	238,535	32,868	271,403	87.89%
2030	238,535	32,868	271,403	87.89%

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate
2031	238,535	32,868	271,403	87.89%
2032	238,535	32,868	271,403	87.89%

Sources of Information: Data for this table is taken from the following portions of the solid waste management plan:

- Waste reduced and recycled: Appendix F, Table F-4 (for reference year) and Table F-5 (for planning period)
- Waste Disposed: Appendix D, Table D-3 (for reference year) and Table D-5 (for planning period)
- Waste Generated: Appendix G, Table G-1 (for reference year) and Table G-2 (for planning period)

Sample Calculations:

$2014 \text{ Waste Reduction \& Recycling Rate} = (2014 \text{ Waste Reduced \& Recycled} \div 2014 \text{ Waste Generated}) \times 100$

$93.93\% = (224,052 \text{ tons} \div 238,527 \text{ tons}) \times 100$

The combined WRR rate for residential/commercial and industrial sectors is shown in Table K-3. Overall, the WRR rate is projected to fluctuate between 47 and 49 percent from 2016 to the end of the planning period.

Table K-3. Annual Rate of Waste Reduction: Total Solid Waste

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate
2014	2014	405,723	402,165	807,888
2015	2015	423,400	448,415	871,814
2016	2016	428,545	452,330	880,875
2017	2017	423,723	456,286	880,009
2018	2018	423,774	460,283	884,057
2019	2019	423,826	459,120	882,946
2020	2020	423,878	457,959	881,837
2021	2021	423,931	456,802	880,733
2022	2022	423,983	455,647	879,630
2023	2023	424,036	454,694	878,730
2024	2024	424,089	453,740	877,830
2025	2025	424,143	452,787	876,930
2026	2026	424,196	451,827	876,023
2027	2027	424,250	450,733	874,983
2028	2028	424,304	449,640	873,944

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate
2029	2029	424,359	448,546	872,905
2030	2030	424,414	447,320	871,733
2031	2031	424,469	446,377	870,846
2032	2032	424,524	445,301	869,825

Sources of Information:

Tables K-1 and K-2

Sample Calculations:

2014 Waste Generated = 2014 Waste reduced and recycled + 2014 waste disposed

807,889 tons = 405,723 tons + 402,165 tons

2014 Waste Reduction & Recycling Rate = (2014 Waste Reduced & Recycled ÷ 2014 Waste Generated) x 100

50.22% = (405,723 tons ÷ 807,889 tons) x 100

Although the District is committed to achieving Goal 1, the District will strive to maintain its achievement of Goal 2. The specific programs and activities that will provide assistance in achieving the targeted recycling rates are discussed in Appendix I.



APPENDIX L

MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS



APPENDIX L. MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

This Appendix discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following figure includes a summary of each goal, as presented in Ohio EPA's Plan Format v4.0:

Goal 3: Waste Reduction and Recycling Rates

- The SWMD shall provide the following required programs:
 - A website
 - A comprehensive resource List
 - An inventory of available infrastructure
 - A speaker or presenter

Goal 4: Outreach and Education - Outreach Plan and General Requirements

- The SWMD shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to target audiences using best practices.

A. Minimum Required Education Programs

In accordance with Goal 3 of the *2009 State Plan*, the District is required to provide four minimum education programs including (1) a website, (2) a comprehensive resource List, (3) an inventory of available infrastructure, and (4) a speaker or presenter. The District met these requirements in the reference year as well as for this Plan Update.

1. Website

a. Description

The District's comprehensive website is updated regularly. The website is available at: www.co.lucas.oh.us/index.aspx?nid=749.

The main page provides the District's contact information, mission, solid waste and recycling news, a calendar of upcoming collections, events, or programs, and frequently asked questions (FAQs). It also provides links to information about assistance programs, business waste reduction assistance programs, local curbside recycling and waste collection programs, District recycling programs, and the most current approved Solid Waste Management Plan Update. Residents can also sign up for e-mail notifications from the District to receive reminders about upcoming collection events and other special programs.

b. Website Advertisement Strategy

The District advertises the availability of its website using a variety of mechanisms:

- The web address is included in the Recycler’s List and press releases.
- The District’s partners, such as Keep Toledo/Lucas County Beautiful, Inc., include links to the District’s website on their websites and social media posts.
- The District’s website is displayed on many promotional items that are distributed at local special events and community activities.
- The website is further promoted by the inclusion of a direct link on the District’s Facebook page.

Additionally, the website exists within the framework of Lucas County’s website (www.co.lucas.oh.us/), which increases its visibility. The District’s website can be accessed from Lucas County’s homepage by navigating to Departments, then Solid Waste Management, or by searching “Solid Waste” or “Recycling” using the search box.

c. Website Updating Strategy

Updates are completed on an ongoing and as-needed basis. Examples of routine updates include adding upcoming events and to the calendar, updating the “Recycler’s List” resource List, and replacing the Solid Waste Plan each time a new update is approved.

d. Person(s) Responsible for Maintaining Website

The District’s website is hosted on Lucas County’s website. The County is responsible for maintaining the website, however, the District edits the website directly.

2. Comprehensive Resource List

a. Description

Each year and as changes occur, the District and Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB) update the Recycler’s List, which is a comprehensive List identifying recycling opportunities for residents and businesses. The List includes:

- List of drop-offs by community, materials accepted at the drop-offs, and examples of each material
- Curbside recycling opportunities
- Local businesses that accept materials from residents and businesses for recycling and the materials each business accepts
- Locations to recycle special materials including electronic waste, ink jet cartridges, laser and toner cartridges, rechargeable batteries, cell phones, household hazardous waste, compact fluorescent bulbs, tires, motor oil, and automotive batteries
- List of yard waste drop-offs
- Locations that accept animal manure
- Phone numbers and websites for cities, villages, and townships with curbside recycling programs
- Commercial/industrial recycling information (recycling haulers, facilities, and programs)
- Waste analysis and assessment service information for businesses
- Recycling opportunities for miscellaneous materials including books, bicycles, concrete, eyeglasses, plastic grocery bags, textiles, furniture, wire hangers, etc.
- District contact information
- Educational resources and opportunities

b. Access to Recycler's List

The Recycler's List can be accessed by a variety of means. Electronically, the List is available on the District's website and on Keep Toledo/Lucas County Beautiful, Inc.'s website. Printed copies are also available through the District and Keep Toledo/Lucas County Beautiful, Inc. In addition, information cards are distributed at special events.

Moving forward, the District will also continue to work with its public and private partners to carry, offer, and/or distribute information cards guiding residents to electronic links. Potential partners for this initiative may include property managers of multi-family housing units, city, village, and township halls, community centers, chambers of commerce, and libraries.

c. Recycler's List Updating Strategy

District staff and representatives from Keep Toledo/Lucas County Beautiful Inc. review the Recycler's List regularly and

as needed throughout the year to confirm whether existing information/listings need updated and add new recycling resources for residents and businesses when they are identified. Lists are replaced annually on the website and physical copies of the updated List are printed as needed for distribution at events held within Lucas County.

All identified recyclers on the List are contacted annually to confirm continued participation and to update information.

To solicit the public's assistance with keeping the List as current as possible, future Lists will include a message such as "If you know about a recycling opportunity that is not listed in this List, or encounter any errors in the listings, please contact the Lucas County Solid Waste Management District."

3. Infrastructure Inventory

a. Description

A copy of the District's approved Plan is posted on the website, which includes the infrastructure inventory as compiled during the Plan's reference year.

In an effort to provide the most up-to-date information, the District will create a stand-alone document containing Lucas County's solid waste and recycling infrastructure inventory. The infrastructure inventory will consist of at least the following:

- Solid waste management and disposal infrastructure, including:
 - Landfill facilities
 - Transfer facilities
 - Scrap tire facilities
 - Incinerators/waste-to-energy facilities
- Waste reduction and recycling infrastructure, including:
 - Curbside recycling services
 - PAYT trash collection services
 - Drop-off recycling locations (both privately and publicly owned/operated)
 - Composting facilities
 - Yard waste collection programs
 - Recycling centers
 - Material recovery facilities and other facilities for processing recyclable materials

A portion of the information to be included in the inventory is currently included in the Recycler's List, such as details about curbside programs, drop-off recycling sites, yard waste composting, and recycling centers. Appendix B also includes much of the information that will be included in the infrastructure inventory.

b. Access to Inventory

The inventory will be made available by the first year of the planning period (2018). An electronic version will be posted on the District's website. The inventory will be available to Keep Toledo/Lucas County Beautiful, Inc. Toledo-Lucas County Sustainability Commission and the BWRAP if they choose to post it on their websites. Printed copies of the inventory will not be distributed at public events or other establishments since the majority of information which is relevant to residents and businesses is already included in the Recycler's List.

c. Inventory Updating Strategy

The infrastructure inventory will be updated annually. The majority of information to be included in the inventory has historically (and is currently) collected during the Annual District Report preparation process. Information in the inventory such as the operational status of facilities and their addresses and contact information will be revised as necessary.

4. Speaker/Presenter

a. Description

During the reference year, the District continued its partnership with Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB) to perform education and outreach activities. As a partner, KT/LCB is a natural fit for the District. Their mission is to establish greener communities through environmental education, litter prevention and voluntary partnerships. KT/LCB covers a wide range of solid waste areas in their work including promoting recycling, reuse, reducing solid waste and litter and addressing other solid waste issues.

b. Environmental Education Specialist's Duties

KT/LCB employs a full-time Education Specialist that conducts classroom presentations for students of all ages and teachers in accordance with the State of Ohio's educational standards. Classroom presentations are provided for no cost. Educators may

schedule a presentation by calling KT/LCB at 419-213-2252, or by submitting a request online from the organization's website (www.ktlcb.org).

Examples of some of the demonstrations offered include the following:

- *The Incredible Edible Landfill:* Students build a model landfill out of pudding and pie crust.
- *Landfill Display Model:* The landfill model demonstrates how modern landfill systems today are different from the dumps of the past. This is a wonderful tool for helping people of all ages understand how a landfill works.
- *Litter Olympics:* This is an outdoor or gymnasium activity where students play games using litter or recyclables.
- *Pack to Reduce:* Students work in groups to determine whether or not the contents of sample lunches are reusable or recyclable. Then they make presentations about the lunches to the class. Other topics discussed are nutrition, cost, convenience, and litter.
- *Paper Pin Decorating:* Students decorate handmade pins, made from recycled paper.
- *Tin Can Papermaking:* Each student makes one sheet of recycled paper.
- *Wallpaper Bead Necklace:* Each student makes a necklace out of old wallpaper samples.
- *Riley's Adventure Puppet Show:* Earth Day and as scheduled.

In 2014, the Education Specialist completed 38 presentations, reaching 1,155 students and 93 adults. In 2015, in its first year, Riley's Adventure Puppet Show reached 7,186 students and 459 teachers.

The Environmental Education Specialist and other staff from KT/LCB participate in local events such as the Toledo Zoo Party for the Planet and other events. KT/LCB typically maintains a booth that contains educational information and brochures for residents, such as the District's Recycler's List. Their staff is present at the events to

engage residents, increase awareness, promote recycling/waste reduction opportunities and programs, and answer questions.

KT/LCB also maintains detailed information on its website about environmental field trips that can be scheduled with other local organizations or facilities. The Environmental Education Specialist promotes these opportunities to interested educators. Field trip destinations include:

- Blue Creek Conservation Area
- City of Sylvania Composting Site
- EnviroSafe Services of Ohio
- Lourdes College Life Lab
- Maumee Bay State Park
- Metroparks of the Toledo Area
- Ottawa National Wildlife Refuge
- The Scrap Box – Where Discards Become Discoveries!
- Toledo Botanical Garden
- Toledo Zoo Educational Program
- University of Toledo Stranahan Arboretum and Eco Discovery

Transportation costs and other associated costs for field trips varies by location. Schools are responsible for covering these costs.

A lending library is maintained by KT/LCB. Borrowing materials is free for educators. The lending library has a variety of VHS tapes, DVDs, and books that are appropriate for a range of age groups, from preschool to adult learners. The majority of materials available focus on topics such as litter prevention, recycling, landfills, composting, material recovery facilities, buying recycled to “close the loop,” hazardous waste, waste-to-energy facilities, reuse, and other related themes.

KT/LCB partnered with EcoErek to recycle 4,748 pairs of jeans and 2,128 pairs of shoes. EcoErek was recognized by local, state and national organizations for his recycling efforts.

KT/LB also offers trash and recycle boxes free of charge to anyone within Lucas County. This “Trash Toss” program is made possible through a corporate sponsor. In 2014, 4,845 boxes and 1,550 recycling lids were given to residents and organizations for use at special events. KT/LB also coordinates District recycling at large events.

B. Outreach and Education – Outreach Plan and General Education Requirements

1. Evaluation of Existing Programs and Outstanding Needs

The following table presents the District’s existing education and outreach programs and each program’s target audience.

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
District Website	✓	✓	✓	✓	✓
Distributing Publications at Community Events	✓	✓			✓
Social Networking	✓				
Presentations	✓	✓		✓	✓
Outreach (Tours, KT/LCB Events)	✓	✓			
Lending Library		✓			
Community Curbside Solid Waste and Recyclables Technical Assistance					✓
Toledo-Lucas County Sustainability Commission	✓	✓	✓	✓	✓
Market Development Grant Technical Assistance			✓		
Waste Assessment Program		✓	✓	✓	
School Paper Recycling Program		✓			
Total Program per Group	6	8	4	4	5

During the reference year, the District had programs that addressed the five target audiences. The District’s infrastructure is mature, so the existing programs are appropriate given the available recycling opportunities.

a. **Existing Program Evaluation**

i. **District website**

The District website provides each target audience with awareness education about programs and infrastructure available locally for recycling and reducing waste. The website contains information about participating in programs, so the focus of the website is not just on increasing awareness; materials are geared to changing behavior.

- **Strengths:** Providing resources such as the Recycler's List through the website is a cost-effective method of providing awareness education to a large quantity of individuals. It also allows the District to update and add new information on an as-needed basis. The notification subscription system on the website is a powerful tool the District can use to reach individuals in the targeted audiences via e-mail to send reminders about upcoming events or other important information in real-time. As smartphone use continues to grow, the notification system is becoming a tool to reach individuals not only on a computer, but through their mobile devices.
- **Challenges:** Individuals who are not aware of the District's website or do not have internet access do not benefit from it.

The District's website is part of the County's website. It is visually uniform with webpages of other county departments. The website does not display a District logo and the branding, or lack thereof, does not convey a unique identity or message separate from that of other county departments. Additionally, because the website is integrated within the County's website, the main page has a complicated, unmemorable web address.

- **Measuring Effectiveness:** Due to the fact that the website is part of the County's system, measurement tools are not available to the District. Potential methods of measurable success may include obtaining the total number of visits to the website annually, monitoring the total number of individuals who have subscribed to the District's notifications, and/or adding

a survey on the website asking visitors how they found the site (i.e., found the link while browsing the County's website, saw the address on a District flyer/publication, clicked a link posted by a partner organization, etc.) to identify the most effective way to promote the District's website. Other methods for measuring and improving the effectiveness of the website, which KT/LB currently does, includes logging the nature of calls received by the District to identify if there are frequently asked questions about information that is not posted on the website.

- **Best Practices:** Content on the website is aligned with recycling opportunities. For example, on the page regarding information about curbside recycling, the District provides updated community specific information for each city, township, and village's curbside recycling program. Information on the website directly corresponds to opportunities available in the District. The District will begin measuring the effectiveness of the website using strategies outlined in the previous bulletpoint to continually improve the website. Using a consistent and frequently repeated message is another best practice that the District utilizes. As a response to the contamination issues in local curbside and drop-off programs, the District recently updated the graphics it uses to promote proper recycling. These graphics have been used on the website, on the District's social media page, and on educational flyers.

ii. **Distributing Publications at Community Events**

In addition to the website, the District also uses printed flyers and Lists to disseminate information about recycling and waste reduction opportunities. Currently, materials are available at community events such as the Toledo Zoo Party for the Planet and other events, at the District office, and through the District's partner, KT/LCB. Providing information directly to residents achieves the District's goal of raising awareness amongst residents about which materials can be recycled and nearby locations that accept recyclables. The District is targeting the correct audience given this goal.

- **Strengths:** Reaching out to residents at events provides opportunities to reach segments of the

population that might not otherwise be reached, either due to being unaware of the District's presence and website or because they lack access to the internet. Providing information directly to residents creates an opportunity for the public to meet District staff, ask questions, and give feedback about the District's services.

- **Challenges:** There are segments of the residential population that are not reached through the internet or by participating in community events. Additionally, educational materials can be ineffective if non-English speaking residents experience encounter a language barrier. Lucas County has the third largest Hispanic population out of Ohio's counties. The Census Bureau's 2014 American Community Survey 1-year Estimates indicate that 5.7% of Lucas County's population that is aged 18 and over speaks a language other than English. Spanish was the most common language spoken by a wide margin. Approximately 19.5% of residents who speak a language other than English reported speaking English less than "very well," which translates to approximately 4,500 residents who may have language barrier issues. This represents a very small portion of the District's overall population, so the general printed materials produced by the District do not need to be changed on account of language. However, bilingual materials may be available for more targeted outreach activities in the future. If the District identifies a need for these materials, they will reach out to language departments at local universities for assistance.

Rather than a challenge, the District has identified opportunities to improve this program by aligning the existing program with social marketing. Focusing on changing behavior instead of increasing awareness may improve the District's impact at community events. The District can accomplish this by using facetime with residents at special events to gather information about recycling habits and why people do/do not recycle. This new initiative would be modeled after Example B, "Aligning Existing Program with Social Marketing" in Ohio EPA's Plan Format 4.0 Attachment L-1.

- **Measuring Effectiveness:** Possible measures include tracking the total publications that are distributed each year and/or the total locations where publications are accessible to identify if there is a direct correlation in tonnage collected from programs or establishments listed in the publications over a period of time. The District can also consider tracking the number of community events attended to identify correlations in behavior change. It may be difficult to discern which changes to the District's programs impact behavior if multiple changes are implemented simultaneously.
- **Best Practices:** The District provides information at community events that is tailored to the available infrastructure in Lucas County. For example, the Recycler's List provides information about which materials are accepted by the drop-off program and provides a full listing of the drop-off locations, as well as local establishments that accept special materials such as yard waste, electronics, and household hazardous waste.

iii. Social Networking

The District regularly updated its Facebook page with posts promoting special District and community recycling drives, sustainability events, and other environmentally-related content. The page was available at:

www.facebook.com/pages/Lucas-County-Solid-Waste-Management-District/156293251078902

The District's partner, Keep Toledo/Lucas County Beautiful, Inc., also maintained a Facebook page in 2014 (<https://www.facebook.com/pages/Keep-ToledoLucas-County-Beautiful-Inc/167085956670756>). This site cross-promoted the District's waste reduction and recycling activities.

- **Strengths:** Reaching out to residents on social media reaches segments of the population that might not otherwise be reached through other existing education and outreach programs. In contrast to print materials, Facebook does have an option to translate text to another language.

Individuals can find the District's Facebook page a variety of ways, including but not limited to directly searching for the page, seeing shared posts, or searching for words in the District's name, such as "Lucas County". There are more opportunities for the District's page to be "discovered" on a platform such as Facebook, versus more traditional platforms, such as websites.

Approximately 71% of American internet users use Facebook, making it the most popular social networking site. It is most popular amongst 18-29 year olds, with 87% of the online population in this age group using the site. The majority of online adults aged 65 and over used Facebook, despite representing the age group that uses Facebook the least. Popularity amongst this age group is growing, as shown by a 24% increase in users from 2013 to 2014.¹ Facebook is an effective platform for reaching a wide audience inexpensively. Information can be shared or updated in real-time, even when residents are on-the-go if they are using a smartphone.

- **Challenges:** There are segments of the residential population that are not reached through social media platforms.
- **Measuring Effectiveness:** Facebook provides "insights" to organizational (versus personal) pages. Insights provide valuable information such as:
 - Graphs showing what times and days "fans" of the page are most commonly online;
 - Quantity of individuals reached and engaged (through post clicks or reactions, comments, and shares) per post;
 - Age, gender, city, and device used by users who click posts;
 - The District can use this information to create a baseline and make improvements in posts based on what types of posts are most popular or by fine-tuning the message to the dominant demographic of users or "fans."

¹ Pew Research Center. Internet Project September Combined Omnibus Survey, September 11-14 & September 18-21, 2014. <http://www.pewinternet.org/2015/01/09/demographics-of-key-social-networking-platforms-2/>.

- **Best Practices:** The District provides outreach in the context of infrastructure. Many posts on social media promote upcoming local recycling events or local waste reduction programs. As a response to the contamination issues in local curbside and drop-off programs, the District recently updated the graphics it uses to promote proper recycling. These graphics have been used on social media as well as the District's website and educational flyers. Using a consistent and frequently repeated message is a more effective strategy of educating residents.

iv. Presentations

The District continued to partner with Keep Toledo/Lucas County Beautiful, Inc. (KT/LCB) for educational activities. KT/LCB provides schools in Lucas County with comprehensive education and awareness activities for students as well as educators. The school programs are designed for students from K-12, as well as pre-school, youth groups, and scout troops. Some hands-on instructional activities include making recycled paper, jewelry and an edible landfill. Presentations can be scheduled online or by calling 419-213-2252.

In 2014, 38 presentations were given, reaching 1,155 students and 93 adults.

- **Strengths:** Presentations are available for no cost, making these opportunities available to any student, teacher, scout group, or school in the county. This hands-on approach allows for individualized education themes. The puppet show reaches much larger audiences with key reduce, reuse, recycle messaging.
- **Challenges:** The presentations given to students reached a negligible percent of the total students in Lucas County in 2014. Many demonstrations teach students that waste materials have value through hands-on learning. While these presentations may be effective when measuring how they impact a student's awareness of recycling, the effectiveness of changing students' behavior to begin recycling or recycle more has not been measured. While the puppet show reaches significantly more students and teachers, behavior changes are still not easily measured.

- **Measuring Effectiveness:** Potential methods of measurable success may include increasing the number of students, educators, and school districts reached and requesting that educators complete a feedback form after a presentation or attending a workshop. Additionally, recycling tonnage from schools with recycling programs could be estimated to identify if there is a correlation between presentations given and waste diverted.
- **Best Practices:** The District understands that providing education within the context of available infrastructure is a best practice. Working with schools has presented challenges for the District in terms of following all known best practices. Presentations are available to any District school that expresses interest. The District does not turn away schools that request presentations about recycling if the school does not have a recycling program. The District and Board continue to set up meetings with administrative officials at schools to discuss implementing recycling programs and offer assistance with developing contracts. Though presentations are given at some schools that do not have recycling programs, the message about recycling and waste reduction still reaches students who likely have recycling at home through curbside and drop-off recycling programs.

v. Outreach

The District continued to partner with KT/LCB for outreach activities. KT/LCB maintains detailed information about tours and field trips. The information includes the contact person at each location for educators to set up a field trip, as well as the address, operating hours, duration of tour or program, and any types of fees per student if applicable.

In 2017, the District began working with Toledo ZOOTEen program to engage Lucas County residents about recycling and other sustainability-related topics. Each year, the ZOOTEen program selects a focus that volunteers between ages 13 and 17 will work to promote. The focus of 2017 is conservation. The District trained 250 ZOOTEen volunteers on proper recycling techniques to reduce contamination issues. These volunteers will engage with Zoo guests and provide education and answer questions.

- **Strengths:** Field trip and tour information is compiled in an easy-to-use format for educators to consider. Learning about waste management, recycling, and composting on-site at a facility is a memorable experience for both students and educators. Outreach events have the potential to reach many members of a community as well as improve the visibility of recycling opportunities.

The ZOOTEen program, while temporary (the program's focus changes annually) is an excellent resource for spreading the District's message and engaging residents.

Outreach education to residents about contamination issues was necessary and the District suspects that it will have a positive impact on the quality of recycling collected moving forward.

- **Challenges:** Financial assistance is not provided for field trips or tours, so the opportunities presented may not be accessible to all schools in the District. Also, State education standards limit outside teaching opportunities.
- **Measuring Effectiveness:** Potential methods of measurable success may include tracking and increasing the total number of field trips to waste-management related facilities and the total number of students reached. Measuring the effectiveness of other outreach activities such as events could be accomplished by tracking the number of participants or the materials collected at each event.
- **Best Practices:** The District's partner, KT/LCB provides outreach assistance to educators. KT/LCB understands the needs of this particular audience and has compiled information most helpful for educators that are interested in activities such as tours by providing a list of possible tours/programs, costs for students, and operating hours.

vi. Lending Library

The District continued to partner with KT/LCB to manage a lending library. A variety of VHS tapes, DVDs, and books on

waste-management related topics are available for educators to borrow. Materials are available for preschool aged students to adults. In late 2014, a grant from Ohio EPA made it possible to upgrade all the materials.

- **Strengths:** The lending library is a free-resource for educators.
- **Challenges:** No challenges were identified.
- **Measuring Effectiveness:** Potential methods of measurable success may include tracking and increasing the total number of lending transactions annually or the total number of teachers that request materials annually. Collecting other information, such as which types of materials (VHS, DVD, book) are requested most often, and the subject matter/target age group of the borrowed materials may be beneficial for improving the Lending Library in the future and tailoring it to the needs of the program's main users.
- **Best Practices:** The District has diversified its lending library to include materials in multiple formats for most age groups.

vii. Community Curbside Solid Waste and Recyclables Technical Assistance

This new program combines the District Management of Collection Contracts program and the Municipal Assistance program. The District continued to provide technical assistance to communities upon request. Technical assistance that is provided to communities can include, but is not limited to assisting with service provider contracts for trash, recycling and yard waste services, bundling multiple services together and pay-as-you through (PAYT) assistance. It may also include assisting participating local units with collection contracts by contracting for service delivery and directly billing either generators or participating local units.

The District provided direct management of the City of Toledo curbside trash and recycling program via a contract with Republic Services in 2014. The contract value is \$9.4 million annually. No other assistance was requested in 2014.

- **Strengths:** The program provides political subdivisions with one-on-one assistance for implementing improvements to waste management and recycling related programming. The District's assistance can help political subdivisions achieve consistent levels of both waste management and reduction services over time while improving contracts by including provisions for recycling incentives, stronger education/outreach services, and increasing the materials accepted.
- **Challenges:** Communities do not use this resource often, even though it would likely benefit communities and residents.
- **Measuring Effectiveness:** Potential methods of measurable success may include tracking the number of communities served through the program annually and improvements in waste management and recycling services compared to baseline statistics. Areas of improvement may be related to costs per household, recycling incentives, levels of service provided, tonnage collected, contamination rates, education/outreach services provided, and materials accepted.
- **Best Practices:** The District understands the needs of political subdivisions and has provided assistance managing collection contracts as a service to them and the residents in which they serve. The District's assistance helps create better contracts for political subdivisions. The District serves as an advocate for political subdivisions while negotiating improved and expanded services. These services are vital to the longevity of programs and maintaining local infrastructure. The assistance provided to communities is within the context of existing infrastructure in Lucas County. Technical assistance with contracts focuses on creating opportunities that change the behavior of residents by helping municipalities expand the services available to them.

ix. Toledo-Lucas County Sustainability Commission

The District continued to serve on the Lucas County Sustainability Commission and fund the Commission with \$30,000 annually.

The Toledo-Lucas County Sustainability Commission is a group of representatives from local businesses, governments, and non-profit organizations that work to promote and educate with regard to sustainability issues in the Lucas County region. The Toledo-Lucas County Sustainability Commission is housed in the Board of Lucas County Commissioners Office.

The vision of this group is, "... to enhance the health of ecological, social, and economic systems to produce vibrant, sustainable communities and happy, healthy citizens." The mission is, "...centered on three directives - to educate, to engage, and to act throughout the region around all issues connecting natural, social, and economic systems. Using the Going Beyond Green Sustainability Plan as our framework, we support and tell the story of sustainability efforts for our region."

The Commission focuses on three areas: Natural, Social & Economic Systems. The District made the Commission possible by funding the first effort to define what sustainability meant to Lucas County in 2008. Until that point, recycling was equated to being sustainable. Over the years, the scope of the Commission has grown to include efforts in all three of the defined focus areas. Going Beyond Green, a regional sustainability plan, was finalized in 2014, and now is used as the guiding document for the Commission.

The Sustainable Business Recognition program was created to recognize businesses that are taking steps to reduce their negative impact on the environment, while also being a socially responsible business. The program aims to help those that are interested in incorporating more sustainable practices into their business. An option for those interested in the program is to have a free sustainability assessment conducted. This assessment is provided in partnership with the Lucas County Solid Waste Management District and the University of Toledo Business Waste Reduction Assistance Program (BWRAP) for this Toledo-Lucas County Sustainability Commission program. A team of engineering

students conduct on-site energy use and waste management practices assessments and provide a report detailing their findings. Implementing their changes could make a facility more sustainable. The following statement can be found on the Commission's website:

"...Whether you employ 30 or 300 people the Toledo-Lucas County Sustainability Commission is interested in helping your business become more environmentally, socially, and economically sustainable. We are also thrilled to recognize the practices you are already engaging in."

The District remains involved in the full Commission in an advisory capacity and through the direct involvement of KT/LCB in Commission programs.

In March of 2014, the Commission announced a public comment period for its "Going Beyond Green" regional sustainability plan. The Plan was finalized and launched on Earth Day in April of 2014.

- **Strengths:** The Toledo-Lucas County Sustainability Commission supports the goals of the District; serving on the commission has allowed the District's voice to be incorporated into planning documents and collaborate with other partners throughout the region. One of the goals in the sustainability plan aims to create a world class and well-maintained infrastructure grid for waste management. Additionally, the plan aims to incorporate educational programs specific to climate issues into schools and community empowerment initiatives. An environmentally literate community can self-organize and build programs such as local gardens, recycling programs, and civic campaigns for pro-environmental policy. Education empowers citizens to be guardians of their natural world.
- **Challenges:** No challenges have been identified.
- **Measuring Effectiveness:** Measuring the effectiveness of the District's support of the Toledo-Lucas County Sustainability Commission could include requesting a detailed report explaining how the District's funds were spent each year to evaluate the cost effectiveness and value provided. Measuring the

effectiveness of the Sustainability Plan may include tracking achievements or progress toward stated initiatives.

- **Best Practices:** The District will begin evaluating the annual progress of the Commission to determine whether the work of the Toledo-Lucas County Sustainability Commission is achieving the desired outcome of producing vibrant, sustainable communities.

x. **Market Development Grant Technical Assistance**

The District assists local businesses with completing Ohio EPA grant applications for the development of recycled products. Grants support projects for research and development of products utilizing recycled materials in their products. In 2014, the District did not sponsor any grant applications.

- **Strengths:** The District's assistance on grant applications can increase the likelihood that businesses will receive grants. Businesses that use recycled materials support recycling by creating a demand for materials collected through programs such as curbside recycling.
- **Challenges:** There is low demand for the District's assistance on grant applications. This could be due to a lack of awareness about Ohio EPA's grant opportunities or the District's technical assistance program, a lack of interest in competing for the grant or lack of willingness of local businesses to acquire necessary match funds.
- **Measuring Effectiveness:** Potential methods of measurable success may include measuring the businesses served through the program annually, grants awarded, and impacts to the demand for recyclable materials as a result of the grants awarded. The District may be able to identify grant candidates and directly offer assistance on completing the grant application to increase the number of applicants, or at a minimum, have at least one grant application from Lucas County submitted annually if projects are deemed appropriate.

- **Best Practices:** After the District implements additional methods of measuring effectiveness as outlined above, the District will have additional metrics to evaluate the program and make improvements where necessary to achieve a greater impact.

xi. Waste Assessment Program

The District continued to provide approximately \$75,000 in funding to University of Toledo Business Waste Reduction Assistance Program. During 2014, UT completed 6 regular solid waste assessments and 4 short-term solid waste assessments. These assessments identified 323.1 tons of solid waste diversion and \$23,340 in annual cost savings for local businesses. UT also completed 4 large scale energy audits that identified 367,918 kilowatt hours of energy reduction and \$32,757 in cost savings for Lucas County businesses. In addition, 6 journal papers and 8 conference papers were published in 2014 that related to waste reduction and sustainability efforts in Lucas County to protect the environment and reduce waste.

- **Strengths:** The partnership between the District and UT benefits the students involved with the program by providing real-world experience working with waste management related issues. The partnership also provides businesses with individualized assessments identifying opportunities to further reduce waste, increase environmental sustainability, and improve cost savings. The program provides an economic incentive to businesses while also achieving the waste reduction goals of the District.
- **Challenges:** No challenges were identified.
- **Measuring Effectiveness:** The District historically measured the success of this program in terms of the number of assessments, tons identified for diversion, and cost savings identified. Improving the measures by which the District tracks this program's effectiveness could involve following up with companies who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis. Further technical

assistance may be needed for companies to reap the full benefits of participating in the program.

- **Best Practices:** The District utilizes best practices by encouraging behavior change rather than just creating awareness by providing businesses that participate in the Waste Assessment program with implementable waste reduction solutions that have measurable outcomes. Each year, UT provides the District with a summary of activities completed, waste assessments conducted, and pounds of waste identified for diversion. This, combined with possible improvements in the program metrics outlined under “Measuring Effectiveness,” will allow the District to continue measuring the success of this program.

2. Conclusions

The following conclusions were identified as a result of the Phase I analysis of existing programs and outstanding needs:

- The District should establish quantifiable measures of effectiveness for existing programs if possible.
- The District should implement branding initiatives into its environmental education program.

3. Outreach Priority

In 2016, the District and the City of Toledo conducted an audit of recycling collected from the District’s drop-off program and the City of Toledo’s curbside recycling program. The results indicated that contamination is a serious issue. Results from the audit indicated contamination rates were as high as 24% for the District’s drop-off program and 35% for the City of Toledo’s curbside recycling program. The District has identified reducing contamination in District drop-offs and curbside recycling programs (specifically, the City of Toledo curbside recycling program) as an outreach priority.

As a response, the District recently updated the graphics it uses to promote proper recycling. These graphics have been used on social media as well as the District’s website and educational flyers. Using a consistent and frequently repeated message is a best practice for educating residents. The District also began standardizing the wording on education materials. Water bill inserts identifying proper recycling strategies were mailed to City of Toledo residents and approximately 25,000 residents outside the City of

Toledo that receive City of Toledo water services to address the contamination issues. The following figure presents an example of the graphics used to educate residents on proper recycling.

Figure L-1. Educational Material Focused on Reducing Contamination



The goal of the District’s outreach priority is to change resident behavior to improve recycling efforts in Lucas County. In addition to providing messages to residents in water bills, the District is using a multi-faceted approach to reaching the target audience by providing messages about proper recycling on social media, on the website, and in printed publications. The City of Toledo is reinforcing these efforts by using “OOPS tags” to notify residents when the incorrect materials are placed in curbside recycling containers.

The District plans to conduct a follow-up waste audit in 2017 to measure contamination rates and the impact of providing additional education to residents about proper recycling.

Results from the follow-up waste audit will be used to develop an on-going education campaign to ensure that contamination-reduction efforts remain effective.

4. List of Actions

The following table presents each existing program and the actions the District could implement during the planning period to address the aforementioned conclusions.

Table L-1. Potential Actions

Existing Programs	Potential Actions
District website	Improve branding and visual presentation.
	Obtain a more user-friendly URL such as “LucasCountyRecycles.com” and redirecting the link to the existing homepage.
	Track the number of visits to the website and the total subscribers to the District’s notification system and other metrics.
Printed Publications	Evaluate the use of bilingual options for targeted publications
	Measure the success of printed publications through tracking distribution, availability and if a direct correlation to increased diversion or other result from the printed materials.
Participation in Community Events	Increase District’s participation in Community Events
	Focus on changing behavior at community events by using facetime with residents to gather information about recycling habits and why people do/do not recycle. This new initiative would be modeled after Example B, “Aligning Existing Program with Social Marketing” in Ohio EPA’s Plan Format 4.0 Attachment L-1.
Lending Library	Measure the success of the lending library through tracking distribution, availability and if a direct correlation to increased diversion or other result from the materials loaned.
Presentations	Measure effectiveness of behavior change based on presentation objectives.
	Increase presentations to targeted schools based on District priorities (i.e. single stream recycling and contamination)
Outreach	Evaluate low or no cost options for transportation options for tour and field trips.
	Apply for grants to fund field trips and tours for targeted outreach priorities.
Waste Assessment Program	Follow-up with companies to determine if projected tons recycled or reduced to actual after implementation of recommendations.

Existing Programs	Potential Actions
District Management of Collection Contracts	Measuring success of District involvement vs baseline statistics such as cost, diversion, level of service, materials accepted, etc.
Municipal Assistance Program	Increase promotion of program to non-participating communities.
	Measure success of programs and projects District provided assistance.
Market Development Grant Technical Assistance	Increase promotion of the grants to targeted commercial and industrial businesses and institutions.
	Measure the success of grant projects that were awarded based on metrics such as tons diverted, tons reduced or products produced.
Toledo-Lucas County Sustainability Commission	Measure the effectiveness of the District's involvement through achievements of the Commission.

5. Priorities

The District and Policy Committee realize that the highest priorities identified during this Plan Update process were to implement all existing programs, develop a regional material recycling facility, develop a permanent HHW facility and enhance its education, awareness and outreach programs. The District reserves the right to ensure the implementation of these programs and initiatives first and before all other secondary new programs or initiatives. The District and Policy Committee also realize that the existing staff resources and budgetary constraints are limited and can also be a reason that certain newly identified programs or initiatives may or may not be implemented. This explains why many of the newly identified programs and initiatives summarized below may be considered for implementation versus will be implemented.

The District reviewed the information presented above in Table L-1, and prioritized the list focusing on the actions which were determined to be most important and those which would require less difficulty in implementing. The step-by-step process which the District used to prioritize the list was as follows:

- The ranking consisted of each member of the District assigning a value of between 1 and 5 to each initiative with 5 being the highest priority and 1 being the least.
- The priority ranking defined whether the District felt an initiative or program would be implemented under the following criteria:

- Ranking of 1 – No implementation
- Ranking of 2 – No implementation
- Ranking of 3 – Possible implementation with direction from Policy Committee
- Ranking of 4 – Implement
- Ranking of 5 – Implement
- The District then prioritized the results from the above step.
- The list of prioritized possible actions was then presented to the Policy Committee with discussion from District personnel and the District’s consultant focusing on the initiatives or programs ranked as a 3 from the criteria above.
- The Policy Committee was then asked to assist the District to decide if the initiatives ranked as a 3 should or should not be implemented in the new Plan Update.
- The Policy Committee was also asked to confirm that all initiative ranked as a 4 or 5 should be implemented as recommended by the District and that initiatives ranked 1 or 2 should not be implemented as recommended by the District.
- The results of this prioritization process and the programs/initiatives developed or continued are detailed in Chapter V of this Plan Update.

The following table summarizes the District’s and Policy Committee’s priorities for implementation of the possible list of actions by program:

Table L-2. District’s Ranking of Potential Actions

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
District website	Improve branding and visual presentation.	5	Implement
	Obtain a more user-friendly URL such as “LucasCountyRecycles.com” and redirecting the link to the existing homepage.	5	Implement
	Track the number of visits to the website and the total subscribers to the District’s notification system and other metrics.	4	Implement

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
Printed Publications	Evaluate the use of bilingual options for targeted publications	2	Implement, use County policies as a basis for implementation
	Measure the success of printed publications through tracking distribution, availability and if a direct correlation to increased diversion or other result from the printed materials.	2	Implement based on clear project specific initiatives, not for general publications
Participation in Community Events	Increase District’s participation in Community Events	4	Implement
	Focus on changing behavior at community events by using facetime with residents to gather information about recycling habits and why people do/do not recycle. This new initiative would be modeled after Example B, “Aligning Existing Program with Social Marketing” in Ohio EPA’s Plan Format 4.0 Attachment L-1.	4	Implement
Lending Library	Measure the success of the lending library through tracking distribution, availability and if a direct correlation to increased diversion or other result from the materials loaned.	3	Continue, improve as needed
Presentations	Measure effectiveness of behavior change based on presentation objectives.	5	Implement
	Increase presentations to targeted schools based on District priorities (i.e. single stream recycling and contamination)	5	Implement

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
Outreach	Evaluate low or no cost options for transportation options for tour and field trips.	3	Evaluate for implementation when MRF is developed
	Apply for grants to fund field trips and tours for targeted outreach priorities.	3	Evaluate for implementation when MRF is developed
Waste Assessment Program	Follow-up with companies to determine if projected tons recycled or reduced to actual after implementation of recommendations.	5	Implement
District Management of Collection Contracts	Measuring success of District involvement vs baseline statistics such as cost, diversion, level of service, materials accepted, etc.	4	Implement
Municipal Assistance Program	Increase promotion of program to non-participating communities.	4	Implement
	Measure success of programs and projects District provided assistance.	4	Implement
Market Development Grant Technical Assistance	Increase promotion of the grants to targeted commercial and industrial businesses and institutions.	4	Implement
	Measure the success of grant projects that were awarded based on metrics such as tons diverted, tons reduced or products produced.	3	General follow-up but no direct measurement unless business initiates
Toledo-Lucas County Sustainability Commission	Measure the effectiveness of the District's involvement through achievements of the Commission.	5	Implement

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
Social Networking	Increase social networking to segments of the population currently not served.	5	Implement

6. Outreach and Marketing Plan

The outreach and marketing plan is encapsulated in earlier sections in this Appendix. Previous discussions in this section describe the District’s outreach and education efforts that address the five target audiences, including priority strategies and methods of measuring effectiveness. The programs presented in this section are described in greater detail in Appendices H and I.



APPENDIX M

**WASTE MANAGEMENT CAPACITY
ANALYSIS**



APPENDIX M. Waste Management Capacity Analysis

A. Access to Publicly-Available Landfill Facilities

Since 2010, the Hoffman Road Sanitary Landfill, the Evergreen Landfill in Wood County, and the Vienna Junction Landfill in Michigan have disposed of 88 to 99 percent of the solid waste sent for disposal from the District. Table M-1, which is below, shows that both the Hoffman Road Landfill and the Evergreen Landfill have more than 40 years of remaining capacity based upon the rate of disposal during 2014. The Vienna Junction Landfill was estimated to have only five years of remaining capacity as of September 30, 2014. However, a new construction permit for this facility was approved in July 2015, resulting in 14 years of remaining capacity as of September 30, 2015.

Table M-1. Remaining Operating Life of Publicly-Available Landfills

Facility	Location	Years of Remaining Capacity ^a
<i>In-District</i>		
Hoffman Road Landfill	Lucas County, OH	49
<i>Out-of-District</i>		
Wood County Landfill	Wood County, OH	11.8
Evergreen Recycling & Disposal	Wood County, OH	43.4
Williams County Landfill	Williams County, OH	145.9
American Landfill	Stark County, OH	74.9
Sunny Farms Landfill	Seneca County, OH	24.4
Port Clinton Landfill	Ottawa County, OH	75.1
Hancock County Sanitary Landfill	Hancock County, OH	33.4
Erie County Sanitary Landfill	Erie County, OH	32.1
Defiance County Sanitary Landfill	Defiance County, OH	55.2
<i>Out-of-State</i>		
Twin Bridges Recycling & Disposal Facility	Hendricks County, IN	DNR
Vienna Junction Landfill	Monroe County, MI	14.0 ^b

^a Based on remaining life as reported by landfill owner/operators.

^b The remaining life for this facility is based on available airspace as of September 30, 2015.

Source(s) of Information: Ohio EPA Facility Data, 2014; Michigan Department of Environmental Quality; Republic Waste Services.

If the capacity at the Vienna Junction Landfill were not available for some reason, additional waste could be sent to the Hoffman Road Landfill. Hoffman Road had remaining space available for 5,293,000 tons of waste placement at the end of 2014. If all the waste currently being sent to the Vienna Junction Landfill were disposed at the Hoffman Road Landfill in addition to the amount which Hoffman

Road accepted in 2014, the Hoffman Road Landfill would have an estimated 16 years of remaining capacity. The equations below show the calculations used to make this determination:

$$\text{Years of remaining capacity} = (\text{Tons remaining for waste placement at Hoffman Road LF}) \div (\text{2014 disposal at Hoffman Rd.} + \text{2014 disposal of Lucas Co. waste at Vienna Junction LF})$$

$$16.2 \text{ Years remaining} = (5,293,000 \text{ tons}) \div (127,000 \text{ tons} + 200,000 \text{ tons})$$

Similar calculations could also be developed using the Evergreen Landfill, with similar results, although transportation costs would obviously be higher for this scenario. In conclusion, the District believes that adequate landfill capacity is available to serve the needs of the District; therefore, Table M-2, "Available Regional Capacity at Publicly-Available Landfills," and Table M-3, "Remaining Operating Life of Privately-Available Landfills," have been omitted.

B. Access to Captive Landfill Facilities

No captive landfills exist within the District.

C. Access to Processing Capacity for Recovered Materials

The District has several facilities available for processing recyclables. Those facilities used during the reference year are shown below in Table M-4. (See Appendix H for a more detailed discussion of processing capacity within Lucas County.)

Table M-4: Processing Facilities Used by the District

Name of Facility	Location		Type of Facility	Recyclables Accepted from District	
	County	State		Types	Tons
In-District					
AIM Ecycling LLC	Lucas	OH	Recycler	Electronics	*
Aldi	Lucas	OH	Commercial /Retail	Plastic, cardboard	476
Big Lots	Lucas	OH	Commercial /Retail	Cardboard	161
Dollar General	Lucas	OH	Commercial /Retail	Cardboard, mixed paper	343
Dynalite Corp.	Lucas	OH	Industry		*
Fondessy Enterprises, Inc	Lucas	OH	MRF	Multi-stream	*

Name of Facility	Location		Type of Facility	Recyclables Accepted from District	
	County	State		Types	Tons
Gateway Recycling & Waste Reduction, Inc.	Lucas	OH	MRF	Single & Multi-Stream	*
Home Depot	Lucas	OH	Commercial /Retail	Plastics, cardboard, ferrous, wood	546
Jo-Ann Fabrics	Lucas	OH	Commercial /Retail	Cardboard, commingled	40
Kohl's	Lucas	OH	Commercial /Retail	Plastic, cardboard, commingled	246
Kroger	Lucas	OH	Commercial /Retail	Cardboard	3,727
Kulhman Corporation Recycling Transfer Station	Lucas	OH	Residential/ Commercial	Single Stream Recyclables	26,961
Lowe's	Lucas	OH	Commercial /Retail	Cardboard, ferrous	298
Lucas County Solid Waste	Lucas	OH	MRF	Multi-Stream	
Meijer	Lucas	OH	Commercial /Retail	Cardboard	2,312
Michael's	Lucas	OH	Commercial /Retail	Commingled	74
OmniSource	Lucas	OH	Single Material Processor	Scrap metal	*
Republic Services	Lucas	OH	MRF	Multi-Stream	*
Sims Metal Management	Lucas	OH	MRF, Single Material Processor	Scrap metal	*
State Paper & Metal	Lucas	OH	MRF	Multi-Stream	*
Target	Lucas	OH	Commercial /Retail	Plastic, cardboard, mixed paper, ferrous, commingled	144

Name of Facility	Location		Type of Facility	Recyclables Accepted from District	
	County	State		Types	Tons
Toledo Shredding	Lucas	OH	Recycler	Ferrous, non-ferrous metals, other	*
Walmart	Lucas	OH	Commercial /Retail	Plastics, cardboard, mixed paper, ferrous, wood, other	3,134
Out-of-District					
N & R & G Recycling	Henry	OH	Buyback/ Processor	Ferrous, non-ferrous, other	*
Out-of-State					
ReCommunity**	Various	MI	MRF	Single Stream	26,961
Total					239,238

*Tonnage for this entity has not been included in order to protect the confidentiality of their survey response. The total tons represents the amount of residential/commercial and industrial recyclables reported by scrap yards, MRFs, and other processors receiving materials from the District.

**In 2016, ReCommunity lost its capacity at the City of Ann Arbor, Michigan’s MRF. ReCommunity operates several recycling facilities in the lower Michigan area. In addition, ReCommunity was able to obtain additional processing capacity with their processing partner Waste Management in Akron, Ohio. The transfer of materials from the District to Waste Management has increased costs to the City of Toledo, the District and other District entities. Although the processing capacity was stabilized, the need for a local or regional MRF is warranted and is discussed in Appendices H, I, and O and the appropriate Chapters in this *Plan Update*.

D. Incinerators and Energy Recovery Facilities

The District sent less than 100 tons of waste to medical waste treatment facilities and hazardous/non-hazardous waste treatment facilities in Indiana during the reference year. It is expected that these facilities (or similar facilities) will continue to provide necessary capacity to process these types of waste. In addition, the amount of waste processed by these facilities is less than 0.02% of the total waste disposal. Therefore, further consideration of incineration/energy recovery capacity is not needed.

Table M-5. Incinerators and Energy Recovery Facilities Used by the District in the Reference Year

Facility Name	State	Type of Facility	Tons Processed from SWMD
<i>In-District</i>			
None			
<i>Out-of-District</i>			
None			
<i>Out-of-State</i>			
Liquid Waste Removal Processing Facility	IN	Disposal of hazardous and non-hazardous materials and recycling for batteries, oil filters, fluorescent bulbs	4.5
Medassure of Indiana Treatment Facility	IN	Medical waste treatment	0.42
Stericycle Solid Waste Processing Facility	IN	Medical waste treatment	6.71
Tradebe Treatment & Recycling, LLC	IN	Hazardous waste treatment	60.95
Total			72.58

Source(s) of Information: Lucas SWMD 2014 Annual District Report



APPENDIX N

**EVALUATING GREENHOUSE GAS
EMISSIONS**



APPENDIX N. EVALUATING GREENHOUSE GAS EMISSIONS

Greenhouse gas (GHG) emissions associated with solid waste management activities were estimated for the District using U.S. Environmental Protection Agency’s Waste Reduction Model (WARM). The WARM was applied to reference data and data projected for the sixth year of the planning period, or year 2023. Table N-1 shows the waste categories as well as the amounts recycled, landfilled, and composted which were entered into the model. Both residential/commercial and industrial waste has been included in this analysis, and sources of waste or recyclables have been combined as necessary to create waste category totals corresponding to input entries available in the WARM. For instance, the “Mixed recyclables” waste category in Table N-1 represents the sum of the estimated tonnages for the following sources:

- Processors (for both residential/commercial and industrial)
- MRFs (for both residential/commercial and industrial)
- Ohio EPA Retail Data
- HHW Collection
- Residential Curbside Recycling
- Drop-offs
- Commercial and industrial survey results

Table N-1. Tons of Solid Waste Applied to WARM

Waste Category	2014 (Reference Year)			2023		
	Recycled	Landfilled	Composted	Recycled	Landfilled	Composted
Mixed metals	115,754	-	-	64,255	-	-
Organics diversion	-	-	67,015	-	-	52,540
Mixed recyclables	215,534	-	-	302,875	-	-
Scrap tires	4,562	-	-	4,366	-	-
Mixed waste	-	402,165	-	-	454,694	-

Note: The “mixed metals” and “mixed recyclables” categories are not directly comparable for 2014 vs. 2023 since the recycling projections involved grouping categories differently than the reference year analysis.

The top half of Table N-2 shown below provides the results from the WARM assuming that all waste generated in the reference year is disposed in landfills. The model estimates a net production of 253,799 metric tons of carbon dioxide equivalents (MTCO₂E) using this assumption which is characterized as the baseline scenario. The second half of Table N-2 represents the actual amounts recycled, composted, and landfilled in 2014, and is termed the alternative scenario. The alternative scenario results in a net generation of -946,931 MTCO₂E.

Figure N-2. Greenhouse Gas Emissions Printout for Reference Year Data

GHG Emissions from Baseline Waste Management (MTCO₂E):

252,770

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Yard Trimmings	NA	67,015.0	-	-	-	(11,170)
Mixed Metals	-	115,754.0	-	NA	NA	2,345
Mixed Recyclables	-	215,534.0	-	NA	NA	77,541
Mixed MSW	NA	402,165.0	-	NA	NA	183,962
Tires	-	4,562.0	-	NA	NA	92

GHG Emissions from Alternative Waste Management Scenario (MTCO₂E):

(938,857)

Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO ₂ E
Yard Trimmings	NA	NA	-	-	67,015.0	-	(9,805)
Mixed Metals	-	115,754.0	-	-	NA	NA	(502,421)
Mixed Recyclables	NA	215,534.0	-	-	NA	NA	(608,877)
Mixed MSW	NA	NA	402,165.0	-	NA	NA	183,962
Tires	-	4,562.0	-	-	NA	NA	(1,716)

Combining the results from the two scenarios shows the GHG reductions within each waste category which are achieved by recycling and composting compared to landfilling all of the waste stream. (See Table N-3.) The total estimated GHG reductions are 1,191,627 MTCO₂E.

Table N-3. Net GHG Reductions for 2014: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (Alternative - Baseline)
Mixed metals recycled	-504,766
Yard Trimmings composted	1,365
Mixed recyclables	-686,418
Scrap tires recycled	-1,808
Mixed waste landfilled	0
Net Totals	-1,191,627

Note: "MTCO₂E" means metric tons of carbon dioxide equivalent.

Most (if not all) of the waste sent for disposal from the District is received by landfills which operate a gas recovery system. However, the facility which received the majority of waste in 2014 (Vienna Junction Landfill) flares most of the collected gas instead of processing it for energy recovery. The results shown in Table N-3 assume that all of the recovered gas from landfilling is flared.

The analysis described above has also been conducted for year six of the planning period, or year 2023. The following table shows that the net GHG reductions in 2023 by recycling are more than 1,236,000 MTCO₂E.

Table N-4. Net GHG Reductions for 2023: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO ₂ E (Alternative - Baseline)
Mixed metals recycled	-280,195
Yard Trimmings composted	1,039
Mixed recyclables	-955,305
Scrap tires recycled	-2,072
Mixed waste landfilled	0
Net Totals	-1,236,533



APPENDIX O

FINANCIAL DATA



APPENDIX O. FINANCIAL DATA

This Appendix summarizes the District's funding mechanisms, projected revenues and expenses for the planning period of 2018-2032. The District has prepared the budget section of this *Plan Update* to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.

The budget tables prepared for this *Plan Update* demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives. Nothing contained in these budget projections should be construed as a binding commitment by the District to spend a specific amount of money on a particular strategy, facility, program and/or activity. The Board, with the advice and assistance of the Sanitary Engineer and District Manager, will review and revise the budget as needed to implement the planned strategies, facilities, programs and/or activities as effectively as possible with the funds available. Revenues, not otherwise committed to an existing strategy, facility, program or activity may be used to increase funding to improve the effectiveness of an existing strategy, facility, program or activity and to provide funding for a new strategy, facility, program or activity the Board concludes is justified based on the Sanitary Engineer's and District Manager's recommendations and the content of this *Plan Update*.

The District reserves the right to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this *Plan Update* is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions.

The District is committed to implementing planned strategies, facilities, programs and/or activities in a cost-effective manner. The District is committed to improving the effectiveness and reduce the cost of all District strategies, facilities, programs and activities. The District Board is authorized to expend District funds among other uses included in the *Plan Update* when costs are reduced. Additionally, the Board is authorized to use reduced costs to provide grant funds or direct funding to evaluate, test and/or implement new strategies, facilities, programs and activities that are in compliance with this *Plan Update* are not a "material change in circumstance" regarding the implementation of this *Plan Update*.

Budgets presented in this Appendix will be based on two scenarios. Budget A includes all the planned activities, programs and initiatives documented in this *Plan Update* along with building and operating a full-service single stream material recovery facility (MRF). Budget B is similar to Budget A with the exception that instead of a full-service single

stream MRF, the District would construct and operate a hybrid MRF/transfer station combination facility. Budget B includes all the planned activities with the exception of the full service single stream MRF and/or the hybrid MRF/transfer station combination facility. To differentiate the budget scenarios, the following table summarizes the budget table differences by scenario:

Workbook Table #	Budget A Full-Service Single Stream MRF	Budget B Hybrid MRF/Transfer Station
O-1	Not Used	Not Used
O-2	No Differences Between Scenarios	No Differences Between Scenarios
O-3	No Differences Between Scenarios	No Differences Between Scenarios
O-4	Increased Loan Amounts versus Budget B	Decreased Loan Amounts versus Budget A
O-5	MRF Recycling Revenue Higher than Budget B	MRF Recycling Revenue Lower than Budget A
O-6	Other Revenue Column Reflects Differences in MRF Revenue from O-5	Other Revenue Column Reflects Differences in MRF Revenue from O-5
O-7	Full-Service MRF Operating Expenses and Debt Payments are Higher Than Budget B	Hybrid MRF Operating Expenses and Debt Payments are Lower than Budget A
O-8	Annual Surplus and Fund Balance Reflect Projected Revenue and Expense Differences of Full-Service MRF Compared to Hybrid MRF	Annual Surplus and Fund Balance Reflect Projected Revenue and Expense Differences of Hybrid MRF Compared to Full-Service MRF
O-9	Reflective of the Revenue for the Full-Service MRF	Reflective of the Revenue for the Hybrid MRF
O-10	Not Used	Not Used
O-11	Not Used	Not Used

The two budgets are designed to be implemented independently or in phases from one budget to the next depending on when a recycling facility is developed. For planning purposes, Budget A is projected to be impacted by the development of the full-service single stream MRF by the 4th quarter of 2021 or sooner. Budget B is projected to be impacted by the development of the hybrid MRF by the 4th quarter of 2019 or sooner.

A. Funding Mechanisms and Revenue Generated – Budget A

Budget A includes all the planned activities, programs and initiatives documented in this Plan Update along with building and operating a full-service single stream material recovery facility (MRF).

1. Disposal Fees

The District does not receive revenues from disposal fees; therefore, Table O-1 has been omitted.

2. Generation Fees

The District receives \$2.20 per ton on all solid waste that is generated in the District. Table O-2a and O2b, “Generation Fee Schedule and Revenue,” presents the actual generation fee revenue from 2010 through 2015 and projected generation fee revenue from 2016 through 2032. Generation fee revenue decreased approximately 23% from 2010 to 2013, then increased annually until 2015. Generation fee revenue was projected by calculating the 2012-2015 average percentage of residential/commercial and industrial sector waste tonnage that was subject to the generation fee out of the total tons disposed by these sectors, which was approximately 50%. This percentage was applied to the total tons projected in Table D-5.

Table O-2a. Generation Fee Schedule and Revenue

Year	Generation Fee Schedule (per ton)	Tons Disposed	Total Revenue from Generation Fee
2010	\$2.20	241,906	\$519,201
2011	\$2.20	227,130	\$492,100
2012	\$2.20	200,723	\$441,590
2013	\$2.20	191,616	\$398,208
2014	\$2.20	200,722	\$441,589
2015	\$2.20	232,330	\$511,127
2016	\$2.20	222,640	\$489,808
2017	\$2.20	201,437	\$443,162
2018	\$2.20	201,335	\$442,937
2019	\$2.20	201,232	\$442,711
2020	\$2.20	201,128	\$442,483
2021	\$2.20	201,026	\$442,257
2022	\$2.20	200,923	\$442,030
2023	\$2.20	200,923	\$442,030
2024	\$2.20	200,923	\$442,030
2025	\$2.20	200,923	\$442,030

Year	Generation Fee Schedule (per ton)	Tons Disposed	Total Revenue from Generation Fee
2026	\$2.20	200,923	\$442,030
2027	\$2.20	200,923	\$442,030
2028	\$2.20	200,923	\$442,030
2029	\$2.20	200,923	\$442,030
2030	\$2.20	200,923	\$442,030
2031	\$2.20	200,923	\$442,030
2032	\$2.20	200,923	\$442,030

Source(s) of Information: 2010-2015 District Quarterly Fee Reports, Plan Table D-5

Sample Calculations: 2018 Total Revenue from Generation Fee = Total Tons Disposed at Ohio Contracted Facilities (Table O-3A) x Generation Fee

$$\$442,937 = 201,335 \times \$2.20/\text{ton}$$

The District has a contract with an out-of-state landfill and transfer station to accept District waste. Ohio ORC Code Generation fees are not received from waste delivered to this facility.

As part of a settlement agreement, the District’s Board currently grants a waiver to OmniSource for all of the auto-shredder residue (ASR) produced by OmniSource in Lucas County. In granting the waiver, it is the Board’s intent that OmniSource’s ASR shall not be subject to the District’s generation fee. This waiver applies to ASR produced by OmniSource within Lucas County on and after April 1, 2006. The settlement agreement may be terminated by the Board after twenty years from the effective date (September 2007) provided the Board pays OmniSource a termination fee. A copy of the settlement agreement is included in Appendix X.

3. Designation Fees

The District levies a contract disposal designation fee to all solid waste facilities, either in-state or out-of-state that are designated by the District to receive District solid waste. In 2010 and 2011, the fee was \$1.00 per ton for waste disposed at Ohio landfills and \$3.20 per ton for waste disposed at out-of-state landfills. In 2012, the fee increased to \$3.00 per ton for Ohio landfills and \$5.20 per ton for out-of-state landfills. The District may evaluate the amount of that fee, as part of its annual budgeting cycle, and may consider decreasing/increasing it, depending on the economic conditions facing the District throughout the planning period. Any changes to the designation fee would follow all required procedures of the Ohio Revised Code for establishing and adjusting solid waste management district fees for openness, transparency, inclusiveness, and public input and approval. At this time, there are no plans to change the designation fee.

Approximately 47% of the tons disposed at contracted facilities from 2011 to 2014 were disposed at Ohio Landfills; the remaining tonnage was disposed at Michigan landfills. This ratio was used in projections to calculate the portion of the total tons disposed in Table D-5 that were disposed in-state versus out-of-state. The following table presents the actual and projected contract fee revenue from 2010 to 2032:

Table O-3a. Contractual Fee Schedule and Revenue

Year	Contract Fee Schedule (per ton)		Tons Disposed at Contracted Facilities		Total Contract Fee Revenue
	Ohio	Michigan	Ohio	Michigan	
2010	\$1.00	\$3.20	241,906	177,473	\$657,922
2011	\$1.00	\$3.20	227,130	167,167	\$676,998
2012	\$3.00	\$5.20	200,723	203,035	\$1,563,000
2013	\$3.00	\$5.20	191,616	194,961	\$1,611,993
2014	\$3.00	\$5.20	200,722	204,943	\$1,668,718
2015	\$3.00	\$5.20	232,330	211,862	\$1,798,674
2016	\$3.00	\$5.20	222,640	233,246	\$1,880,799
2017	\$3.00	\$5.20	201,437	201,059	\$1,649,817
2018	\$3.00	\$5.20	201,335	200,957	\$1,648,980
2019	\$3.00	\$5.20	201,232	200,854	\$1,648,137
2020	\$3.00	\$5.20	201,128	200,751	\$1,647,289
2021	\$3.00	\$5.20	201,026	200,648	\$1,646,449
2022	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2023	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2024	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2025	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2026	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2027	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2028	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2029	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2030	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2031	\$3.00	\$5.20	200,923	200,545	\$1,645,604
2032	\$3.00	\$5.20	200,923	200,545	\$1,645,604

Source(s) of Information: Quarterly Fee Reports, Table D-5

Sample Calculation (2018):

Total Contract Fee Revenue = ((Total Tons Disposed (Table D-5) x Average percentage disposed in Ohio) x \$3.00) + ((Total Tons Disposed (Table D-5) – tons disposed in Ohio) x \$5.20)

$$\$1,648,980 = ((402,292 \times 0.503) \times \$3.00) + ((402,292 - 202,217) \times \$5.20)$$

4. Loans (Scenario A)

The District obtained a \$1.2 million loan from the Ohio Water Development Authority to purchase a material recovery facility located at 1011 Matzinger Road. Semi-annual payments are made totaling approximately \$100,913 annually. The District began making payments on the loan in January of 2009. The 20-year loan is scheduled to be retired in July of 2028. In Scenario A during 2021, the District anticipates securing two new loans. The first is an \$8.5 million loan to construct a new material recovery facility located either at the District’s current location or at another suitable location in the region. Semi-annual payments will be made totaling approximately \$565,690 annually. The 20-year loan will be retired in 2040. The second loan is a \$2.5 million loan for the purchase of equipment for the new single stream material recovery facility. Semi-annual payments will be made totaling approximately \$289,681 annually. The 10-year loan will be retired in 2030. The following table presents the District’s current and anticipated loans.

Table O-4a. Loans

Loan Obtained	Outstanding Balance	Lending Institution	Loan Term (years)	Annual Debt Service
2009	\$1,200,000	Ohio Water Development Authority	20	\$100,913
2021	\$8,500,000	To Be Determined	20	\$565,690
2021	\$2,500,000	To Be Determined	10	\$289,681

Source(s) of Information: District Records

5. Rates and Charges (ORC 343.08)

Residents with improved property parcels in Lucas County cities, villages, and townships began paying \$2.50 per half fixed fee (\$5 per year). The rate and charge is shown on property tax documents starting in 2014. The rate and charge is dedicated to the operation of the Lucas County Solid Waste Management District. The implementation of this fixed rate and charge is in lieu of raising the existing disposal fees that are paid through waste haulers and landfills. Revenue from rates and charges in Table O-5a from 2014 to 2016 is based on actual annual and partial year revenue. Revenue

from 2017 to 2032 is projected as a flat \$750,000 annually. This figure is based on receiving \$5 per improved parcel for 150,000 parcels.

District programs and services are mandated by the Ohio EPA and ensuring adequate funding is a requirement of the EPA approval process. District services to reduce, reuse and recycle include education and outreach, planning, county wide drop-off recycling program, technical assistance, administration and to ensure landfill capacity.

Funds for the District programs and services have historically (since 1988) come from disposal fees (waste generated in Lucas County that goes to landfills). The inherent nature of the success of reducing waste (and recycling more), have also reduced revenue for funding the required District programs/services. This prompted the District to react with a more sustainable funding stream (fixed rate and charge per improved parcel throughout Lucas County). The fixed rate and charge provides a more sustainable funding stream for the District.

It is estimated that each household contributes 1 ton per year in fee eligible wastes to designated landfills. The current \$5.20 per ton disposal fee (\$2.20 generation fee + \$3.00 contract fee) is based on the amount of waste generated in Lucas County that goes into a landfill. Each \$1 per ton in the disposal fee generates the corresponding number of tons going to landfills (400,000 tons/year = \$400,000/year)

The rate and charge fee would be paid directly by all improved parcels resulting in a \$5.00 per year per improved parcel. This is a fixed fee per improved parcel. Each \$1 in rate and charge fee generates \$129,000 as estimated revenue from all improved parcels in Lucas County (\$5/parcel/year = \$645,000/year)

An annual re-evaluation of fees is intended to reduce the disposal fees based on the success of stabilizing revenue and providing cost effective programs/services. In future plan updates, it is intended to move from disposal fees to fixed fees by maximizing the return on investment with a material recovery facility located in Lucas County.

6. Other Sources of Revenue

a. Reimbursements

The District serves as a pass-through entity for the City of Toledo's curbside collection services contract. The District makes payments on behalf of the City to the program contractor. The City of Toledo reimburses the District for costs incurred for performing this service. The table reflects actual reimbursement revenue for 2010 to 2015,

and values from the District's approved budget from 2016 and 2017. A new 10-year contract was negotiated in 2016. Costs and the subsequent reimbursement revenue are expected to increase approximately 2.5% annually based on the terms of the new contract.

b. Funding from Health Department

The Toledo-Lucas County Health Department pays the District for disposal of construction and demolition waste. The average annual county contribution from 2010 to 2015 was approximately \$9,500. The District conservatively estimated a flat annual county contribution of \$9,000 beginning in 2015 through the end of the planning period.

c. Grants

Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue from future grants has been excluded from the projections in Table O-5A.

d. Recycling Revenue

The commodity market for recycled materials is volatile and unpredictable. During 2010 to 2016, annual recycling revenue ranged from a low of \$84,405 in 2015 to a high of \$532,120 in 2011. This recycling revenue came from the sale of fiber related commodities from the District's drop-off program. Revenue in 2021 reflects receiving recycling revenue for three-quarters of the year from the drop-off program. Revenue from this source ceases after 2021 because the District anticipates that the new MRF will be operating by the 4th quarter of 2021 or sooner.

e. Miscellaneous Revenue

Miscellaneous revenue represents revenue resulting from untraditional and unforeseen sources. Due to the changing, unpredictable nature of this category, potential miscellaneous revenue has been excluded from the projections in Table O-5a.

f. Scrap Tire User Fee

The District plans to begin accepting scrap tires for a fee of approximately \$2 per tire in 2017 at a permanent facility. Based on historic scrap tire collections, the District anticipates collecting a maximum volume of 10,000 tires during the first year. Revenue is

projected to increase 1% annually to account for a modest annual growth in the total tires collected.

The District reserves the right to adjust the scrap tire user fee as needed throughout the planning period. The goal of the user fee level is to encourage residents to manage their scrap tires responsibly.

g. HHW User Fee

The District plans to begin accepting HHW for a fee in 2017 at the planned permanent HHW facility located at the District's current facility on Matzinger Road. Revenue collected from the user fee will help offset the District's cost of managing the HHW. Revenue is projected to remain flat throughout the planning period. The user fee is estimated to be approximately \$1 per pound for materials that are costly to manage.

The District reserves the right to adjust the HHW user fee as needed throughout the planning period. The goal of the user fee level is to encourage residents to manage their HHW responsibly.

h. MRF Tipping Fees

The District anticipates that the new single stream MRF will be operating for the last quarter of 2021. A separate analysis developed for the MRF projected tipping fee revenue at roughly \$525,000 annually (see Table O-5a). This revenue projection assumed of the City of Toledo committing to sending their tonnage to the District's facility other communities and haulers in the District.

For budgetary purposes, the MRF tipping fee is estimated to be \$20.00 for each ton of single stream recyclable material delivered to the facility by the City of Toledo (estimated to be 20,000 tons) and \$25.00 for each ton delivered by others (estimated to be 5,000 tons). The District may adjust tip fees based on market conditions regarding the operation of the MRF. Agreements for receipt of recyclable tons are anticipated and negotiations may alter the terms of these tip fee estimates.

In 2021, MRF tipping fee revenue is 25% of the annual revenue projected from 2022 to the end of the planning period to reflect that the MRF will only operate during the last quarter of the year.

i. MRF Recycling Revenue

The District anticipates that the new MRF will be operating for the last quarter of 2021. A separate analysis developed for the MRF projected recycling revenue at roughly \$2.8 million for the first full operating year in 2022. This figure was based on historical tonnage trends and average commodity pricing in the Midwest region. In 2021, MRF recycling revenue is 25% of the annual revenue projected in 2022 to reflect that the MRF will only operate during the last quarter of the year. Revenue projections were based on the assumption that the City of Toledo would commit to sending their tonnage to the District's facility and that volunteer use of the MRF from other communities and haulers in the region. Revenue is projected to increase 1% annually to reflect modest increases in tonnage.

Revenue from other sources amounted to \$8.9 million during the 2014 reference year. During the first year of the planning period (2018), revenue from other sources is expected to increase to \$10.7 million. By the end of the planning period in 2032, revenue from other sources is projected to reach \$18.3 million. Other revenue appears to increase significantly throughout the planning period; however, the majority of the increase is directly related to increases in reimbursement revenue, which is a pass-through financial situation where the City of Toledo reimburses the District for expenses related to the curbside collection services contract. The reimbursement value each year is equal to the District's expense for this program, so it does not result in a net gain for the District. Revenue from other sources excluding reimbursement revenue increases from \$914,200 million in 2018 to \$4.4 million in 2032. The following table presents other revenue by source from 2010 to 2032.

Table O-5a. Other Revenue and Other Revenue Sources

Year	Rates & Charges	Reimbursements	Funding from Health Dept.	Grants	Recycling Revenue	Misc.	Scrap Tire User Fee	HHW User Fee	MRF Tipping Fees	MRF Recycling Revenue	"Other Revenue" Total
2010	\$0	\$114	\$9,206	\$10,000	\$274,704	\$158,802	\$0	\$0	\$0	\$0	\$452,826
2011	\$0	\$2,267,284	\$7,625	\$125,400	\$532,120	\$117,917	\$0	\$0	\$0	\$0	\$3,050,346
2012	\$0	\$9,628,310	\$10,572	\$97,458	\$257,421	\$26,170	\$0	\$0	\$0	\$0	\$10,019,931
2013	\$0	\$9,174,629	\$9,113	\$142,298	\$321,291	\$14,312	\$0	\$0	\$0	\$0	\$9,661,643
2014	\$720,887	\$7,859,650	\$9,900	\$64,850	\$254,645	\$20	\$0	\$0	\$0	\$0	\$8,909,952
2015	\$778,663	\$10,452,985	\$10,746	\$21,259	\$84,405	\$10,031	\$0	\$0	\$0	\$0	\$11,358,088
2016	\$782,368	\$9,648,608	\$13,826	\$20,000	\$97,903	\$0	\$0	\$0	\$0	\$0	\$10,562,705
2017	\$750,000	\$9,560,880	\$9,000	\$0	\$90,000	\$0	\$20,000	\$45,000	\$0	\$0	\$10,474,880
2018	\$750,000	\$9,799,902	\$9,000	\$0	\$90,000	\$0	\$20,200	\$45,000	\$0	\$0	\$10,714,102
2019	\$750,000	\$10,044,900	\$9,000	\$0	\$90,000	\$0	\$20,402	\$45,000	\$0	\$0	\$10,959,302
2020	\$750,000	\$10,296,022	\$9,000	\$0	\$90,000	\$0	\$20,606	\$45,000	\$0	\$0	\$11,210,628
2021	\$750,000	\$10,553,423	\$9,000	\$0	\$52,500	\$0	\$20,812	\$45,000	\$131,250	\$700,000	\$12,261,985
2022	\$750,000	\$10,817,258	\$9,000	\$0	\$0	\$0	\$21,020	\$45,000	\$525,000	\$2,800,000	\$14,967,278
2023	\$750,000	\$11,087,690	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,828,000	\$15,265,920
2024	\$750,000	\$11,364,882	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,856,280	\$15,571,392
2025	\$750,000	\$11,649,004	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,884,843	\$15,884,077
2026	\$750,000	\$11,940,229	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,913,691	\$16,204,151
2027	\$750,000	\$12,238,735	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,942,828	\$16,531,793
2028	\$750,000	\$12,544,703	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$2,972,256	\$16,867,190
2029	\$750,000	\$12,858,321	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$3,001,979	\$17,210,530
2030	\$750,000	\$13,179,779	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$3,031,999	\$17,562,008
2031	\$750,000	\$13,509,273	\$9,000	\$0	\$0	\$0	\$20,000	\$45,000	\$525,000	\$3,062,319	\$17,920,592
2032	\$750,000	\$13,847,005	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$3,092,942	\$18,290,177

First Year of Planning Period ← X

Source(s) of Information: Quarterly Fee Reports, District Records

Sample Calculations:

2014 Revenue = Rates & charges + reimbursements + county contributions + grants + recycling revenue + misc. + scrap tire user fee + HHW user fee + MRF tipping fees + MRF recycling revenue

$$\$8,909,952 = \$720,887 + \$7,859,650 + \$9,900 + \$64,850 + \$254,645 + \$20 + \$0 + \$0 + \$0 + \$0$$

7. Summary of District Revenues

The total revenue, comprised of generation fees, contract fees, and other revenue, was \$11,020,258 during the reference year. Revenue in the first year of the planning period (2018) is projected to be \$16,041,019, a 46% increase from the reference year. Revenue is projected to increase annually throughout the planning period, ending in 2032 with a total revenue of \$20,503,397. The following table presents a summary of the District’s actual and projected total revenue from 2010 to 2032.

Table O-6a. Total Revenue

	Year	Generation Fees	Contract Fees	Other Revenue	Total Revenue
	2010	\$519,201	\$657,922	\$452,826	\$1,629,949
	2011	\$492,100	\$676,998	\$3,050,346	\$4,219,445
	2012	\$441,590	\$1,563,000	\$10,019,931	\$12,024,521
	2013	\$398,208	\$1,611,993	\$9,661,643	\$11,671,844
	2014	\$441,589	\$1,668,718	\$8,909,952	\$11,020,258
	2015	\$511,127	\$1,798,674	\$11,358,088	\$13,667,889
	2016	\$489,808	\$1,880,799	\$10,562,705	\$12,933,312
	2017	\$443,162	\$1,649,817	\$10,474,880	\$12,567,859
First Year of Planning Period → X	2018	\$442,937	\$1,648,980	\$10,714,102	\$12,806,019
	2019	\$442,711	\$1,648,137	\$10,959,302	\$13,050,150
	2020	\$442,483	\$1,647,289	\$11,210,628	\$13,300,400
	2021	\$442,257	\$1,646,449	\$12,261,985	\$14,350,691
	2022	\$442,030	\$1,645,604	\$14,967,278	\$17,054,913
	2023	\$442,030	\$1,645,604	\$15,265,920	\$17,353,554
	2024	\$442,030	\$1,645,604	\$15,571,392	\$17,659,026
	2025	\$442,030	\$1,645,604	\$15,884,077	\$17,971,711
	2026	\$442,030	\$1,645,604	\$16,204,151	\$18,291,785
	2027	\$442,030	\$1,645,604	\$16,531,793	\$18,619,427
	2028	\$442,030	\$1,645,604	\$16,867,190	\$18,954,824
	2029	\$442,030	\$1,645,604	\$17,210,530	\$19,298,164
	2030	\$442,030	\$1,645,604	\$17,562,008	\$19,649,642

	Year	Generation Fees	Contract Fees	Other Revenue	Total Revenue
	2031	\$442,030	\$1,645,604	\$17,920,592	\$20,008,226
	2032	\$442,030	\$1,645,604	\$18,290,177	\$20,377,811

Source(s) of Information: Quarterly Fee Reports

Sample Calculations (2014): Total Revenue = Generation Fees + Contract Fees + Other Revenues

$$\$11,020,258 = \$441,589 + \$1,668,718 + \$8,909,952$$

B. Cost of Implementing Plan – Budget A

1. Expenses

The projected budget, shown in table O-7A, was developed based on programmatic needs identified in Appendices H, I, and L.

Table O-7a. Expenses

Line	Category/Program	2010	2011	2012	2013	2014	2015	2016	2017
1	1. Plan Monitoring/Prep.	\$51,396	\$29,038	\$22,899	\$27,758	\$13,971	\$21,653	\$75,779	\$63,500
1.a	a. Plan Preparation	\$0	\$0	\$0	\$0	\$0	\$8,322	\$62,626	\$35,000
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$13,971	\$13,331	\$0	\$8,500
1.c	c. Other	\$51,396	\$29,038	\$22,899	\$27,758	\$0	\$0	\$13,153	\$20,000
2	2. Plan Implementation	\$1,972,695	\$3,855,931	\$10,261,804	\$10,961,807	\$10,603,847	\$11,808,004	\$11,412,414	\$12,280,743
2.a	a. District Administration	\$870,360	\$905,046	\$870,421	\$896,750	\$752,057	\$898,087	\$830,939	\$1,025,950
2.a.1	Personnel	\$696,631	\$693,604	\$676,746	\$697,811	\$674,499	\$773,218	\$719,383	\$845,700
2.a.2	Office Overhead	\$173,729	\$211,442	\$193,675	\$198,939	\$77,558	\$124,869	\$111,556	\$180,250
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$7,500	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$7,500	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$481,799	\$2,707,451	\$9,205,514	\$9,674,361	\$9,551,242	\$10,572,580	\$10,258,241	\$10,693,880
2.d.1	Curbside		\$2,267,123	\$8,870,040	\$9,152,580	\$8,670,840	\$9,658,302	\$9,637,709	\$9,560,880
2.d.2	Drop-off	\$481,799	\$440,329	\$335,474	\$521,781	\$880,402	\$914,278	\$620,532	\$1,133,000
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$79,912	\$67,990	\$11,762	\$9,840	\$0	\$28,359	\$10,598	\$130,000
2.e.1	Tire Collection	\$35,394	\$17,837	\$10,000	\$9,840	\$0	\$28,359	\$8,403	\$20,000
2.e.2	HHW Collection	\$28,773	\$46,518	\$1,762	\$0	\$0	\$0	\$2,195	\$110,000
2.e.3	Electronics Collection	\$15,744	\$3,634	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$371,171	\$31,030	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$0	\$0	\$0	\$0	\$109,076	\$115,520	\$131,433	\$225,000
2.g.1	Education Staff	\$0	\$0	\$0	\$0	\$109,076	\$100,000	\$129,170	\$150,000
2.g.2	Advertisement/Promotion	\$0	\$0	\$0	\$0	\$0	\$15,520	\$1,160	\$25,000
2.g.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$1,103	\$50,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$230,000	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activities	\$0	\$0	\$0	\$230,000	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000
2.k	k. Waste Assessments/Audits	\$77,791	\$42,301	\$74,108	\$50,854	\$90,471	\$85,045	\$80,291	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$91,663	\$100,000	\$100,000	\$100,003	\$101,000	\$100,913	\$100,913	\$100,913
2.p	p. Other	\$0	\$2,113	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Health Department Name:</i>	None							
4	4. County Assistance	\$30,000	\$30,000	\$30,000	\$5,000	\$30,000	\$80,000	\$0	\$160,000
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$30,000	\$30,000	\$30,000	\$5,000	\$30,000	\$80,000	\$0	\$160,000
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Expenses	\$2,054,090	\$3,914,968	\$10,314,703	\$10,994,565	\$10,647,818	\$11,909,657	\$11,488,193	\$12,504,243

Line	Category/Program	2018	2019	2020	2021	2022	2023	2024
1	1. Plan Monitoring/Prep.	\$28,628	\$28,757	\$28,888	\$44,022	\$77,157	\$29,294	\$29,434
1.a	a. Plan Preparation	\$0	\$0	\$0	\$15,000	\$48,000	\$0	\$0
1.b	b. Plan Monitoring	\$8,628	\$8,757	\$8,888	\$9,022	\$9,157	\$9,294	\$9,434
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	2. Plan Implementation	\$12,280,863	\$12,687,229	\$12,868,074	\$15,752,560	\$17,224,515	\$17,491,731	\$17,806,964
2.a	a. District Administration	\$993,048	\$1,002,979	\$1,013,009	\$1,023,139	\$1,033,370	\$1,043,704	\$1,054,141
2.a.1	Personnel	\$854,157	\$862,699	\$871,326	\$880,039	\$888,839	\$897,728	\$906,705
2.a.2	Office Overhead	\$138,891	\$140,280	\$141,683	\$143,100	\$144,531	\$145,976	\$147,436
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$1,734,633	\$2,944,306	\$2,963,276	\$2,982,340
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$1,734,633	\$2,944,306	\$2,963,276	\$2,982,340
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$10,759,902	\$11,019,300	\$11,288,038	\$11,560,274	\$11,845,167	\$12,130,882	\$12,414,587
2.d.1	Curbside	\$9,799,902	\$10,044,900	\$10,296,022	\$10,553,423	\$10,817,258	\$11,087,690	\$11,364,882
2.d.2	Drop-off	\$960,000	\$974,400	\$989,016	\$1,003,851	\$1,018,909	\$1,034,193	\$1,049,706
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$3,000	\$3,000	\$9,000	\$9,000	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$112,000	\$114,038	\$116,115	\$118,231	\$120,387	\$122,585	\$124,612
2.e.1	Tire Collection	\$20,200	\$20,402	\$20,606	\$20,812	\$21,020	\$21,230	\$21,230
2.e.2	HHW Collection	\$91,800	\$93,636	\$95,509	\$97,419	\$99,367	\$101,355	\$103,382
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$225,000	\$225,000	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
2.g.1	Education Staff	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.g.2	Advertisement/Promotion	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.g.3	Other	\$50,000	\$50,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.h	h. Recycling Market Development	\$0						
	General Market Development							
2.h.1	Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$35,000	\$0	\$35,000	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$100,913	\$100,913	\$100,913	\$956,284	\$956,284	\$956,284	\$956,284
2.p	p. Other	\$0	\$100,000	\$75,000	\$50,000	\$50,000	\$0	\$0
3	3. Health Dept. Enforcement	\$0						
	<i>Health Department Name:</i>							
4	4. County Assistance	\$80,000						
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
5	5. Well Testing	\$0						
6	6. Out-of-State Waste Inspection	\$0						
7	7. Open Dump, Litter Law Enforcement	\$0						
7.a	a. Health Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Health Department Training	\$0						
9	9. Municipal/Township Assistance	\$0						
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0						
	Total Expenses	\$12,389,491	\$12,795,986	\$12,976,963	\$15,876,582	\$17,381,672	\$17,601,025	\$17,916,398

Line	Category/Program	2025	2026	2027	2028	2029	2030	2031	2032
1	1. Plan Monitoring/Prep.	\$29,575	\$29,719	\$45,465	\$79,933	\$30,163	\$30,315	\$30,470	\$30,627
1.a	a. Plan Preparation	\$0	\$0	\$15,600	\$49,920	\$0	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$9,575	\$9,719	\$9,865	\$10,013	\$10,163	\$10,315	\$10,470	\$10,627
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	2. Plan Implementation	\$18,138,601	\$18,477,819	\$18,825,091	\$19,129,571	\$19,442,197	\$19,813,623	\$20,193,595	\$20,582,622
2.a	a. District Administration	\$1,064,682	\$1,075,329	\$1,086,082	\$1,096,943	\$1,107,913	\$1,118,992	\$1,130,182	\$1,141,484
2.a.1	Personnel	\$915,772	\$924,930	\$934,179	\$943,521	\$952,956	\$962,485	\$972,110	\$981,831
2.a.2	Office Overhead	\$148,910	\$150,400	\$151,904	\$153,423	\$154,957	\$156,506	\$158,071	\$159,652
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$3,001,500	\$3,020,755	\$3,040,396	\$3,059,844	\$3,079,390	\$3,099,033	\$3,408,456	\$3,428,600
2.b.1	MRF/Recycling Center	\$3,001,500	\$3,020,755	\$3,040,396	\$3,059,844	\$3,079,390	\$3,099,033	\$3,408,456	\$3,428,600
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$12,714,455	\$13,021,662	\$13,336,389	\$13,658,822	\$13,989,152	\$14,327,572	\$14,674,283	\$15,029,490
2.d.1	Curbside	\$11,649,004	\$11,940,229	\$12,238,735	\$12,544,703	\$12,858,321	\$13,179,779	\$13,509,273	\$13,847,005
2.d.2	Drop-off	\$1,065,451	\$1,081,433	\$1,097,654	\$1,114,119	\$1,130,831	\$1,147,793	\$1,165,010	\$1,182,486
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$126,680	\$128,789	\$130,940	\$133,134	\$135,372	\$137,655	\$139,983	\$142,359
2.e.1	Tire Collection	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230
2.e.2	HHW Collection	\$105,449	\$107,558	\$109,709	\$111,904	\$114,142	\$116,425	\$118,753	\$121,128
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$185,000							
2.g.1	Education Staff	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.g.2	Advertisement/Promotion	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.g.3	Other	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.h	h. Recycling Market Development	\$0							
2.h.1	General Market Development								
2.h.1	Activities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$956,284	\$956,284	\$956,284	\$905,827	\$855,371	\$855,371	\$565,690	\$565,690
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0							
	<i>Health Department Name:</i>								
4	4. County Assistance	\$80,000							
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
5	5. Well Testing	\$0							
6	6. Out-of-State Waste Inspection	\$0							
7	7. Open Dump, Litter Law Enforcement	\$0							
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Heath Department Training	\$0							
9	9. Municipal/Township Assistance	\$0							
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)	\$0							
	Total Expenses	\$18,248,176	\$18,587,538	\$18,950,556	\$19,289,504	\$19,552,360	\$19,923,938	\$20,304,065	\$20,693,249

2. Explanation of Expenses

Table O-7a includes actual expenses from 2010 to 2015, anticipated expenses from the District's approved budgets for 2016 to 2017, and projected expenditures from 2018 to 2032. Line items explained below are numbered according to the corresponding line item number in the District's Quarterly Fee Reports. Instances where numbers or letters appear to be omitted reflect a line item budget of \$0. Projections were developed using the following assumptions or criteria:

1. Plan Preparation and Monitoring

- 1.a Plan Preparation – A total of \$63,000 was allocated over a two-year period from 2021 to 2022 and a total of \$65,520 was allocated over the two-year period from 2027 to 2028. Funding was allocated to work with consultants to develop the next two Solid Waste Management Plan Updates which will begin in 2021 and 2027.
- 1.b Plan Monitoring – Based on the 2017 approved budget for annual assistance with plan implementation monitoring and reporting, expenses are projected to increase 1.5% annually to account for inflation.
- 1.c Other – Budget includes a flat annual amount of \$20,000 to cover expenses for legal assistance and an annual District waste audit.

2. Plan Implementation

2.a District Administration

- 2.a.1 Personnel – Budget includes expenditures for salaries, OPERS, FICA, unemployment compensation, workers' compensation, and health insurance. Expenditures are projected to increase 1% annually based on historic trends and District practices.
- 2.a.2 Office Overhead – Budget includes expenditures for a variety of administrative costs, including but not limited to drug testing, postage, office rent, utilities, telecommunications, staff training, trade organization memberships, industry-specific subscriptions, and asset insurance. Budget in 2018 is based on the average expenditures from 2015 to 2017. Expenditures are projected to increase 1% annually.

2.b Facility Operation

- 2.b.1 MRF/Recycling Center – The amount allocated in 2021 was calculated by taking the sum of \$1 million for purchasing equipment outright (i.e., not through the equipment loan, rather the use of the District’s un-encumbered fund balance) and 25% of the expected annual operating costs of \$2,938,532 since the facility is only expected to operate for one quarter of 2021.

The sample calculation for 2021 is as follows:

2021 MRF/Recycling Center budget = Equipment purchase + 25% of annual operating budget

$$\$1,734,633 = \$1,000,000 + (\$2,938,532 \times 0.25)$$

In 2022, MRF/Recycling Center costs were projected to be \$2,944,306, which included debt retirement payments. To isolate the MRF/Recycling Center costs from the debt retirement, the annual loan repayment for other equipment and the building were subtracted. Insurance costs for the facility, as quoted by the District’s Office of Management and Budget (OMB) Risk Management agent, were added to the total. The sample calculation is as follows:

2022 MRF/Recycling Center budget = Annual operating budget – annual debt retirement for \$2.5 million/10 year other equipment loan – annual debt retirement for \$8.5 million/20 year building loan + insurance costs

$$\$2,944,306 = \$3,793,902 - \$289,681.20 - \$565,689.60 + \$5,775$$

Moving forward, annual operating costs are increased by 0.5% annually. Debt retirement amount is flat from 2021 to 2030. After 2030, the other equipment loan will be retired, bringing the annual debt retirement amount to \$565,689.60 for the remainder of the planning period. Insurance costs are projected to increase 5% every 5 years (in 2022, 2027, and 2032).

2.d Recycling Collection

- 2.d.1 Curbside – This reflects the District’s costs for the City of Toledo curbside collection services contract. This line item is a pass-through expense, meaning from 2017 to 2032, it is equal to the amount of reimbursement revenue listed in Table O-5A. Expenses in previous years do not match reimbursement revenue due to the

dates of payments received and using different line item numbers on historic quarterly fee reports.

- 2.d.2 Drop-Off Recycling – Costs for this program did not include significant vehicle repair or replacement costs from 2010 to 2012. Costs increased more than \$186,000 in 2013, which included significant vehicle repairs. In 2014, costs increased nearly \$359,000, which included vehicle repairs and the purchase of two new trucks. Based on the District's rate of use and historic patterns, it has allocated \$285,000 annually to purchase a new truck or other equipment each year and factored in expenses for equipment replacement based on the District's equipment replacement schedule. Annual costs allocated for the drop-off program also include operating costs, diesel fuel costs, processing costs (up to the 4th quarter of 2017) and funding for motor vehicle repairs. Costs in 2018 are projected to be \$960,000. The budget is projected to increase 1.5% annually thereafter.
- 2.d.4 Multi-Family – A budget of \$3,000 is allocated in 2020 for education and awareness initiatives targeting residents and managers of multi-family housing units. In 2022 and 2023, \$9,000 is allocated to operate a pilot recycling program. The costs for the pilot program assume the District will fund two recycling containers at three multi-family housing units annually. Per container costs are based on the District's existing per container costs from the drop-off recycling program.

2.e Special Collection

- 2.e.1 Tire Collection – Based on historic scrap tire collections, the District anticipates collecting a maximum volume of 10,000 tires during 2017, costing \$2.00 per unit to manage. Expenses are projected to increase 1% annually to account for a modest annual growth in the total tires collected.
- 2.e.2 HHW Collection – In 2017, a total of \$110,000 is allocated to the HHW Collection program; this includes \$20,000 for capital improvements and \$90,000 for operational costs. Operating costs are projected to increase 2% annually until the end of the planning period.
- 2.e.3 Electronics Collection – Actual costs are presented for 2010 and 2011, but no further costs were incurred or projected.

2.f Yard Waste/Other Organics

- Actual costs are presented for 2010 and 2011, but no further costs were incurred or projected.

2.g Education/Awareness

Many education and awareness initiatives discussed in Appendices H, I, and L will not require a specific budget to complete, as the work will be done by District staff. For example, many programs discussed include a new component for measuring success, which will include collecting baseline and ongoing statistics and following up with program participants. The cost of completing these types of initiatives is included in staff salaries. Other education and awareness budgets are as follows:

- 2.g.1 Education Staff – A flat rate of \$150,000 is allocated from 2016 to the end of the planning period based on the service agreement between the District and KT/LCB.
- 2.g.2 Advertisement/Promotion – In 2014 and 2015, the District spent an average of approximately \$13,000 on advertisements and promotion. Several initiatives described in Appendices H, I, and L require additional advertisement and promotion. Beginning in 2017, a flat annual budget of \$25,000 is allocated. The increased budget would cover the District's participation in additional community events, education campaigns targeted to specific demographics, and education campaigns to reduce contamination in curbside and drop-off programs.
- 2.g.3 Other – The District intends to invest in rebranding its image and marketing. This may include a variety of activities, such as hiring a public relations or marketing specialist firm, redeveloping the District website, and/or redesigning the District logo. This may also include graphic design services to update the District's flyers and education materials to promote a consistent message with recognizable graphics that can be reused in a variety of mediums such as on the website, in print media, and in social media. An annual amount of \$50,000 is budgeted from 2017 to 2019 when the majority of the rebranding is expected to occur. A flat amount of \$10,000 is annually budgeted for 2020 to the end of the planning period.

2.h Recycling Market Development

- 2.h.1 General Market Development Activities – Actual costs are presented for 2013, but no further costs were incurred or projected.

- 2.h.2 ODNR pass-through grant – Actual costs are presented for 2016, but no further costs were incurred or projected.

2.j Feasibility Studies

- In 2017, \$15,000 was allocated to complete a HHW program analysis. In 2019, \$35,000 is allocated to complete a feasibility study for a food waste recycling program. In 2021, \$35,000 is allocated to complete a feasibility study for other difficult to manage waste streams.

2.k Waste Assessments/Audits

- This line item reflects the budget for waste assessments and audits performed by the University of Toledo (UT) on behalf of the District. The District's new 5-year agreement with UT beginning in 2016 commits \$90,000 annually to operate the program.

2.o Loan Payment

- This budget includes debt retirement for the District's three loans listed in Table O-4a.

2.p Other

- This budget line reflects miscellaneous expenses in 2011. Starting in 2019, the District has budgeted \$100,000, then \$75,000 in 2020, \$50,000 in 2021 and \$50,000 in 2022 for the one-time community grant program discussed in Appendix I (page I-31-I-32). The District will evaluate the effectiveness of this grant program throughout 2019-2022 to determine if it will be continued in the next Plan Update scheduled to begin in 2022 or 2023.

4. County Assistance

4.d Providing Other Public Services

- Budget includes a flat annual amount of \$80,000 for the Lucas County Sustainability Commission.

Table O-8a presents a summary of the District's budget, including revenue, expenditures, and fund balance.

Table O-8a. Budget Summary

	Year	Revenue	Expenses	Annual Surplus/Deficit	Balance	
First Year of Planning Period →	2009	Ending Balance			\$446,729	
	2010	\$1,629,949	\$2,054,090	-\$424,141	\$22,588	
	2011	\$4,219,445	\$3,914,968	\$304,476	\$327,064	
	2012	\$12,024,521	\$10,314,703	\$1,709,817	\$2,036,881	
	2013	\$11,671,844	\$10,994,565	\$677,279	\$2,714,161	
	2014	\$11,020,258	\$10,647,818	\$372,441	\$3,086,601	
	2015	\$13,667,889	\$11,909,657	\$1,758,232	\$4,844,833	
	2016	\$12,933,312	\$11,488,193	\$1,445,119	\$6,289,952	
	2017	\$12,567,859	\$12,504,243	\$63,616	\$6,353,569	
	X	2018	\$12,806,019	\$12,389,491	\$416,528	\$6,770,097
		2019	\$13,050,150	\$12,795,986	\$254,163	\$7,024,260
		2020	\$13,300,400	\$12,976,963	\$323,437	\$7,347,697
		2021	\$14,350,691	\$15,876,582	-\$1,525,891	\$5,821,806
		2022	\$17,054,913	\$17,381,672	-\$326,759	\$5,495,047
		2023	\$17,353,554	\$17,601,025	-\$247,471	\$5,247,576
		2024	\$17,659,026	\$17,916,398	-\$257,372	\$4,990,204
		2025	\$17,971,711	\$18,248,176	-\$276,465	\$4,713,740
		2026	\$18,291,785	\$18,587,538	-\$295,753	\$4,417,987
		2027	\$18,619,427	\$18,950,556	-\$331,128	\$4,086,859
		2028	\$18,954,824	\$19,289,504	-\$334,680	\$3,752,179
	2029	\$19,298,164	\$19,552,360	-\$254,196	\$3,497,983	
	2030	\$19,649,642	\$19,923,938	-\$274,296	\$3,223,687	
	2031	\$20,008,226	\$20,304,065	-\$295,839	\$2,927,848	
	2032	\$20,377,811	\$20,693,249	-\$315,438	\$2,612,411	

C. Alternative Budget

1. Contingent Funding

The District and Board of County Commissioners believe the implementation of sustainable revenue from the rates and charges has allowed greater flexibility to properly allocate resources during this planning period. However, the Board may consider increasing the generation fee, rate and charge and/or designation fee or developing other funding options if needed. This could occur if the District’s revenues and/or expenses were creating excessive budgetary shortfalls that reduce the District’s fund

balance below its annual expenses. This is also necessary with a volatile commodity market that may require additional revenue.

In general, the District has confidence that it can adjust to less than catastrophic changes in waste generation, and thus a loss in projected generation fee or designation fee revenue. District revenues may vary from year-to-year or season-to-season depending on the waste generation and/or rate and charge collection. The District has the responsibility for monitoring revenue and expenses, on a quarterly basis, and to determine if this contingency plan needs to be implemented.

The District will begin the process to set and ratify a generation fee increase, revise the designation fee and/or the rate and charge when District projections indicate that it will be required to spend down the reserve funds projected in this Plan to below one year of expenses and that current generation fees or designation fees will not be sufficient to fund the required programs in the future. The District will be cognizant of the fact that the time required to enact and begin increasing the generation fee, designation fee and/or the rate and charge.

D. Major Facility Project

The District is planning on developing a recycling facility to process approximately 35,000 tons of source separated recyclables from District generators. The development of this facility has been divided into two separate scenarios:

Scenario 1 (Budget A)

The District will develop, under this scenario, a full-service single stream MRF at either the District's current location or a new location. The MRF will be designed to include the latest technology for automated sorting and processing and will be designed to service the capacity needs for the District into the future. The facility is also anticipated to include options for educating residents and businesses on recyclable materials processing through tours and other educational activities.

Under this scenario, the revenue from tipping fees and commodity sales mostly funds the operation of the MRF. The District will need to provide some subsidy for the operation.

The budget for this scenario is included in all tables signified by the letter A. Revenues and expenses were based on previous pro-forma analysis for the required operational and capital needs.

Scenario 2 (Budget B)

The District will develop, under this scenario, a hybrid MRF at either the District's current location or a new location. The hybrid MRF will be designed to include the latest technology for automated sorting and processing and will be designed to service the capacity needs for the District into the future. The facility is also anticipated to include options for educating residents and businesses on recyclable materials processing through tours and other educational activities. The main difference between this operation and the full-service single stream MRF will be that the hybrid MRF will be designed to extract certain recyclables, remove contaminants and then ship all remaining recyclables to a third-party facility for further processing.

Under this scenario, the revenue from tipping fees and commodity sales only partially funds the operation of the MRF. The District will need to provide significant subsidy for the operation.

The budget for this scenario is included in all tables signified by the letter B. Revenues and expenses were based on previous pro-forma analysis for the required operational and capital needs.

E. Alternative Scenario Funding Mechanisms and Revenue Generated – Budget B

The District developed a budget for an alternative scenario. The first budget presented earlier in this Section was Scenario A, which was based on building and operating a single-stream MRF. The alternative scenario, Scenario B, presented in this section is based on constructing and operating a hybrid MRF/transfer station combination facility.

1. Disposal Fees

The District does not receive revenues from disposal fees; therefore, Table O-1 has been omitted for all scenarios.

2. Generation Fees

There are no changes in generation fee revenue amongst the scenarios. See Table O-2a.

3. Designation Fees

There are no changes in designation fee revenue amongst the scenarios. See Table O-3a.

4. Loans (Scenario B)

The District obtained a \$1.2 million loan from the Ohio Water Development Authority to purchase a material recovery facility located at 1011 Matzinger Road. Semi-annual payments are made totaling approximately \$100,913 annually. The District began making payments on the loan in January of 2009. The 20-year loan is scheduled to be retired in July of 2028. In Scenario B during 2019 or sooner, the District anticipates securing two loans. The first is a \$4.25 million loan to construct a hybrid MRF. Semi-annual payments will be made totaling approximately \$282,845 annually. The 20-year loan will be retired in 2038. The second loan is a \$1.8 million loan for the purchase of equipment for the new hybrid MRF. Semi-annual payments will be made totaling approximately \$207,528 annually. The 10-year loan will be retired in 2028. The following table presents the District's current and anticipated loans.

Table O-4b. Loans

Year Loan Obtained	Outstanding Balance	Lending Institution	Loan Term (years)	Annual Debt Service
2009	\$1,200,000	Ohio Water Development Authority	20	\$100,913
2019	\$4,250,000	To Be Determined	20	\$282,845
2019	\$1,800,000	To Be Determined	10	\$207,528

Source(s) of Information: District Records

5. Rates and Charges (343.08)

There are no changes in revenue from rates and charges amongst the scenarios.

6. Other Sources of Revenue

a. Reimbursements

There are no changes in reimbursement revenue amongst the scenarios.

b. Funding from Health Department

There are no changes in funding from the Health Department amongst the scenarios.

c. Grants

There are no changes in grant revenue amongst the scenarios.

d. Recycling Revenue

The commodity market for recycled materials is volatile and unpredictable. During 2010 to 2016, annual recycling revenue ranged from a low of \$84,405 in 2015 to a high of \$532,120 in 2011. This recycling revenue came from the sale of fiber related commodities from the District's drop-off program. Revenue in 2019 reflects receiving recycling revenue for three-quarters of the year from the drop-off program (based on receiving a conservative total of \$90,000 for a full-year). Revenue from this source ceases after 2019 because the District anticipates that the new hybrid MRF will be operating by the 4th quarter of 2019 or sooner.

e. Miscellaneous Revenue

There are no changes in miscellaneous revenue amongst the scenarios.

f. Scrap Tire User Fee

There are no changes in scrap tire user fee revenue amongst the scenarios.

g. HHW User Fee

There are no changes in HHW user fee revenue amongst the scenarios.

h. Hybrid MRF Tipping Fees

The District anticipates that the hybrid MRF will be operating for the last quarter of 2019. A separate analysis developed for the hybrid MRF projected tipping fee revenue at roughly \$525,000 annually (see Table O-5a). This revenue projection assumed of the City of Toledo committing to sending their tonnage to the District's facility other communities and haulers in the District.

For budgetary purposes, the hybrid MRF tipping fee is estimated to be \$20.00 for each ton of single stream recyclable material delivered to the facility by the City of Toledo (estimated to be 20,000 tons) and \$25.00 for each ton delivered by others (estimated to be 5,000 tons). The District may adjust tip fees based on market conditions regarding the operation of the hybrid MRF. Agreements for receipt of recyclable tons are anticipated and negotiations may alter the terms of these tip fee estimates.

In 2019, MRF tipping fee revenue is 25% of the annual revenue projected from 2020 to the end of the planning period to reflect that the hybrid MRF will only operate during the last quarter of the year.

i. Hybrid MRF Recycling Revenue

The District anticipates that the new hybrid MRF will be operating for the last quarter of 2019. A separate financial analysis was developed for the hybrid MRF that projected recycling revenue at roughly \$453,000 for the first full operating year in 2020. This figure was based on historical tonnage trends and average commodity pricing in the Midwest region. In 2019, hybrid MRF recycling revenue is 25% of the annual revenue projected in 2020 to reflect that the MRF will only operate during the last quarter of the year. Revenue is projected conservatively to increase 0.5% annually to reflect modest increases in tonnage based on historical data and trends.

The following table presents other revenue by source from 2010 to 2032.

Table O-5b. Other Revenue and Other Revenue Sources

Year	Rates & Charges	Reimbursements	Funding from Health Dept.	Grants	Recycling Revenue	Misc.	Scrap Tire User Fee	HHW User Fee	Mini-MRF Tipping Fee Revenue	Mini-MRF Recycling Revenue	"Other Revenue" Total
2010	\$0	\$114	\$9,206	\$10,000	\$274,704	\$158,802	\$0	\$0	\$0	\$0	\$452,825.69
2011	\$0	\$2,267,284	\$7,625	\$125,400	\$532,120	\$117,917	\$0	\$0	\$0	\$0	\$3,050,346.38
2012	\$0	\$9,628,310	\$10,572	\$97,458	\$257,421	\$26,170	\$0	\$0	\$0	\$0	\$10,019,931.23
2013	\$0	\$9,174,629	\$9,113	\$142,298	\$321,291	\$14,312	\$0	\$0	\$0	\$0	\$9,661,643.18
2014	\$720,887	\$7,859,650	\$9,900	\$64,850	\$254,645	\$20	\$0	\$0	\$0	\$0	\$8,909,951.52
2015	\$778,663	\$10,452,985	\$10,746	\$21,259	\$84,405	\$10,031	\$0	\$0	\$0	\$0	\$11,358,088.26
2016	\$782,368	\$9,648,608	\$13,826	\$20,000	\$97,903	\$0	\$0	\$0	\$0	\$0	\$10,562,705
2017	\$750,000	\$9,560,880	\$9,000	\$0	\$90,000	\$0	\$20,000	\$45,000	\$0	\$0	\$10,474,880
2018	\$750,000	\$9,799,902	\$9,000	\$0	\$90,000	\$0	\$20,200	\$45,000	\$0	\$0	\$10,714,102
2019	\$750,000	\$10,044,900	\$9,000	\$0	\$67,500	\$0	\$20,402	\$45,000	\$131,250	\$113,250	\$11,181,302
2020	\$750,000	\$10,296,022	\$9,000	\$0	\$0	\$0	\$20,606	\$45,000	\$525,000	\$453,600	\$12,099,228
2021	\$750,000	\$10,553,423	\$9,000	\$0	\$0	\$0	\$20,812	\$45,000	\$525,000	\$455,868	\$12,359,103
2022	\$750,000	\$10,817,258	\$9,000	\$0	\$0	\$0	\$21,020	\$45,000	\$525,000	\$458,147	\$12,625,426
2023	\$750,000	\$11,087,690	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$460,438	\$12,898,358
2024	\$750,000	\$11,364,882	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$462,740	\$13,177,853
2025	\$750,000	\$11,649,004	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$465,054	\$13,464,288
2026	\$750,000	\$11,940,229	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$467,379	\$13,757,839
2027	\$750,000	\$12,238,735	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$469,716	\$14,058,681
2028	\$750,000	\$12,544,703	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$472,065	\$14,366,998
2029	\$750,000	\$12,858,321	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$474,425	\$14,682,976
2030	\$750,000	\$13,179,779	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$476,797	\$15,006,806
2031	\$750,000	\$13,509,273	\$9,000	\$0	\$0	\$0	\$20,000	\$45,000	\$525,000	\$479,181	\$15,337,454
2032	\$750,000	\$13,847,005	\$9,000	\$0	\$0	\$0	\$21,230	\$45,000	\$525,000	\$481,577	\$15,678,812

First Year of Planning Period → X

7. Summary of District Revenues

The total revenue, comprised of generation fees, contract fees, and other revenue, was \$11,020,258 during the 2014 reference year. Revenue in the first year of the planning period (2018) is projected to be \$13,694,019. Revenue is projected to increase annually throughout the planning period, ending in 2032 with a total revenue of \$17,770,631. The following table presents a summary of the District’s actual and projected total revenue from 2010 to 2032.

Table O-6b. Total Revenue

	Year	Generation Fees	Contract Fees	Other Revenue	Total Revenue
First Year of Planning Period →	2010	\$519,201	\$657,922	\$452,826	\$1,629,949
	2011	\$492,100	\$676,998	\$3,050,346	\$4,219,445
	2012	\$441,590	\$1,563,000	\$10,019,931	\$12,024,521
	2013	\$398,208	\$1,611,993	\$9,661,643	\$11,671,844
	2014	\$441,589	\$1,668,718	\$8,909,952	\$11,020,258
	2015	\$511,127	\$1,798,674	\$11,358,088	\$13,667,889
	2016	\$489,808	\$1,880,799	\$10,562,705	\$12,933,312
	2017	\$443,162	\$1,649,817	\$10,474,880	\$12,567,859
	X 2018	\$442,937	\$1,648,980	\$10,714,102	\$12,806,019
	2019	\$442,711	\$1,648,137	\$11,181,302	\$13,272,150
	2020	\$442,483	\$1,647,289	\$12,099,228	\$14,189,000
	2021	\$442,257	\$1,646,449	\$12,359,103	\$14,447,809
	2022	\$442,030	\$1,645,604	\$12,625,426	\$14,713,060
	2023	\$442,030	\$1,645,604	\$12,898,358	\$14,985,992
	2024	\$442,030	\$1,645,604	\$13,177,853	\$15,265,487
	2025	\$442,030	\$1,645,604	\$13,464,288	\$15,551,922
	2026	\$442,030	\$1,645,604	\$13,757,839	\$15,845,473
	2027	\$442,030	\$1,645,604	\$14,058,681	\$16,146,315
	2028	\$442,030	\$1,645,604	\$14,366,998	\$16,454,632
	2029	\$442,030	\$1,645,604	\$14,682,976	\$16,770,610
2030	\$442,030	\$1,645,604	\$15,006,806	\$17,094,440	
2031	\$442,030	\$1,645,604	\$15,337,454	\$17,425,088	
2032	\$442,030	\$1,645,604	\$15,678,812	\$17,766,447	

Source(s) of Information: Quarterly Fee Reports

Sample Calculations (2014): Total Revenue = Generation Fees + Contract Fees + Other Revenues

$$\$11,020,258 = \$441,589 + \$1,668,718 + \$8,909,952$$

F. Cost of Implementing Plan –Scenario B

1. Expenses

The projected budget, shown in Table O-7b, was developed based on programmatic needs identified in Appendices H, I, and L.

Table O-7b. Expenses

Line #	Category/Program	2010	2011	2012	2013	2014	2015	2016	2017
1	1. Plan Monitoring/Prep.	\$51,396	\$29,038	\$22,899	\$27,758	\$4	\$21,653	\$75,779	\$63,500
1.a	a. Plan Preparation	\$0	\$0	\$0	\$0	\$0	\$8,322	\$62,626	\$35,000
1.b	b. Plan Monitoring	\$0	\$0	\$0	\$0	\$13,971	\$13,331	\$0	\$8,500
1.c	c. Other	\$51,396	\$29,038	\$22,899	\$27,758	\$0	\$0	\$13,153	\$20,000
2	2. Plan Implementation	\$1,972,695	\$3,855,931	\$10,261,804	\$10,961,807	\$10,603,847	\$11,808,004	\$11,412,414	\$12,280,743
2.a	a. District Administration	\$870,360	\$905,046	\$870,421	\$896,750	\$752,057	\$898,087	\$830,939	\$1,025,950
2.a.1	Personnel	\$696,631	\$693,604	\$676,746	\$697,811	\$674,499	\$773,218	\$719,383	\$845,700
2.a.2	Office Overhead	\$173,729	\$211,442	\$193,675	\$198,939	\$77,558	\$124,869	\$111,556	\$180,250
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$7,500	\$0	\$0
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$7,500	\$0	\$0
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$481,799	\$2,707,451	\$9,205,514	\$9,674,361	\$9,551,242	\$10,572,580	\$10,258,241	\$10,693,880
2.d.1	Curbside	\$0	\$2,267,123	\$8,870,040	\$9,152,580	\$8,670,840	\$9,658,302	\$9,637,709	\$9,560,880
2.d.2	Drop-off	\$481,799	\$440,329	\$335,474	\$521,781	\$880,402	\$914,278	\$620,532	\$1,133,000
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$79,912	\$67,990	\$11,762	\$9,840	\$0	\$28,359	\$10,598	\$130,000
2.e.1	Tire Collection	\$35,394	\$17,837	\$10,000	\$9,840	\$0	\$28,359	\$8,403	\$20,000
2.e.2	HHW Collection	\$28,773	\$46,518	\$1,762	\$0	\$0	\$0	\$2,195	\$110,000
2.e.3	Electronics Collection	\$15,744	\$3,634	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$371,171	\$31,030	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$0	\$0	\$0	\$0	\$109,076	\$115,520	\$131,433	\$225,000
2.g.1	Education Staff	\$0	\$0	\$0	\$0	\$109,076	\$100,000	\$129,170	\$150,000
2.g.2	Advertisement/Promotion	\$0	\$0	\$0	\$0	\$0	\$15,520	\$1,160	\$25,000
2.g.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$1,103	\$50,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$230,000	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activi	\$0	\$0	\$0	\$230,000	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000
2.k	k. Waste Assessments/Audits	\$77,791	\$42,301	\$74,108	\$50,854	\$90,471	\$85,045	\$80,291	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$91,663	\$100,000	\$100,000	\$100,003	\$101,000	\$100,913	\$100,913	\$100,913
2.p	p. Other	\$0	\$2,113	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Health Department Name:</i>	None							
4	4. County Assistance	\$30,000	\$30,000	\$30,000	\$5,000	\$30,000	\$80,000	\$0	\$160,000
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$30,000	\$30,000	\$30,000	\$5,000	\$30,000	\$80,000	\$0	\$160,000
5	5. Well Testing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	7. Open Dump, Litter Law Enforcer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Heath Department Training	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)								
	Total Expenses	\$2,054,090	\$3,914,968	\$10,314,703	\$10,994,565	\$10,633,851	\$11,909,657	\$11,488,193	\$12,504,243

Line #	Category/Program	2018	2019	2020	2021	2022	2023	2024	2025
1	1. Plan Monitoring/Prep.	\$28,628	\$28,757	\$28,888	\$44,022	\$77,157	\$29,294	\$29,434	\$29,575
1.a	a. Plan Preparation	\$0	\$0	\$0	\$15,000	\$48,000	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$8,628	\$8,757	\$8,888	\$9,022	\$9,157	\$9,294	\$9,434	\$9,575
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	2. Plan Implementation	\$12,280,863	\$14,396,529	\$14,234,156	\$14,535,441	\$14,804,834	\$15,059,951	\$15,363,026	\$15,682,443
2.a	a. District Administration	\$993,048	\$1,002,979	\$1,013,009	\$1,023,139	\$1,033,370	\$1,043,704	\$1,054,141	\$1,064,682
2.a.1	Personnel	\$854,157	\$862,699	\$871,326	\$880,039	\$888,839	\$897,728	\$906,705	\$915,772
2.a.2	Office Overhead	\$138,891	\$140,280	\$141,683	\$143,100	\$144,531	\$145,976	\$147,436	\$148,910
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$0	\$1,218,927	\$875,708	\$882,511	\$889,623	\$896,494	\$903,400	\$910,340
2.b.1	MRF/Recycling Center	\$0	\$1,218,927	\$875,708	\$882,511	\$889,623	\$896,494	\$903,400	\$910,340
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$10,759,902	\$11,019,300	\$11,288,038	\$11,560,274	\$11,845,167	\$12,130,882	\$12,414,587	\$12,714,455
2.d.1	Curbside	\$9,799,902	\$10,044,900	\$10,296,022	\$10,553,423	\$10,817,258	\$11,087,690	\$11,364,882	\$11,649,004
2.d.2	Drop-off	\$960,000	\$974,400	\$989,016	\$1,003,851	\$1,018,909	\$1,034,193	\$1,049,706	\$1,065,451
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$3,000	\$3,000	\$9,000	\$9,000	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$112,000	\$114,038	\$116,115	\$118,231	\$120,387	\$122,585	\$124,612	\$126,680
2.e.1	Tire Collection	\$20,200	\$20,402	\$20,606	\$20,812	\$21,020	\$21,230	\$21,230	\$21,230
2.e.2	HHW Collection	\$91,800	\$93,636	\$95,509	\$97,419	\$99,367	\$101,355	\$103,382	\$105,449
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$225,000	\$225,000	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
2.g.1	Education Staff	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.g.2	Advertisement/Promotion	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.g.3	Other	\$50,000	\$50,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activi	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$35,000	\$0	\$35,000	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$100,913	\$591,286	\$591,286	\$591,286	\$591,286	\$591,286	\$591,286	\$591,286
2.p	p. Other	\$0	\$100,000	\$75,000	\$50,000	\$50,000	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0							
	<i>Health Department Name:</i>								
4	4. County Assistance	\$80,000							
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
5	5. Well Testing	\$0							
6	6. Out-of-State Waste Inspection	\$0							
7	7. Open Dump, Litter Law Enforcer	\$0							
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Heath Department Training	\$0							
9	9. Municipal/Township Assistance	\$0							
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)								
	Total Expenses	\$12,389,491	\$14,505,286	\$14,343,044	\$14,659,462	\$14,961,991	\$15,169,245	\$15,472,460	\$15,792,018

Line #	Category/Program	2026	2027	2028	2029	2030	2031	2032
1	1. Plan Monitoring/Prep.	\$29,719	\$45,465	\$79,933	\$30,163	\$30,315	\$30,470	\$30,627
1.a	a. Plan Preparation	\$0	\$15,600	\$49,920	\$0	\$0	\$0	\$0
1.b	b. Plan Monitoring	\$9,719	\$9,865	\$10,013	\$10,163	\$10,315	\$10,470	\$10,627
1.c	c. Other	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2	2. Plan Implementation	\$16,009,380	\$16,344,310	\$16,636,386	\$16,936,546	\$17,295,444	\$17,662,825	\$18,039,198
2.a	a. District Administration	\$1,075,329	\$1,086,082	\$1,096,943	\$1,107,913	\$1,118,992	\$1,130,182	\$1,141,484
2.a.1	Personnel	\$924,930	\$934,179	\$943,521	\$952,956	\$962,485	\$972,110	\$981,831
2.a.2	Office Overhead	\$150,400	\$151,904	\$153,423	\$154,957	\$156,506	\$158,071	\$159,652
2.a.3	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b	b. Facility Operation	\$917,314	\$924,613	\$931,657	\$1,146,265	\$1,153,380	\$1,160,531	\$1,168,021
2.b.1	MRF/Recycling Center	\$917,314	\$924,613	\$931,657	\$1,146,265	\$1,153,380	\$1,160,531	\$1,168,021
2.b.2	Compost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.3	Transfer	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.c	c. Landfill Closure/Post-Closure	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d	d. Recycling Collection	\$13,021,662	\$13,336,389	\$13,658,822	\$13,989,152	\$14,327,572	\$14,674,283	\$15,029,490
2.d.1	Curbside	\$11,940,229	\$12,238,735	\$12,544,703	\$12,858,321	\$13,179,779	\$13,509,273	\$13,847,005
2.d.2	Drop-off	\$1,081,433	\$1,097,654	\$1,114,119	\$1,130,831	\$1,147,793	\$1,165,010	\$1,182,486
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.5	Business/Institutional	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.d.6	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e	e. Special Collections	\$128,789	\$130,940	\$133,134	\$135,372	\$137,655	\$139,983	\$142,359
2.e.1	Tire Collection	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230	\$21,230
2.e.2	HHW Collection	\$107,558	\$109,709	\$111,904	\$114,142	\$116,425	\$118,753	\$121,128
2.e.3	Electronics Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.e.5	Other Collection Drives	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.f	f. Yard Waste/Other Organics	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.g	g. Education/Awareness	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000	\$185,000
2.g.1	Education Staff	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2.g.2	Advertisement/Promotion	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
2.g.3	Other	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.h	h. Recycling Market Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.1	General Market Development Activi	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.k	k. Waste Assessments/Audits	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
2.l	l. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.o	o. Loan Payment	\$591,286	\$591,286	\$540,829	\$282,845	\$282,845	\$282,845	\$282,845
2.p	p. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$0						
	<i>Health Department Name:</i>							
4	4. County Assistance	\$80,000						
4.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.d	d. Providing Other Public Services	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
5	5. Well Testing	\$0						
6	6. Out-of-State Waste Inspection	\$0						
7	7. Open Dump, Litter Law Enforcen	\$0						
7.a	a. Heath Departments	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.b	b. Local Law Enforcement	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.c	c. Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	8. Heath Department Training	\$0						
9	9. Municipal/Township Assistance	\$0						
9.a	a. Maintaining Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.c	c. Providing Emergency Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9.d	d. Providing other Public Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	10. Compensation to Affected Community (ORC Section 3734.35)							
	Total Expenses	\$16,119,099	\$16,469,775	\$16,796,319	\$17,046,709	\$17,405,759	\$17,773,295	\$18,149,825

2. Explanation of Expenses

Table O-7b includes actual expenses for 2015 and anticipated expenses from the District's approved budgets for 2016 to 2017, and projected expenditures from 2018 to 2032. Line items explained below are numbered according to the corresponding line item number in the District's Quarterly Fee Reports. Instances where numbers or letters appear to be omitted reflect a line item budget of \$0. Projections were developed using the following assumptions or criteria:

1. Plan Preparation and Monitoring

- 1.a Plan Preparation – There are no changes amongst the scenarios.
- 1.b Plan Monitoring – There are no changes amongst the scenarios.
- 1.c Other – There are no changes amongst the scenarios.

2. Plan Implementation

2.a District Administration

- 2.a.1 Personnel – There are no changes amongst the scenarios.
- 2.a.2 Office Overhead – There are no changes amongst the scenarios.

2.b Facility Operation

- 2.b.1 MRF/Recycling Center – The amount allocated in 2019 was calculated by taking the sum of \$1 million for purchasing equipment outright (i.e., not through the equipment loan, rather the use of the District's un-encumbered fund balance) and 25% of the expected annual operating costs of \$875,708 since the facility is only expected to operate for one quarter of 2019, then subtracting the debt retirement amount that will be paid on the District's building loan and equipment loan. Moving forward, annual costs are calculated by increasing the annual expenses by 0.5% annually, subtracting the annual debt retirement amount, and adding the insurance costs for the MRF as quoted by the District's Office of Management and Budget (OMB) Risk Management agent.

2.d Recycling Collection

- 2.d.1 Curbside – There are no changes amongst the scenarios.
- 2.d.2 Drop-Off Recycling – There are no changes amongst the scenarios.
- 2.d.4 Multi-Family – There are no changes amongst the scenarios.

2.e Special Collection

- 2.e.1 Tire Collection – There are no changes amongst the scenarios.
- 2.e.2 HHW Collection – There are no changes amongst the scenarios.
- 2.e.3 Electronics Collection – There are no changes amongst the scenarios.

2.f Yard Waste/Other Organics

- There are no changes amongst the scenarios.

2.g Education/Awareness

- 2.g.1 Education Staff – There are no changes amongst the scenarios.
- 2.g.2 Advertisement/Promotion – There are no changes amongst the scenarios.
- 2.g.3 Other – There are no changes amongst the scenarios.

2.h Recycling Market Development

- 2.h.1 General Market Development Activities – There are no changes amongst the scenarios.
- 2.h.2 ODNR pass-through grant – There are no changes amongst the scenarios.

2.j Feasibility Studies

- There are no changes amongst the scenarios.

2.k Waste Assessments/Audits

- There are no changes amongst the scenarios.

2.o Loan Payment

- This budget includes debt retirement for the District's three loans listed in Table O-4b.

2.p Other

- There are no changes amongst the scenarios.

4. County Assistance

4.d Providing Other Public Services

- There are no changes amongst the scenarios.

Table O-8b presents a summary of the District's budget, including revenue, expenditures, and fund balance.

Table O-8b. Budget Summary

	Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
First Year of Planning Period →	2009	Ending Balance			\$446,729
	2010	\$1,629,949	\$2,054,090	-\$424,141	\$22,588
	2011	\$4,219,445	\$3,914,968	\$304,476	\$327,064
	2012	\$12,024,521	\$10,314,703	\$1,709,817	\$2,036,881
	2013	\$11,671,844	\$10,994,565	\$677,279	\$2,714,161
	2014	\$11,020,258	\$10,633,851	\$386,408	\$3,100,568
	2015	\$13,667,889	\$11,909,657	\$1,758,232	\$4,858,800
	2016	\$12,933,312	\$11,488,193	\$1,445,119	\$6,303,919
	2017	\$12,567,859	\$12,504,243	\$63,616	\$6,367,536
	X 2018	\$12,806,019	\$12,389,491	\$416,528	\$6,784,064
	2019	\$13,272,150	\$14,505,286	-\$1,233,137	\$5,550,927
	2020	\$14,189,000	\$14,343,044	-\$154,044	\$5,396,883
	2021	\$14,447,809	\$14,659,462	-\$211,653	\$5,185,230
	2022	\$14,713,060	\$14,961,991	-\$248,931	\$4,936,299
	2023	\$14,985,992	\$15,169,245	-\$183,253	\$4,753,046
	2024	\$15,265,487	\$15,472,460	-\$206,973	\$4,546,073
	2025	\$15,551,922	\$15,792,018	-\$240,095	\$4,305,977
	2026	\$15,845,473	\$16,119,099	-\$273,626	\$4,032,351
	2027	\$16,146,315	\$16,469,775	-\$323,459	\$3,708,892
	2028	\$16,454,632	\$16,796,319	-\$341,686	\$3,367,206
2029	\$16,770,610	\$17,046,709	-\$276,099	\$3,091,107	
2030	\$17,094,440	\$17,405,759	-\$311,319	\$2,779,788	
2031	\$17,425,088	\$17,773,295	-\$348,206	\$2,431,582	
2032	\$17,766,447	\$18,149,825	-\$383,379	\$2,048,203	



APPENDIX P

DESIGNATION



APPENDIX P. DESIGNATION

A. Statement Authorizing/Precluding Designation

Ohio law gives each SWMD the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.¹

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee (or the Board in the case of an Authority) specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If the SWMD desires to have the ability to designate facilities, then the policy committee includes a clear statement in the solid waste management plan giving the designation authority to the board of directors. The policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

Even if the policy committee grants the board of directors the authority to designate in a solid waste management plan, the board of directors decides whether or not to act on that authority. If it chooses to use its authority to designate facilities, then the board of directors must follow the process that is prescribed in [ORC Section 343.014](#). If it chooses not to designate facilities, then the board of directors simply takes no action.

Once the board of directors designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is when the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and the time period available to the board for making a decision on a waiver request.

1. **Authorization Statement to Designate**

The District is hereby authorized to establish facility designations in accordance with ORC Section 343.013, 343.014 and 343.015.

¹ Source-separated recyclables delivered to a "legitimate recycling facility" as defined in Ohio law are not subject to the requirements of designation. (A legitimate recycling facility is loosely defined as a facility which consistently recycles a majority of the materials processed on-site.)

2. Description of the SWMD’s Designation Process

Decisions regarding designation or the granting of a designation waiver shall be made by the District, following a review of the request by the Policy Committee. Copies of applicable resolutions for the District’s most recent designation process are included in Appendix V.

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(l)(2). The Policy Committee will evaluate each request for designation or waiver based upon, at least, the following general criteria:

- The facility’s compatibility with the District’s Solid Waste Management Plan.
- The facility’s compliance with all rules promulgated by the District and the District’s Solid Waste Management Plan.

The full procedure for granting a designation waiver is included in the District’s *Designation Procedure and Evaluation Document*, found in Appendix V.

B. Designated Facilities

Table P-1 Designated Facilities

The currently designated facilities for the solid waste generators are shown in Table P-1.

Table P-1. Facilities Designated

Facility Name	Location		Facility Type	Year Designated
	County	State		
<i>In-District</i>				
Hoffman Road Landfill	Lucas	OH	Landfill	2013
<i>Out-of-District</i>				
Port Clinton Landfill	Ottawa	OH	Landfill	2013
Wood County Landfill	Wood	OH	Landfill	2013
Suburban Landfill	Perry	OH	Landfill	2013
American Landfill	Stark	OH	Landfill	2013
Erie County Sanitary Landfill	Erie	OH	Landfill	2013
Henry County Landfill	Henry	OH	Landfill	2013
County Environmental of Wyandot	Wyandot	OH	Landfill	2013

Facility Name	Location		Facility Type	Year Designated
	County	State		
Williams County Landfill	Williams	OH	Landfill	2013
Hancock County Landfill	Hancock	OH	Landfill	2013
Evergreen Landfill	Wood	OH	Landfill	2013
ARS Refuse Service	Fulton	OH	Transfer Station	2013
Out-of-State				
Adrian Landfill	Lenawee	MI	Landfill	2013
Vienna Junction Landfill	Monroe	MI	Landfill	2013
Steven's Disposal and Transfer Facility	Monroe	MI	Transfer Station	2013

C. Documents

Appendix V contains the related documents including resolutions pertaining to designation.



APPENDIX Q

DISTRICT RULES



APPENDIX Q. DISTRICT RULES

A. Existing Rules

The District does not currently have any existing rules.

1. **Rule Making Authority - ORC 343.01**

The solid waste management plan provides the authority to the Board of County Commissioners to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

ORC 343.01(G)(1)

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code, except that the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to

incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

- (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
- (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;
- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or

operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

“Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility under general plans and specifications for the proposed improvement have been submitted to and approved by the Board of County Commissioners . . . as complying with solid waste management plan or amended plan of the District. The construction of such a facility . . .”

ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district’s solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district’s solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

ORC 343.01(G)(4)

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that

became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

2. Rule Making Authority - ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:
 - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
 - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
 - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
 - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
 - (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;

- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.
- (2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;
- (3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;
- (4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

B. Proposed Rules

The District is not proposing any new rules in this *Plan Update*.

C. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board of Directors as provided in Section 343.01(G).



APPENDIX R

**BLANK SURVEY FORMS AND RELATED
INFORMATION**



February 2015

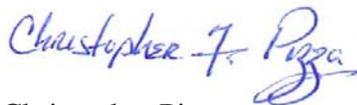
Dear Solid Waste/Recycling Manager:

The Lucas County Solid Waste Management District (District) requests your participation in a brief recycling survey. The District is responsible for providing local opportunities to reduce, reuse, and recycle materials. Each year, the District is required by law to survey establishments within its jurisdiction or businesses that may process materials generated within Lucas County, Ohio. This information is critical for state-mandated data reporting and solid waste management planning. The data you provide will be combined with data reported from other establishments. Survey responses are aggregated, so your individual information will not be identified.

Please complete the enclosed survey using only **calendar year 2014 information**. Completing this survey should only take a few minutes. Only materials generated within Lucas County, Ohio should be reported.

Please submit your completed survey in the enclosed envelope to the District's consultant, GT Environmental, **by Friday March 27, 2015**. You may also return your completed survey via e-mail (mkathleen@gtenvironmental.com) or by fax (**614-899-9255**). If you have questions about the survey, please call the District's consultant, GT Environmental, at **740-212-3430**. We appreciate your cooperation in completing this survey.

Sincerely,



Christopher Pizza
District Manager
Lucas County Solid Waste Management District

Enclosure

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 POLITICAL SUBDIVISION RECYCLING SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated *within* Lucas County. The information requested is usually available on hauler invoices or receipts from purchasers of recycled materials. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** in the enclosed pre-paid envelope, via email (mkathleen@gtenvironmental.com) or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part I - General Information

City/Township/Village Name: _____
Address: _____
Contact Person: _____ **Title:** _____
Email: _____ **Phone:** _____

Part II – Recycling

1. Type of Recycling Program:

Please check the type of recycling program operated in your community and complete the required information for the type of program you offer.

- A. Non-Subscription Curbside Program:** **Number of Households:** _____
(All single family household residents have access to the recycling program whether or not they participate. Recycling can be paid for by residents or by the political jurisdiction)
- B. Subscription Curbside Program:** **Number of Subscribers:** _____
(Residents request and pay for recycling with a subscription fee)
- C. Drop-Off Recycling** (Please Complete Table 2)
(Recycling collection containers available to the public that are not provided by the Lucas County Solid Waste Management District)

2. Refuse Service Providers:

List the public/private refuse service providers that serve your community:

- | | |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

3. Yard Waste Management:

Does your community have leaf or yard waste collection? Yes No

Provide the total tons of each yard waste type collected in 2014:

Grass _____ (tons) **Receiving Compost Facility** _____

Leaves _____ (tons) **Receiving Compost Facility** _____

Mixed Yard Waste _____ (tons) **Receiving Compost Facility** _____

4. Materials Recycled

Table 1 – Please report the actual number of tons **recycled by your community in 2014**. The data in the recycled column is used to calculate the District’s progress in meeting state and local recycling goals. The values reported are for calendar year 2014. For data conversions, assume 2,000 lbs = 1 ton, 3 cubic yards = 1 ton, 7.5 lbs = 1 gallon for used motor oil and 8 lbs = 1 gallon for used antifreeze.

Table 1 –All Recycling (including curbside, drop off and special collections) in 2014

Waste Stream Type	Recycled (tons)	Waste Stream Type	Recycled (tons)
Cardboard		Commingled (Mixed recyclables)	
Mixed Paper		Rubber (Tires)	
Newsprint		Wood pallets	
Office Paper		Appliances (white goods)	
Aluminum Cans		Textiles (clothing, fabric)	
Steel/Tin Cans		Food	
Non-Ferrous Metals (aluminum, copper)		Dry-Cell Batteries	
		Lead Acid Batteries	
Ferrous Metals (steel, iron)		Electronics	
Mixed plastics #1-#7		Used Oil (residential only)	
Glass		Used Antifreeze (residential only)	
Total Tons Recycled in 2014			

Table 2 –Drop-Off Recycling 2014

Please complete Table 2 for each drop-off recycling center located within your political subdivision.

Drop-Off Address	Operating Days and Hours	Materials Accepted	Total Tons Collected in 2014
Example: 12 Main St., Buckeye City, Ohio	Mon. – Fri. 8AM-6PM	Paper, plastics, metals, cardboard, glass	4.2 tons

Return the survey in the enclosed envelope, by email to mkathleen@gtenvironmental.com, or fax to 614-899-9255.

THANK YOU FOR COMPLETING THIS SURVEY!

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 COMMERCIAL/INSTITUTIONAL RECYCLING SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated *within* Lucas County. The information requested is usually available on hauler invoices or receipts from purchasers of recycled materials. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** either in the enclosed pre-paid envelope, via email to mkathleen@gtenvironmental.com, or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part I - General Information

Company Name: _____
Address: _____
City: _____ **Zip:** _____
Contact Person: _____ **Phone:** _____
of Employees: _____ **SIC Code:** _____

Part II –Recycling

Table 1 –Data recorded in this table should include all of the recyclables generated by your company in 2014 along with the processor/recycler/broker used for each material recycled. Please estimate the quantities of **each type** of material recycled in tons. **The data in the recycled column is used to calculate the District's progress in meeting state and local recycling goals.** For data conversions assume the following: 2,000 pounds = 1 ton, 3 cubic yards = 1 ton, 7.5 lbs = 1 gallon of used oil, and 8 lbs = 1 gallon of used antifreeze.

Table 1 –Recycling in 2014

	Category	Total Tons Recycled	Processor/Recycler/Broker
	Example: Mixed Paper	2.5 tons	Lucas County Paper Recyclery
Paper	Mixed Paper		
	Cardboard ¹ (use Table 2 if needed)		
	Newsprint		
	Office Paper		
	Other Paper (specify)		
Wood	Wood		
	Sawdust		
	Board Ends		
	Pallets		
Metals	Aluminum Beverage Containers		
	Steel Food/Beverage Containers		
	Non-Ferrous Metals (aluminum, copper, brass)		
	Ferrous Metals (steel, iron)		
	Appliances (white goods)		
Plastics	Mixed plastics		
	PETE Plastic (#1)		
	HDPE Plastic (#2)		
	#3 - #7 Plastics		
	Other Plastics (specify)		

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 INDUSTRIAL RECYCLING SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated *within* Lucas County. The information requested is usually available on hauler invoices or receipts from purchasers of recycled materials. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** either in the enclosed pre-paid envelope, via email to mkathleen@gtenvironmental.com, or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part I - General Information

Company Name: _____
Address: _____
City: _____ **Zip:** _____
Contact Person: _____ **Phone:** _____
of Employees: _____ **SIC Code:** _____

Part II –Recycling

Table 1 –Data recorded in this table should include all of the recyclables generated by your company in 2014 along with the processor/recycler/broker used for each material recycled. Please estimate the quantities of **each type** of material recycled in tons. **The data in the recycled column is used to calculate the District's progress in meeting state and local recycling goals.** For data conversions assume the following: 2,000 pounds = 1 ton, 3 cubic yards = 1 ton, 7.5 lbs = 1 gallon of used oil, and 8 lbs = 1 gallon of used antifreeze.

Table 1 –Recycling in 2014

	Category	Total Tons Recycled	Processor/Recycler/Broker
	Example: Mixed Paper	2.5 tons	Lucas County Paper Recyclery
Paper	Mixed Paper		
	Cardboard ¹ (use Table 2 if needed)		
	Newsprint		
	Office Paper		
	Other Paper (specify)		
Wood	Wood		
	Sawdust		
	Board Ends		
	Pallets		
Metals	Aluminum Beverage Containers		
	Steel Food/Beverage Containers		
	Non-Ferrous Metals (aluminum, copper, brass)		
	Ferrous Metals (steel, iron)		
	Appliances (white goods)		
Plastics	Mixed plastics		
	PETE Plastic (#1)		
	HDPE Plastic (#2)		
	PVC Plastic (#3)		
	LDPE Plastic (#4)		
	Polypropylene Plastic (#5)		
	Polystyrene Plastic (#6)		
	Other Plastics (specify)		

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 COMPOST FACILITY SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include information on organic materials that were generated *within* Lucas County. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** either in the enclosed pre-paid envelope, via email to mkathleen@gtenvironmental.com, or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part 1 – General Information

Company Name _____
Street Address _____
City _____ **Zip** _____
Contact Person _____ **Phone** _____

Part 2 – Description of Facility/Activity

- Please select the category (or categories) to describe operations at your facility:
 Composting Community Collection Mulching Land Application Anaerobic Digestion
- Is your facility/activity open to the public or for private use only? _____

Part 3- Composting Operations in 2014

Please report the amount of materials composted in 2014 that were generated within Lucas County in the table below. Please report by whether materials were generated by the residential/commercial sector or the industrial sector. **The data in the recycled column is used to calculate the District's progress in meeting state and local recycling goals.** For data conversions assume the following: 2,000 pounds = 1 ton, 3 cubic yards = 1 ton.

Material Generated in Lucas County	Residential/Commercial Material (Tons) (A)	Industrial Material (Tons) (B)	Total Material (Tons) (A+B)	Bulking Agents Added (Tons)	Non-Compostables landfilled (TPY)	Final Compost Produced (TPY)
Grass						
Leaves						
Brush						
Food Waste						
Animal waste						
Other:						
Other:						
Totals						

TPY = Tons Per Year

Return the survey in the enclosed envelope, email to mkathleen@gtenvironmental.com, or fax to 614-899-9255.

THANK YOU FOR COMPLETING THIS SURVEY!

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 SOLID WASTE HAULER SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated *within* Lucas County. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** either in the enclosed pre-paid envelope, via email to mkathleen@gtenvironmental.com, or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part 1 – General Information

Company Name _____
Street Address _____
City _____ **Zip** _____
Contact Person _____ **Phone** _____

Part 2 – Solid Waste Services Provided in 2014: Please fill out the table below for all service areas within Lucas County, Ohio. You may use the back of this survey if you need additional space to list communities serviced.

Table 1 – Solid Waste Services by Community

List the City, Township or Villages Serviced	Type of Service Provided (see key)	2014 Tons Collected Per Service Provided	Facility Used
<i>Example: City of Toledo</i>	<i>CRTC RRDO CRRC</i>	<i>10,500 tons 1,500 tons 2,000 tons</i>	<i>XYZ Landfill ABC Recycling Ohioville MRF</i>

Key: **CRTC** Curbside Residential Trash Collection **CRYC** Curbside Residential Yard Waste Collection
CRRC Curbside Residential Recyclables Collection **CRC** Commercial Recyclables Collection
CRPAYT Curbside Residential Pay-As-You-Throw **RRDO** Residential Recycling Drop-Off
IRC Industrial Recyclables Collection

Return the survey in the enclosed envelope, email to mkathleen@gtenvironmental.com, or fax to 614-899-9255.

THANK YOU FOR COMPLETING THIS SURVEY!

LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT 2014 RECYCLING FACILITY/BROKER/PROCESSOR SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only include solid waste/recyclable data that is generated *within* Lucas County. **Confidentiality:** The Lucas County Solid Waste Management District (District) will use the information in this survey for summary purposes only to identify types of wastes that may be further reduced or recycled. **Submitting:** Upon completion, please return this survey by **March 27, 2015** in the enclosed pre-paid envelope, via email (mkathleen@gtenvironmental.com) or by fax to **614-899-9255**. If you have any questions, please call the District's consultant at 740-212-3430.

Part 1 - General Information

Company Name _____
Street Address _____
City _____ **Zip** _____
Contact Person _____ **Phone** _____

Hours Open to the Public: _____ **Days Open to the Public:** _____

Part 2 – Facility Information

1. In 2014, where did your facility accept material from? Please check all that apply.

- Lucas County Only
 Ohio Counties other than Lucas
 Outside Ohio

2. How do you define your facility? Please check all that apply.

- Recycling Broker
 Scrap Yard
 Buyback Recycling Center
 Drop-off Facility
 Hauler Collection
 Licensed Auto Salvage Dealer
 Processor/End User
 Other: _____

3. Do you accept materials from the public?
 Yes, publicly available
 No, private use only

Part III – Recycling Totals

Please report the amount of materials recycled in 2014 that were generated within Lucas County, OH in the following table. Indicate whether materials were generated by the residential/commercial sector or the industrial sector using the columns below. **The data in the tonnage columns is used to calculate the District's progress in meeting state and local recycling goals.** For data conversions assume the following: 2,000 pounds = 1 ton, 3 cubic yards = 1 ton, 7.5 lbs = 1 gallon of used oil, and 8 lbs = 1 gallon of used antifreeze.

Recycling in 2014

	Category	Residential/Commercial Sector Tons Recycled	Industrial Sector Tons Recycled
	Example: Mixed Paper	265 tons	185 tons
Paper	Mixed Paper		
	Cardboard		
	Newsprint		
	Office Paper		
	Other Paper (specify)		
Wood	Wood		
	Sawdust		
	Board Ends		
	Pallets		

	Category	Residential/Commercial Sector Tons Recycled	Industrial Sector Tons Recycled
Metals	Aluminum Beverage Containers		
	Steel Food/Beverage Containers		
	Non-Ferrous Metals (aluminum, copper, brass)		
	Ferrous Metals (steel, iron)		
	Appliances (white goods)		
Plastics	Mixed plastics		
	PETE Plastic (#1)		
	HDPE Plastic (#2)		
	PVC Plastic (#3)		
	LDPE Plastic (#4)		
	Polypropylene Plastic (#5)		
	Polystyrene Plastic (#6)		
	Other Plastics (specify)		
Glass	Glass		
Rubber	Rubber (not including tires)		
	Passenger Tires		
	Light Truck/Semi Tires		
	Tractor Tires		
Other	Commingled (mixed, single stream)		
	Textiles (clothing, fabrics)		
	Food		
	Yard Waste (grass, brush)		
	Lead Acid Batteries		
	Stone/Clay/Sand		
	Concrete		
	Non-Exempt Foundry Sand/Slag		
	Ash		
	Sludge		
	Dry Cell Batteries		
	Used Oil (residential only)		
	Used Antifreeze (residential only)		
	Other:		
	Other:		
Other:			
Other:			
Totals			

Return the survey in the enclosed envelope, by email to mkathleen@gtenvironmental.com, or fax to 614-899-9255.

THANK YOU FOR COMPLETING THIS SURVEY!



APPENDIX S

SITING STRATEGY



APPENDIX S. SITING STRATEGY

This section outlines the strategy to be used for evaluating proposals for siting solid waste facilities within the District to meet the need for additional disposal and/or processing capacity to serve the District. While the District does not believe it has a capacity concern or will need to consider a landfill siting contingency plan, if the need would arise, the following siting procedures would be followed.

Included in the strategy is a delineation of the functional roles to be performed by the District, the Solid Waste Management District Policy Committee (“Policy Committee”) and its operational subcommittees, local governmental jurisdictions and the public. Additionally, the categories of criteria that will be employed to evaluate sites and/or facilities are identified. A Siting Evaluation and Ranking document discussing the criteria more specifically, as well as, how it will be applied to a site or facility during the evaluation process will be available, upon request, at the Solid Waste District offices. Finally, a process of dispute resolution and mediation is outlined and recommended for use in reducing potential conflicts, fostering communication between involved parties and resolving impasses.

The District’s siting strategy has been developed to provide a process for evaluating proposed solid waste facilities and the sites upon which they may be constructed. This strategy is not meant to replace current review and evaluation processes conducted by Ohio Environmental Protection Agency, local zoning and planning commissioner, or other state or local agencies. Rather the District’s siting strategy is meant to supplement those reviews by evaluating a proposed facility’s conformity with the goals and objectives of the District Solid Waste Management Plan and providing a forum for public participation in the siting process. The District may alter this strategy to assure that it consistently meets these objectives. Such changes in the strategy will be published as part of the District’s Siting Evaluation and Ranking document. The evaluation and siting strategy applies to all facilities regardless of ownership, except solid waste facilities sited within the district prior to plan approval. The strategy consists of three components:

- Preliminary site survey;
- Evaluation of proposed sites and requests for designation; and
- Resolving site impasses through mediation

A. Preliminary Site Analysis

The District will charge the Policy Committee or a special task force formed for such purpose, with responsibility for performing a preliminary site and black-out analysis. The Policy Committee or special task force, in cooperation with Ohio Environmental Protection Agency, the Ohio Department of Natural Resources, the U.S. Army Corps of Engineers, the Soil & Water Conservation Service and the Lucas County Plan Commissions, will identify all areas of the District that for statutory, regulatory, geologic, zoning or other reasons are determined to be

“environmentally sensitive areas” and unavailable for construction of a new solid waste facility.

The results of the District’s black-out analysis will be presented to the proper legal authorities within the District for adoption and implementation. Additionally, the District may assist local subdivisions, upon request, with developing responsible strategies for siting solid waste facilities within their jurisdictions through the utilization of their zoning and planning authority. This may include the addition of specific solid waste facilities to existing zoning categories, development of special zoning classifications for solid waste facilities, or the requirement of conditional use or special use permits for solid waste facilities.

Information concerning preferred sites identified by local subdivisions and black-out areas will be made available to developers proposing to site solid waste facilities within the District through the District office.

Exemption for Lucas County Solid Waste District Facilities and Anticipated Facilities: The Board has determined that the expansion, modification or development of the proposed material recovery facility and any other complimentary operation such as recycling drop-off sites, curbside programs or yard waste drop-off sites to the District’s material recovery facility is in the best interest of the District, its residents and businesses and complies with the Plan. Board approval of the costs associated with any expansion, modification or development of the material recovery facility shall constitute a continuing determination by the Board that the proposed expansion, modification or development of the District’s material recovery facility complies with the Plan.

Finally, the Board believes that additional processing facilities may be constructed by the District on behalf of its residents including special waste collection facilities and one or more Material Recovery Facilities. Board approval of the costs associated with any construction, expansion or modification of the material recovery facility or additional processing facilities shall constitute a continuing determination by the Board that the proposed Modification expansion or renovation of these facilities complies with the Plan.

B. Evaluation of Proposed Sites and Designation Requests

General Requirements

Developers of proposed solid waste facilities within the District must comply with all federal, state and local statutes, regulations and guidance documents governing the siting, construction, expansion or modification of a solid waste facility. Certification of such compliance shall be provided to the District. Sources of information include:

- A copy of current state solid waste regulations and other applicable siting criteria is available from the Northwest District Office of Ohio Environmental Protection Agency, 347 N. Dunbridge Road, P.O. Box 466, Bowling Green, Ohio 43402; (419) 352-8461.
- Information on zoning restrictions, building code requirements and special use permits is available through the Toledo/Lucas County Planning Commission, One Government Center #1620, Toledo, Ohio 43604; (419) 245-1200 or the applicable municipality, village or township offices.
- Information on siting or operating licenses required by the Board of Health is available at the Lucas County Board of Health, 635 North Erie Street, Toledo, OH 43604 (419) 213-4100.

District Requirements

As required by the statutes and regulations referred to above, a developer of a solid waste facility may be required to submit a Permit-to-Install (PTI) application to Ohio Environmental Protection Agency for approval prior to construction or modification of the facility. Within 10 days of submission of such PTI to Ohio Environmental Protection Agency, a copy is required to be submitted to the District along with, at a minimum, the following data to support the District's evaluation process. Most of the information listed below is available from the Ohio Department of Natural Resources, Ohio Environmental Protection Agency, the Toledo/Lucas County Planning Commission, the Lucas County Soil and Water Conservation District, the Ohio Historic Preservation Office or the applicable local governmental jurisdiction. The minimum District requirements are:

- A description of the site and its location, including property boundaries and their relationship to political subdivisions, highways, roads, and utilities.
- Descriptions of each of the following located within one-half mile of the proposed site:
 - Residential, commercial, industrial and institutional buildings;
 - Zoning and land use classifications;
 - Roads and railroads;
 - Floodplains;
 - Existing topography including vegetation, rivers, creeks, intermittent streams, lakes, ponds, wetlands, and other surface waters;
 - Parks, nature preserves, wildlife areas, scenic rivers and exceptional wildlife habitats; and
 - Any other significant features.
- Surface drainage patterns within 500 feet in all directions beyond the facility's borders.

- Location of public and private water supply wells with 1,000 feet in all directions beyond facility boundaries.

Local Zoning and Planning Requirements

The District's Siting Strategy encourages a responsible and effective local community response to zoning and planning issues related to the siting and operation of solid waste facilities within the District. Developers of a proposed solid waste facility must provide certification to the District that such proposed facility is in compliance with the zoning and planning regulations of the local jurisdiction in which it is to be sited.

District Siting Process and Designation Review

The District, the Policy Committee, its applicable operating committees, the Solid Waste Management District staff and the local subdivision where the facility is proposed to be sited will follow a specific review process for the evaluation of a proposed facility. The siting process will consist of an evaluation of the proposed solid waste facility's compliance with the goals and objectives of the District Solid Waste Management Plan and the District's siting criteria. District approval of a proposed site will be conditioned upon receipt of certification that a proposed facility has complied with all Ohio Environmental Protection Agency and U.S. Environmental Protection Agency regulations and siting criteria, as well as, local zoning and planning regulations.

The District will charge the Policy Committee or a special task force appointed by the Policy Committee with responsibility for evaluating compliance of a proposed facility with the District's goals, objectives, and siting criteria. The Policy Committee or special task force will include members from the Policy Committee's applicable operating committees, members of the public with appropriate technical expertise, representatives of the Lucas County Health department, representatives from affected communities and landowners. The County's planning and engineering staff may support the Policy Committee or special task force in its technical review of all pertinent information regarding the facility.

Upon completion of its evaluation, the Policy Committee or special task force shall hold a public hearing to solicit comments on its report and recommendations. The Policy Committee or special task force shall submit its written report, including information obtained from the public hearing, to the Policy Committee within 60 days of receiving the proposed facility's siting information. The Policy Committee shall submit a resolution stating its recommendation to the District within 15 days of receiving the Policy Committee's or special task force's report.

The District will, by resolution, make a final determination and notify all relevant parties of its action within 15 days of receipt of the Policy Committee's resolution. The District's resolution shall make reference to any agreement reached and shall direct, upon approval of the facility where required by Ohio Environmental Protection Agency, that the facility be incorporated in the list of designated facilities stipulated in Section 2 of the plan update as long as said facility has entered into the required designation agreement as provided for in the plan update. A copy of the agreement between the facility and the District shall be added to the Appendices of the plan update.

The District may, upon request, extend the time periods within which the various committees or task forces are required to accomplish their review. Such request shall be submitted, in writing, to the District with the reason for the extension clearly stated. All parties to the evaluation process shall be advised whenever such extension of the review process is granted.

The District shall forward its final decision on the siting of each proposed facility and a copy of any agreement entered into with the facility owner to Ohio Environmental Protection Agency. Any agreement entered into with a facility operator shall set forth negotiated limitations placed upon the facility and shall bind all parties. A list of issues subject to negotiation and incorporation into a final agreement may include but not be limited to:

- Compensation to any person for substantial economic impacts that result directly from the facility;
- Compensation to any affected political subdivision for substantial economic impacts that results directly from the facility, including allowing an affected township or municipality to impose fees under Division (C) of Section 3734.57 of the Ohio Revised Code that are in excess of the twenty-five cents per ton limit;
- Reimbursement to the District for reasonable costs incurred in handling negotiation, mediation, and arbitration activities;
- Screening and fencing related to the appearance of the facility;
- Operational concerns, including noise, dust, debris, odors, and hours of operation;
- Traffic flows and patterns resulting from the facility;
- Use of the site of the facility after it is closed;
- Compliance with any local zoning and planning requirements related to the type of facility being sited;
- Compliance with any rule adopted under Division (F) of Section 343.01 of the Ohio Revised Code;
- Limits on community liability for actions brought under Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) at the facility;
- Standard reporting requirements by the facility on a format provided by the District;

- Overall sizing and capacity of the facility and periodic intake limits; and
- Intake and processing grantees for materials generated in the District.

C. Siting Criteria

As described above, the Policy Committee or special task force shall evaluate proposed facilities against engineering, environmental, and socio-economic criteria for siting the facility in an area within the District that has not previously been eliminated under the black-out analysis. The following is a general, non-exclusive list of issues that may be considered in each of these categories for purposes of evaluating a proposed solid waste facility site plan:

- *Engineering Criteria:* May include such considerations as the site location; accessibility to and from the site; site size; site shape; existing zoning; and access to utilities.
- *Environmental Criteria:* May include such considerations as traffic; noise; dust; screening; topography; soils; and geology.
- *Socio-economic Criteria:* May include such considerations as negative neighborhood image; negative impact on property values; public attitude; and access to markets.

D. Evaluation and Ranking Scheme

A proposed solid waste facility will be evaluated in terms of engineering, environmental and socio-economic criteria. The exact scheme of ranking will depend upon the type of solid waste facility and will be described in the District's Siting Evaluation and Ranking document available, upon request, from the District office. This quantitative scheme will help the District, Policy Committee, and/or special task force examine a specific site according to its suitability. The ranking scheme will be easily understood so people other than the Policy Committee or special task force can perform the method and arrive at similar results. The method will also be replicable in a reasonable amount of time.

The Policy Committee or special task force will begin evaluation of a proposed site by determining which criterion to include on a "must list". The criteria determined to be on the "must list" will not be ranked or weighted by the Policy Committee or special task force. A potential site would have to meet every criterion included on the "must list". Those sites meeting all of the criteria on the "must list" will be further evaluated in terms of other criteria which will be ranked and weighed by the Policy Committee or special task force. For each criterion, this ranking can be a simple low, medium or high ranking, or can easily be converted to a quantitative ranking to show their relative importance.

E. Resolving Site Impasses Through Mediation

Mediation is a technique widely used by government, industry, labor and management to resolve impasses. This formal process brings together representatives of opposing positions to work through a mediator (or a team of mediators) to resolve their conflicts. The mediator may clarify areas of agreement and disagreement by suggesting possible solutions to the conflict, and recommending methods to implementing the solutions.

Mediation will be utilized in those instances where the siting of a solid waste facility is perceived to present major, unresolvable controversies and the matters at issue are within the authority of the District. In those cases, a special effort will be made to actively involve the affected public in a series of open-forums. These meetings will be conducted with the assistance of a skilled mediator. Individuals and groups will be encouraged to voice their concerns and to discuss them with the Policy Committee or special task force. Increased public involvement and the assistance of a skilled mediator are expected to aid in final resolution of controversies and the selection of a suitable site.



APPENDIX T
MISCELLANEOUS PLAN DOCUMENTS



CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Lucas County Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format*, revision 4.0.



Representing the County Commissioners

11/9/2016

Date Signed



Representing CEO of Largest City

11/9/16

Date Signed



Representing County Health Department

11-09-16

Date Signed



Representing Townships

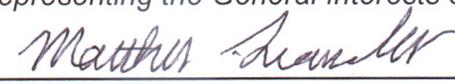
11-09-16

Date Signed

Representing Commercial/Industrial Generators

Date Signed

Representing the General Interests of Citizens



Date Signed

11-10-16

Date Signed

Representing the Public

Date Signed

Date: November 02, 2017

Resolution No. 17-01

Title: Approval of the Lucas County Solid Waste Management District's Amended Draft Solid Waste Management Plan

Department/Agency: Lucas County Solid Waste Management District Policy Committee

Contact: Commissioner Pete Gerken, Chairman

Summary/Background: The Plan is prepared in accordance with Ohio Revised Code ("ORC") Section 3734, the State of Ohio's Solid Waste Management Plan and the Ohio Environmental Protection Agency's guidelines. The Plan also describes strategies and programs that will be implemented to meet or exceed the minimum state waste reduction goals and objectives. The Lucas County Solid Waste Management District ("District") completed the draft amended Solid Waste Management Plan ("Plan") and submitted it to the Ohio Environmental Protection Agency for review and comment on November 21, 2016 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on January 5, 2017. The District's Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken these comments into consideration and incorporated changes into the amended Plan as appropriate. The District has conducted a 30-day comment period from September 28, 2017 to October 27, 2017 and a public hearing was held on October 31, 2017 to provide the public an opportunity to comment on the Plan

Budget Impact: The Plan provides for a fee schedule that generates the required revenue to cover the costs of implementing the strategies and programs designed to meet or exceed the minimum state waste reduction goals and objectives.

Statutory Authority/ORC: 3734.50

Committee Member Raszka offered the following resolution:

WHEREAS, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Members of the Policy Committee, Lucas County, Ohio, that:

Section 1. These Members hereby acknowledge receipt of the amended draft plan.

Section 2. That, the Policy Committee adopts the amended Plan as the District's Plan with changes made on November 2, 2017 based on public comment and Policy Committee changes.

Section 3. That, the Policy Committee certifies that, to the best of its knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the District's Plan, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen-year period covered by the Plan, are accurate and are in compliance with the requirements of the State of Ohio's District Solid Waste Management Plan Format (Version 4.0).

Section 4. That, the Policy Committee directs that copies of the adopted Plan be delivered to the Board of County Commissioners and to the legislative authority of each municipal corporation and township under the jurisdiction of the District for ratification.

Section 5. That this resolution shall be in full force and effect immediately upon its adoption.

Action Taken:

Committee Member Gerken proxied by Jim Shaw voted yes
Committee Member Franchetti voted yes
Committee Member Rasmusson voted yes
Committee Member Zgodzinski proxied by Dave Welch voted yes
Committee Member Raszka voted yes
Committee Member Moyer absent
Committee Member Hassen absent


Julie Riley, Clerk

PUBLIC NOTICE
LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT

Public Comment Period for Draft Solid Waste Management Plan Update

The Lucas County Solid Waste Management District (District) is establishing a 30-day written comment period (September 28 – October 27, 2017) on the draft Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code. The draft Plan Update includes a budget and fees to finance the Plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, and an analysis of the progress made toward achieving state solid waste reduction goals.

The Plan Update includes six chapters that are prepared specifically for the public's review. They include:

1. Introduction
2. District Profile
3. Waste Generation
4. Waste Management
5. Waste Reduction and Recycling
6. Budget

This draft is an update to a previously approved solid waste plan. This Plan Update details the following: Recycling Infrastructure Inventory, Population Data, Disposal Data, Residential/Commercial/Industrial Recycling Data, Waste Generation Data, a Strategic Evaluation of Old and New Proposed District Programs, Methodology to Select Program Priorities, Achievement of State Recycling Goals, Education and Outreach Programs, Greenhouse Gas Emissions Calculations, Financial Data, Designation of Facilities, and a Siting Strategy.

The draft Plan Update includes a demonstration of access to landfill capacity and determines there are more than 40 years of landfill capacity available at the Hoffman Road Landfill located in the District. Based on other landfills used to manage waste generated in Lucas County during the 2015 reference year for the planning period, landfills had an average life expectancy of more than 50 years.

Under this Plan, the Board of Commissioners is authorized to designate facilities in accordance with Section 343.014 and 343.015 of the Ohio Revised Code. The designated facilities in this Plan Update include 12 Ohio facilities and three Michigan facilities. Additional facilities can be utilized if the Policy Committee approves a waiver for the facility.

The draft Plan Update complies with State Plan Goal #1: Providing infrastructure for recycling to over 90% of the population. The District is committed to maintaining its achievement of Goal 1.

The District primarily funds plan programs and current operations through a generation fee, designation fees, and rates and charges. A generation fee of \$2.20 per ton is charged on all solid waste generated within Lucas County and disposed at Ohio based transfer stations or landfills. Contract disposal designation fees are charged to all solid waste facilities that are designated by the District to receive District solid waste. The fee is \$3.00 per ton for Ohio facilities and \$5.20 per ton for out-of-state facilities. A \$5 rate and charge is annually assessed on each improved parcel in Lucas County. The District may evaluate increasing/decreasing the fees based on economic conditions throughout the planning period but is not at this time considering changes to the main funding mechanisms.

The District is currently considering the construction of a new facility to manage materials generated in Lucas County. If a new facility is constructed, it will be a single stream material recovery facility (MRF) or a hybrid MRF/transfer station. The evaluation is ongoing. The Plan describes the need for the facility and how each facility would impact the District's budget.

The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Tuesday, October 31, 2017, at 2:00 PM in the Commissioner's Hearing Room on the 1st floor of One Government Center, Toledo, Ohio 43604.

The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from September 28 until October 27, 2017. Written comments should be sent to Mr. Christopher Pizza, Lucas County Solid Waste Management District, 1011 Matzinger Road, Toledo, Ohio 43612.

The draft Plan Update is available for review at the following locations:

- District Office: 1011 Matzinger Road, Toledo, Ohio 43612, during normal business hours
- County Commissioners Office: One Government Center, Suite 800, Toledo, Ohio 43604, during normal business hours
- District website at <http://co.lucas.oh.us/2193/solid-waste-management-plan-update-2015>

Please call (419) 213-2235 with any questions about the Plan Update.

Public Hearing Notice

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The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update until October 27, 2017. Written comments should be sent to Mr. Christopher Pizza, Lucas County SWMD, 1011 Matzinger Rd., Toledo, OH 43612.

The draft Plan Update is available for review at the following locations:

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- County Commissioners Office: One Government Center, Suite 800, Toledo, OH 43604, during normal business hours
- District website at <http://co.lucas.oh.us/2193/solid-waste-management-plan-update-2015>

Please call (419) 213-2235 with any questions about the Plan Update.

The Blade, 541 N Superior St, Toledo, OH 43660

Account: 126745	Ad ID: 479839
Name:	Description: NOTICE OF PUBLIC COMMENT PERIOD
Company: LUCAS CTY SPECIAL ASSESSMENT	FOR
Address: 1 GOVERNMENT CTR STE 800	Run Dates: 09/27/17 to 09/27/17
TOLEDO, OH 43604-8815	Class: 10
Telephone: (419) 213-4500	Orig User: JWECKESSER
Placed By: JODY BALOGH	Agate Lines: 151
	Amount Due: \$684.00

For any questions concerning your ad please contact: **Jeff at jweckesser@toledoblade.com** or Call **(419) 724-6485**

NOTICE OF PUBLIC COMMENT PERIOD FOR THE LUCAS COUNTY SOLID WASTE MANAGEMENT DISTRICT PLAN UPDATE

The Lucas County Solid Waste Management District (District) is establishing a 30-day written comment period (September 28 – October 27, 2017) on the draft Solid Waste Management Plan Update (Plan Update) (Ohio Revised Code Section 3734.54). The District has prepared the draft Plan Update as required by Section 3734.54 of the Ohio Revised Code. The draft Plan Update includes a budget and fees to finance the Plan, a solid waste facility inventory, projections and strategies, facilities and programs to be used, and an analysis of the progress made toward achieving state solid waste reduction goals.

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4. Waste Management
5. Waste Reduction and Recycling
6. Budget

This draft is an update to a previously approved solid waste plan. This Plan Update details the following: Recycling Infrastructure Inventory, Population Data, Disposal Data, Residential/Commercial/Industrial Recycling Data, Waste Generation Data, a Strategic Evaluation of Old and New Proposed District Programs, Methodology to Select Program Priorities, Achievement of State Recycling Goals, Education and Outreach Programs, Greenhouse Gas Emissions Calculations, Financial Data, Designation of Facilities, and a Siting Strategy.

The draft Plan Update includes a demonstration of access to landfill capacity and determines there are more than 40 years of landfill capacity available at the Hoffman Road Landfill located in the District. Based on other landfills used to manage waste generated in Lucas County during the 2015 reference year for the planning period, landfills had an average life expectancy of more than 50 years.

Under this plan, the Board of Commissioners is authorized to designate facilities in accordance with Section 343.014 and 343.015 of the Ohio Revised Code. The designated facilities in this Plan Update include 12 Ohio Facilities and three Michigan facilities. Additional facilities can be utilized if the Policy Committee approves a waiver for the facility.

The draft Plan Update complies with State Plan Goal #1: Providing infrastructure for recycling to over 90% of the population. The District is committed to maintaining its achievement of Goal 1.

The District primarily funds plan programs and current operations through a generation fees, designation fees, and rates and charges. A generation fee of \$2.20 per ton is charged on all solid waste generated within Lucas County and disposed at Ohio based transfer stations or landfills. Contract

disposal designation fees are charged to all solid waste facilities that are designated by the District to receive District solid waste. The fee is \$3.00 per ton for Ohio facilities and \$5.20 per ton for out-of-state facilities. A \$5 rate and charge is annually assessed on each improved parcel in Lucas County. The District may evaluate increasing/decreasing the fees based on economic conditions throughout the planning period but is not at this time considering changes to the main funding mechanisms.

The District is currently considering the construction of a new facility to manage materials generated in Lucas County. If a new facility is constructed, it will be a single stream material recovery facility (MRF) or a hybrid MRF/transfer station. The evaluation is ongoing. The Plan describes the need for the facility and how each facility would impact the District's budget.

The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Tuesday, October 31, 2017 at 2:00 PM in the Commissioner's Hearing Room on the 1st floor of One Government Center, Toledo, OH 43604.

The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from September 28 until October 27, 2017. Written comments should be sent to Mr. Christopher Pizza, Lucas County SWMD, 1011 Matzinger Rd., Toledo, OH 43612.

The draft Plan Update is available for review at the following locations:

- District Office: 1011 Matzinger Rd., Toledo, OH 43612, during normal business hours
- County Commissioners Office: One Government Center, Suite 800, Toledo, OH 43604, during normal business hours
- District website at <http://co.lucas.oh.us/2193/solid-waste-management-plan-update-2015>

Please call (419) 213-2235 with any questions about the Plan Update.
#479839



APPENDIX U

RATIFICATION RESULTS





APPENDIX V
DESIGNATION RESOLUTIONS



Date: July 30, 2013

Resolution No. 13-655

Title: Resolution Expressing the Intent to Designate Facilities and Activities for the Receipt of Wastes Generated within and Transported into the Lucas County Solid Waste Management District

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: The Ohio Revised Code, explicitly authorizes the Board of County Commissioners or Board of Directors of the District to designate solid waste facilities and recycling activities pursuant to the Ohio Revised Code and the Board, at any time after the approval of the amendment to the Solid Waste Management plan, may designate solid waste disposal, transfer, or resource recovery facilities or recycling activities.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Skeldon Wozniak offered the following resolution:

Whereas, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby expresses their intent to designate facilities and activities for the receipt of wastes generated within and transported into the Lucas County Solid Waste Management District.

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

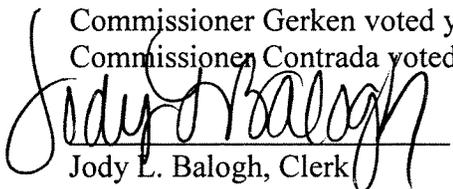
Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Skeldon Wozniak voted yes

Commissioner Gerken voted yes

Commissioner Contrada voted yes


Jody L. Balogh, Clerk

Date: July 30, 2013

Resolution No. 13-655

Title: Resolution Expressing the Intent to Designate Facilities and Activities for the Receipt of Wastes Generated within and Transported into the Lucas County Solid Waste Management District

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: The Ohio Revised Code, explicitly authorizes the Board of County Commissioners or Board of Directors of the District to designate solid waste facilities and recycling activities pursuant to the Ohio Revised Code and the Board, at any time after the approval of the amendment to the Solid Waste Management plan, may designate solid waste disposal, transfer, or resource recovery facilities or recycling activities.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Skeldon Wozniak offered the following resolution:

Whereas, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby expresses their intent to designate facilities and activities for the receipt of wastes generated within and transported into the Lucas County Solid Waste Management District.

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

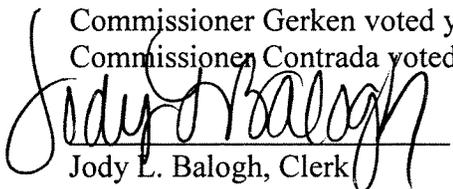
Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Skeldon Wozniak voted yes

Commissioner Gerken voted yes

Commissioner Contrada voted yes


Jody L. Balogh, Clerk

Date: September 10, 2013

Resolution No. 13-780

Title: Authorization to Publish a Notice of a Public Hearing on the Proposed Designation of Facilities for the Solid Waste Management District

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: On July 30, 2013, the Board of County Commissioners, acting as the Board of Directors for the Solid Waste Management District, approved Resolution No. 13-655 expressing the intent to designate solid waste facilities and recycling activities pursuant to the Ohio Revised Code Section 343.014. Said proceedings require publishing a notice of the adoption of the resolution and the date, time and location of a Public Hearing with a description of the types and scope of services subject to the proposed designation. The notice is also required to be sent to potentially interested parties per the Ohio Revised Code. The Sanitary Engineer is recommending that the date of the public hearing occur on October 8, 2013 in conjunction with the Commissioners regularly scheduled meeting.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Gerken offered the following resolution:

Whereas, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

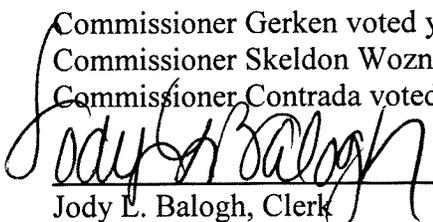
Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby authorizes the publishing of a notice for a public hearing to occur on October 8, 2013 on the proposed designation of facilities for the Solid Waste Management District.

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Gerken voted yes
Commissioner Skeldon Wozniak voted yes
Commissioner Contrada voted yes


Jody L. Balogh, Clerk

Date: October 15, 2013

Resolution No. 13-900

Title: Authorization of Preliminary Designation for Selecting Facilities to receive Wastes Generated within and Transported into the Solid Waste Management District

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: On July 30, 2013, the Board of County Commissioners, acting as the Board of Directors for the Solid Waste Management District, approved Resolution No. 13-655 expressing the intent to designate solid waste facilities and recycling activities pursuant to the Ohio Revised Code Section 343.014. On October 8, 2013, a Public Hearing was held in conjunction with the Commissioners regularly scheduled meeting and this resolution is required in order to proceed with proposed designation.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Contrada offered the following resolution:

Whereas, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

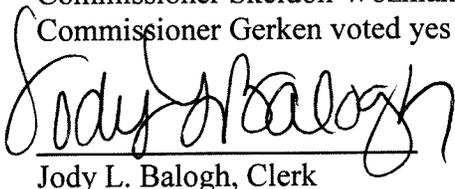
Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby authorizes the preliminary designation for selecting facilities to received wastes generated within and transported into the Solid Waste Management District.

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Contrada voted yes
Commissioner Skeldon Wozniak voted yes
Commissioner Gerken voted yes


Jody L. Balogh, Clerk

Date: October 22, 2013

Resolution No. 13-914

Title: Authorization Declaring Intent to Establish Designation for Selecting Facilities to Receive Wastes Generated within and transported into the Solid Waste Management District and publishing the same with a comment period

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: On July 30, 2013, the Board of County Commissioners, acting as the Board of Directors for the Solid Waste Management District, approved Resolution No. 13-655 expressing the intent to designate solid waste facilities and recycling activities pursuant to the Ohio Revised Code Section 343.014. On October 8, 2013, a Public Hearing was held and on October 15, 2013, Resolution No. 13-900 was approved for preliminary designation. The following is a list of facilities and activities the board proposes to so designate:

Republic Services - Adrian Landfill
1970 N. Ogden Hwy.
Adrian, MI 49221

Republic Services - Vienna
Junction Landfill
6749 Dixie Hwy.
Erie, MI 48133

Republic Services -
Williams County Landfill
12539 County Road G
Bryan, OH 43506

Republic Services - Port Clinton
Landfill, Inc.
530 N. Camp Rd.
Port Clinton, OH 43452

Erie County Sanitary Landfill
554 River Rd., Room #122
Huron, OH 44839

Hancock County Landfill
300 S Main
Findlay, OH 45840

Hoffman Rd. Sanitary Landfill
3962 Hoffman Rd.
Toledo, OH 43611

Carleton Farms
28800 Clark Rd.
New Boston, MI 48164

WMI Evergreen Landfill
2625 E. Broadway St.
Northwood, OH 43619

Wood County Landfill
15320 Tontogany Rd.
Bowling Green, OH 43402

Brent Run Landfill
8335 W. Vienna Rd.
Montrose, MI 48457

ARS Refuse Service, Inc.
200 Taylor Pkwy.
Archbold, OH 43502-9364

WMI Suburban Landfill
3415 Twp Rd 447
Glenford, OH 43739

Henry County Landfill
P O Box 96
Malinta, OH 43535

Steven's Disposal and
Transfer Facility
16929 Ida West Rd.
Petersburg, MI 49270

WMI American Landfill
7916 Chapel St., SE
Waynesburg, OH 44688

County Environmental of
Wyandot
11164 County Rd. #4
Carey, OH 43316

Sunny Farms Landfill
12500 West County Road
18
Fostoria, OH 44830

City of Riverview - The Riverview
Land Preserve
20863 Grange Rd.
Riverview, MI 48193-7600

Woodland Meadows RDF -
Van Buren
5900 Hannon Rd.
Wayne, MI 48184

October 22, 2013

Authorization Declaring Intent to Establish Designation for Selecting Facilities to Receive Wastes Generated within and transported into the Solid Waste Management District and publishing the same with a comment period

Page 2

Activities

A designation agreement shall be signed by solid waste facilities (including landfills and transfer facilities) for the purpose of collecting and remitting the solid waste fees. Failure to sign designation agreement and obtain final approval by the board will result in a facility no longer being able to accept Lucas County waste for disposal or transfer.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Contrada offered the following resolution:

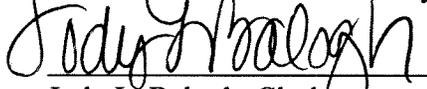
Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby authorizes the declaration of intent to establish designation for selecting facilities to received wastes generated within and transported into the Solid Waste Management District and authorizes publishing the same with a comment period from October 25, 2013 through November 8, 2013.

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Contrada voted yes
Commissioner Skeldon Wozniak voted yes
Commissioner Gerken voted yes


Jody L. Balogh, Clerk

Date: November 12, 2013

Resolution No. 13-984

Title: Authorization of Final Designation of Facilities where wastes generated within or transported into the Solid Waste Management District shall be taken for disposal and transfer

Department/Agency: Solid Waste Management District

Contact: James P. Shaw, P.E., Sanitary Engineer

Summary/Background: On July 30, 2013, the Board of County Commissioners, acting as the Board of Directors for the Solid Waste Management District, approved Resolution No. 13-655 expressing the intent to designate solid waste facilities and activities pursuant to the Ohio Revised Code Section 343.014. On October 8, 2013, a Public Hearing was held and on October 15, 2013 and October 22, 2013 resolutions were approved to establish designation. The public comment period began October 25, 2013 and ended November 8, 2013.

Budget Impact: Comply with Ohio EPA approved Solid Waste Management Plan

Statutory Authority/ORC: 343.014

Commissioner Contrada offered the following resolution:

Whereas, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

Section 1. This Board, acting in their capacity as Board of Directors for the Solid Waste Management District, hereby authorizes the final designation of the facilities as listed in this resolution. A designation agreement shall be signed by solid waste facilities (including landfills and transfer facilities) for the purpose of collecting and remitting the solid waste fees. Failure to sign designation agreement and obtain final approval by the board will result in a facility no longer being able to accept Lucas County waste for disposal or transfer.

Sunny Farms Landfill
12500 West County Road 18
Fostoria, OH 44830

Republic Services - Vienna
Junction Landfill
6749 Dixie Hwy.
Erie, MI 48133

Republic Services -
Williams County Landfill
12539 County Road G
Bryan, OH 43506

Republic Services - Port Clinton
Landfill, Inc.
530 N. Camp Rd.
Port Clinton, OH 43452

Erie County Sanitary Landfill
554 River Rd., Room #122
Huron, OH 44839

Hancock County Landfill
300 S Main
Findlay, OH 45840

Hoffman Rd. Sanitary Landfill
3962 Hoffman Rd.
Toledo, OH 43611

Carleton Farms
28800 Clark Rd.
New Boston, MI 48164

WMI Evergreen Landfill
2625 E. Broadway St.
Northwood, OH 43619

November 12, 2013

Authorization of Final Designation of Facilities where wastes generated within or transported into the Solid Waste Management District shall be taken for disposal and transfer

Page 2

Wood County Landfill
15320 Tontogany Rd.
Bowling Green, OH 43402

Brent Run Landfill
8335 W. Vienna Rd.
Montrose, MI 48457

ARS Refuse Service, Inc.
200 Taylor Pkwy.
Archbold, OH 43502-9364

WMI Suburban Landfill
3415 Twp Rd 447
Glenford, OH 43739

Henry County Landfill
P O Box 96
Malinta, OH 43535

Steven's Disposal and
Transfer Facility
16929 Ida West Rd.
Petersburg, MI 49270

WMI American Landfill
7916 Chapel St., SE
Waynesburg, OH 44688

County Environmental of
Wyandot
11164 County Rd. #4
Carey, OH 43316

City of Riverview - The Riverview
Land Preserve
20863 Grange Rd.
Riverview, MI 48193-7600

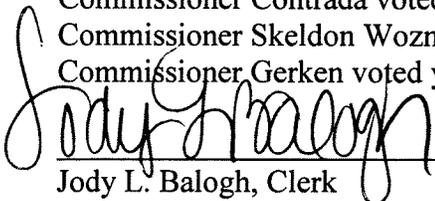
Woodland Meadows RDF -
Van Buren
5900 Hannon Rd.
Wayne, MI 48184

Section 2. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

Section 3. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Contrada voted yes
Commissioner Skeldon Wozniak voted yes
Commissioner Gerken voted yes


Jody L. Balogh, Clerk



APPENDIX W

**MISCELLANEOUS REQUIRED
INFORMATION**



APPENDIX W MISCELLANEOUS REQUIRED INFORMATION

Ohio EPA notified solid waste districts that Format 4.0 did not include several items that are required by Ohio law to be included in solid waste plans. Appendix W has been developed to meet the following miscellaneous requirements:

A. Solid Waste Management and Recycling Inventories Requirement

Ohio Revised Code Section 3734.53 (A)(2) requires “...an inventory of all existing facilities where solid wastes are being disposed of, all resource recovery facilities, and all recycling activities within the district. The inventory shall identify each such facility or activity and, for each disposal shall estimate the remaining disposal capacity available at the facility. The inventory shall be accompanied by a map that shows the location of each such existing facility or activity.”

1. Solid Waste Management and Recycling Inventories Response

Appendix B of the Plan Update includes a comprehensive recycling infrastructure providing data and information on curbside recycling, recycling drop-offs, and composting facilities operating in the District. Appendix D includes an inventory of in-district and out-of-district landfills and transfer facilities managing waste in and outside the district. Appendix M, “Waste Management Capacity Analysis,” provides remaining disposal capacity for landfills.

The following series of maps shows the location of each existing facility or activity in the District during the 2014 reference year.

Figure W-1. 2014 District Access to Drop-Off and Curbside Recycling

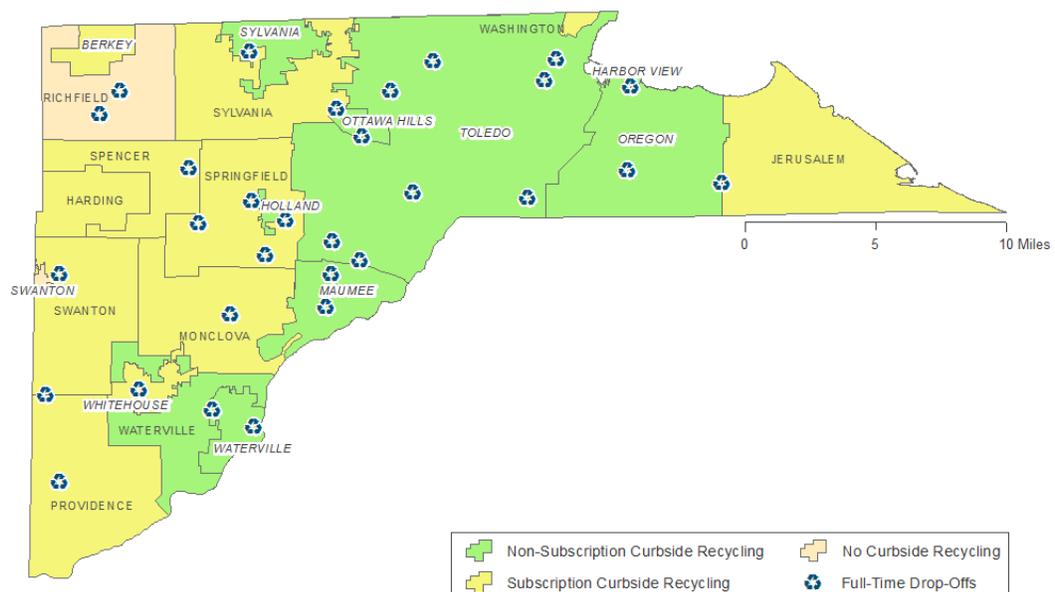


Figure W-2. District Yard Waste Composting Facilities and Activities

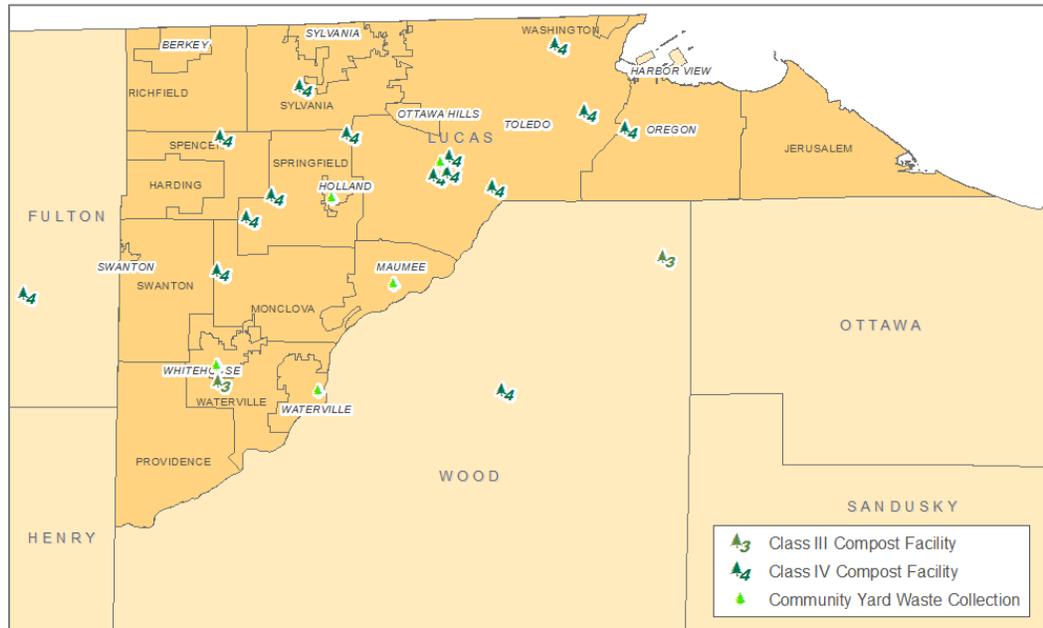
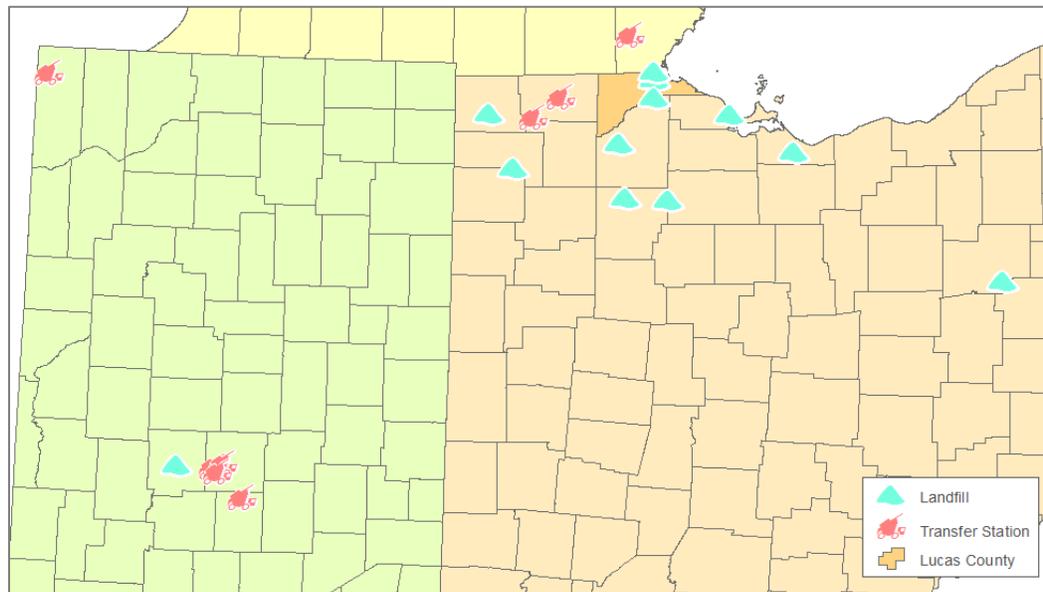


Figure W-3. 2014 Landfills and Transfer Stations Used to Manage District Waste



B. Open Dumping Sites Inventory Requirement

Ohio Revised Code Section 3734.53 (A)(4) requires “...an inventory of open dumping sites for solid wastes, including solid wastes consisting of scrap tires and facilities for the disposal of fly ash and bottom ash, foundry sand, and slag within

the district. The inventory shall identify each such site or facility and shall be accompanied by a map that shows the location of each of them.”

1. **Open Dumping Sites Inventory Response**

An inventory of open dumping sites and illegal scrap tire dumps was obtained from a registered sanitarian from the Toledo-Lucas County Health Department. Table W-1, “Open Dumps and Waste Tire Dumps Located in the District” provides a list of six open dumps and nine illegal scrap tire dumps known to exist in Lucas County in 2014.

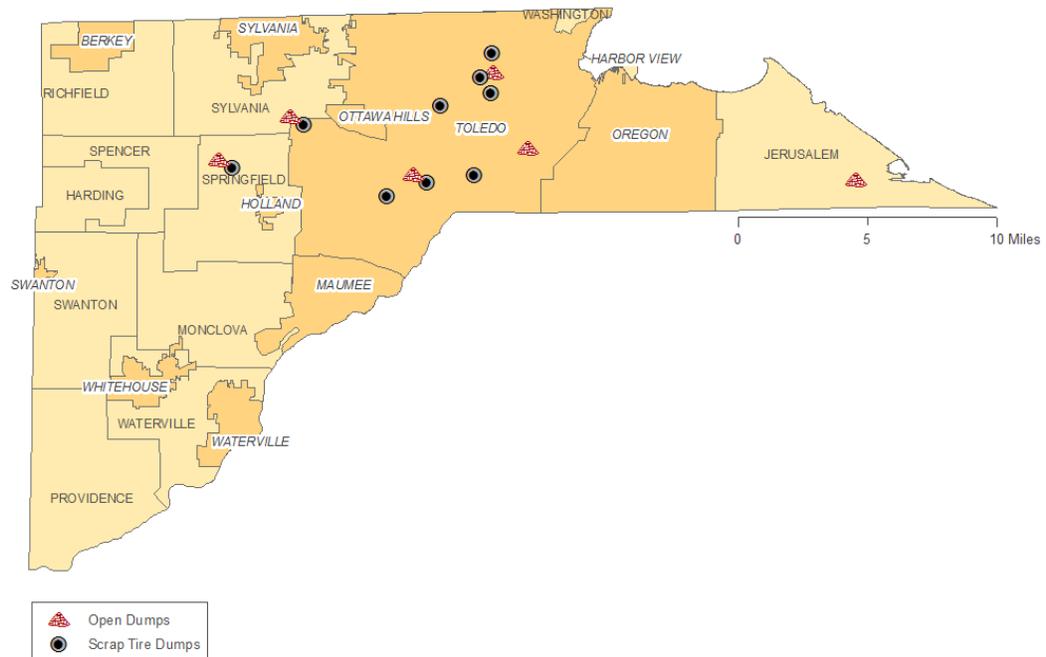
Table W-1. Open Dumps and Waste Tire Dumps Located in the District

Site Location (description)	Owner Contact	Description of Materials Dumped	Parcel Size (acres)	Time Period Site has Existed	Update
<i>Open Dump Sites</i>					
8134 Hill Ave. Holland, OH 43528	Owen Bridgett	Mixed Debris	DNR	2014	N/A
306 Fearing Boulevard Toledo, OH 43609	Hassan and Yasmeen Joumaa	Mixed Debris	DNR	2014	N/A
11524 Greenwood Bono, OH 43445	Clinton Boos	Mixed Debris	DNR	2014	N/A
2411 N. Holland Sylvania Rd. Toledo, OH 43615	Anthony Silvestri	Mixed Debris	DNR	2014	N/A
Paschal Bihn 4102 Creekside Ave. Toledo, OH 43612	N/A	Mixed Debris	DNR	2014	N/A
Unicast 1414 Front St. Toledo, OH 43605	City of Toledo	Residual Waste	DNR	2014	N/A

Site Location (description)	Owner Contact	Description of Materials Dumped	Parcel Size (acres)	Time Period Site has Existed	Update
Waste Tire Dump Sites					
8134 Hill Ave. Holland, OH 43528	Owen Bridgett	Illegal scrap tire storage	DNR	2014	N/A
1549 Jermain Dr. Toledo, OH 43606	Jeffery Kelson	Illegal scrap tire storage	DNR	2014	N/A
306 Fearing Boulevard Toledo, OH 43609	Hassan and Yasmeen Joumaa	Illegal scrap tire storage	DNR	2014	N/A
3234 Airport Hwy. Toledo, OH 43609	Michael Safadi	Illegal scrap tire storage	DNR	2014	N/A
Tires by Red 7 City Park Toledo, OH 43609	Rachael Dennings	Illegal scrap tire storage	DNR	2014	N/A
Homer's Auto 4848 N. Detroit Ave. Toledo, OH 43612	Jimmy Hamblin	Illegal scrap tire storage	DNR	2014	N/A
2411 N. Holland Sylvania Rd. Toledo, OH 43615	Anthony Silvestri	Illegal scrap tire storage	DNR	2014	N/A
KNK Auto Recycling 3391 Lagrange St. Toledo, OH 43608	David Jenkins	Illegal scrap tire storage	DNR	2014	N/A
4008 N Detroit Ave. Toledo, OH 43612	Alexander Hernandez	Illegal scrap tire storage	DNR	2014	N/A

The following maps shows the location of each existing open dump in the District during the 2014 reference year.

Figure W-4. 2014 Open Dumps



C. Out-of-District Waste to be Disposed in District and Effect of Newly Regulated Waste Streams Requirement

Ohio Revised Code Section 3734.53 (A)(6) requires “...for each year of the forecast period, projections of the amounts and composition of solid wastes that will be generated within the district, the amounts of solid wastes originating outside the district that will be brought into the district for disposal or resource recovery, the nature of industrial activities within the district, and the effect of newly regulated waste streams, solid waste minimization activities and solid waste recycling and reuse activities on solid waste generation rates. For each year of the forecast period, projections of waste quantities shall be compiled as an aggregate quantity of wastes.”

1. Out-of-District Waste to be Disposed in District

Appendix M evaluates landfill capacity and has determined that the District has ample capacity for landfilling based on current conditions throughout the planning period. Table K-1 includes the amount of solid waste generated, recycled and the amount of solid waste disposed.

During the five-year period from 2011 to 2015, no waste generated outside Lucas County was disposed in the District. Waste generated outside Lucas

County is not anticipated to be disposed in the District during the planning period.

2. Newly Regulated Waste Streams

The District is not aware of any newly regulated waste streams that are generated or disposed in the District.

D. Expense Analysis Requirement

Ohio Revised Code Section 3734.53 (A)(10) requires "...an analysis of expenses for which the district is liable under section 3734.35 of the Revised Code."

1. Expense Analysis Response

The District does not provide funding under 3734.35 to any political subdivision.

E. Facility Identification Requirement and Facility Closure, Expansion, Establishment Schedule Requirement

Ohio Revised Code Section 3734.53 (A)(13) requires "...a schedule for implementation of the plan that, when applicable contains all of the following:

- (a) An identification of the solid waste disposal, transfer, and resource recovery facilities and recycling activities contained in the plan where solid wastes generated within or transported into the district will be taken for disposal, transfer, resource recovery or recycling.
- (b) A schedule for closure of existing solid waste facilities, expansion of existing facilities and establishment of new facilities. The schedule for expansion of existing facilities or establishment of new facilities shall include, without limitation, the approximate dates for filing applications for appropriate permits to install or modify those facilities under section 3734.05 of the Revised Code...."

1. Facility Identification Response

Appendix P presents the table regarding designation and flow control for disposal of solid waste and transfer of solid waste.

2. Facility Closure, Expansion, Establishment Schedule Response

As of December 31, 2015, the Hoffman Road Sanitary Landfill had 45.6 years of capacity remaining. There are no closures or expansions planned within the upcoming planning period.

F. Source Reduction Program Requirement

Ohio Revised Code Section 3734.53 (A)(14) requires "...a program for providing informational or technical assistance regarding source reduction to solid waste generators or particular categories of solid waste generators, within the District. The plan shall set forth the types of assistance to be provided by the district and the specific categories of generators that are to be served. The district has the sole discretion to determine the types of assistance that are to be provided under the program and the categories of generators to be serviced by it."

1. Source Reduction Program Response

Appendix L includes plans for outreach and marketing and covering the topic of source reduction for solid waste generators for different categories of generators. Plans for the industrial sector also include technical assistance for source and waste reduction.



APPENDIX X

SETTLEMENT AGREEMENT



Date: August 14, 2007

Resolution No. 07-1086

Title: Authorizing the Settlement of Litigation Involving the Lucas County Commissioners

Department/Agency: Lucas County Prosecutor

Contact: John Borell/Jim Walter

Summary/Background: The Board, pursuant to *R.C.* 343.01 and 343.022, has entered into Solid Waste Disposal and Guaranty Agreements with solid waste disposal facilities located in Ohio And Michigan to designate those facilities to receive solid waste generated within the Lucas County Solid Waste Management District, and requiring the designated facilities to remit to the District a fee on each ton of solid waste generated within the District that is disposed at the designated facilities. OmniSource shreds automobiles and produces material at its Toledo, Ohio scrap metal processing facility referred to as Auto Shredder Residue (ASR).

OmniSource disputes that ASR is subject to this fee. OmniSource initiated litigation, in the United States District Court, challenging the Board's authority to collect this fee on ASR generated in Lucas County. OmniSource dismissed that litigation, but the claims asserted by OmniSource have not been resolved and a complaint could be refilled.

This Board and OmniSource wish to resolve this dispute. The proposed terms of this settlement are described in the attached Settlement Agreement.

Budget Impact: Not Applicable

Statutory Authority/ORC: 305.26

Commissioner Gerken offered the following resolution:

WHEREAS, in consideration of the above, NOW, THEREFORE BE IT RESOLVED by the Board of County Commissioners, Lucas County, Ohio, that:

Section 1. This matter shall be settled and resolved under the terms and conditions specified in the attached Settlement Agreement.

Section 2. Julia R. Bates, Lucas County Prosecuting Attorney, or an assistant Lucas County Prosecuting Attorney designated by her, is hereby authorized to execute all appropriate documents necessary to finalize this settlement, including, but not limited to a dismissal entry, judgment entry and release.

Section 3. This Board finds and determines that all formal actions of this Board concerning and relating to the adoption of this resolution were taken in an open meeting of this Board and that all deliberations of this Board that resulted in those formal actions were in a meeting open to the public in compliance with the law.

August 14, 2007

Authorizing the Settlement of Litigation Involving the Lucas County Commissioners

Page 2

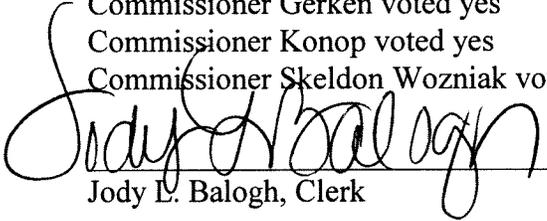
Section 4. This resolution shall be in full force and effect from and immediately upon its adoption.

Action Taken:

Commissioner Gerken voted yes

Commissioner Konop voted yes

Commissioner Skeldon Wozniak voted yes



Jody L. Balogh, Clerk

Settlement Agreement

This Settlement Agreement is by and between the Board of County Commissioners of Lucas County, Ohio (the "Board") with its offices at One Government Center, Suite 800, Toledo, Ohio 43604 and OmniSource Corporation ("OmniSource") with offices located at 5130 N. Detroit Ave., Toledo, Ohio 43612.

W I T N E S S E T H

WHEREAS, pursuant to Sections 343.01(I)(2) and 343.022 of the Ohio Revised Code the Board has entered into Solid Waste Disposal and Guaranty Agreements with solid waste disposal facilities located in Ohio and Michigan to designate those facilities to receive solid waste generated within the Lucas County Solid Waste Management District (the "District"), and requiring the designated facilities to remit to the District a fee on each ton of solid waste generated within the District that is disposed at the designated facilities (the "Fee"), which is currently set at \$3.00 per ton; and

WHEREAS, OmniSource shreds automobiles and produces material at its Toledo, Ohio scrap metal processing facility referred to as Auto Shredder Residue ("ASR") consisting of foam, textiles, plastics, and other materials that have been separated from reusable metals, which the Board asserts, and OmniSource disputes, is subject to the Fee; and

WHEREAS, the dispute between the Board and OmniSource was the subject of litigation, and the parties' respective claims in the litigation have not been adjudicated; and

WHEREAS, on the terms and conditions contained herein, OmniSource and the Board desire to compromise and fully and completely satisfy any and all claims of either party arising from the dispute regarding whether ASR is subject to the Fee.

NOW, THEREFORE, in consideration of the mutual promises, covenants and agreements contained herein, the parties hereby agree that the foregoing recitals are incorporated herein and as follows:

1. On the terms and conditions contained herein, OmniSource, upon the Effective Date (as hereinafter defined), shall pay \$100,000.00 to the Board. Thereafter, OmniSource, without interest or penalty, shall pay \$400,000.00 to the Board in four (4) equal, annual installments of \$100,000.00 each on the anniversary of the Effective Date in 2008, 2009, 2010 and 2011. Except for the obligation of OmniSource to make the foregoing installment payments, upon receipt of the initial \$100,000.00 payment by the Board, the Board shall release OmniSource and the designated solid waste disposal facilities of and from any and all claims the Board may have against OmniSource or the designated solid waste disposal facilities regarding payment of the Fee on the ASR. This release includes any and all claims of the Board against either OmniSource or the designated solid waste disposal facilities pursuant to the Board's Solid Waste Disposal and Guaranty Agreement to impose the fee on ASR generated by OmniSource at its Toledo facility from and after May 1, 2003.

2. Upon the Effective Date, OmniSource hereby releases the Board from any and all claims arising from the dispute regarding whether ASR is subject to the Fee.
3. Within four (4) years of the Effective Date, in addition to the payments described in paragraph 1 hereof, OmniSource shall contribute and donate \$75,000.00 to community projects recommended by the Board and reasonably acceptable to OmniSource. The Board shall adopt a resolution of its recommendations to OmniSource regarding funding of a community project as provided in this Settlement Agreement. In the event that all or any portion of the \$75,000.00 has not been disbursed by OmniSource by the fourth (4th) anniversary of the Effective Date, OmniSource shall pay all of the remaining funding for such community projects to Lucas County Improvement Corporation (the "LCIC") for expenditure by the Board of Directors of LCIC, if the Board of LCIC determines it is in furtherance of the goals and objections of LCIC. The payment to LCIC by OmniSource of any remaining funds for community projects shall satisfy the obligation of OmniSource pursuant to this paragraph and Settlement Agreement.
4. Simultaneously with the execution of this Settlement Agreement, OmniSource shall execute and deliver the Option Agreement attached hereto and made a part hereof as **Exhibit A**.
5. The Board hereby grants a waiver to OmniSource pursuant to Section 343.01(I)(2) of the Ohio Revised Code for all of the ASR produced by OmniSource within Lucas County. In granting this waiver, it is the Board's intent that OmniSource's ASR shall not be subject to the Fee paid to the District pursuant to the Solid Waste Disposal and Guaranty Agreements between the Board and designated solid waste disposal facilities. This waiver applies to all of the ASR produced by OmniSource within Lucas County on and after April 1, 2006, and, except as otherwise provided herein, shall continue in effect as long as OmniSource produces ASR within Lucas County. The Board finds that granting this waiver is not inconsistent with the District's projections concerning solid waste volumes, composition, and origin; solid waste recycling, reuse and minimization; or the need for solid waste management facilities or additional capacity. The Board also finds that granting this waiver will not adversely affect the implementation and financing of the District's solid waste management plan according to the plan's implementation schedule. The Board hereby agrees that as long as OmniSource continues to produce ASR in Lucas County, the Board shall not: (a) collect or attempt to collect the Fee on the ASR; (b) ratify, agree to or approve, any contract with the Board, an amendment to the District's solid waste management plan, a resolution adopted by the District's Policy Committee, or other action by the Board or the District's Policy Committee, that establishes or reinstates, directly or indirectly, the Fee, generation fee, tax, charge or similar exaction imposed on ASR produced by OmniSource in Lucas County.
6. This Settlement Agreement may be terminated by the Board after twenty years from the Effective Date provided the board pays to OmniSource a termination fee calculated as follows: the total weight of ASR produced by OmniSource within Lucas County during the five years prior to the termination of this Settlement Agreement multiplied by the average Fee during the same five years. The Board further agrees that, in the event of termination by the Board, the Fee applicable to ASR at the time of such termination shall

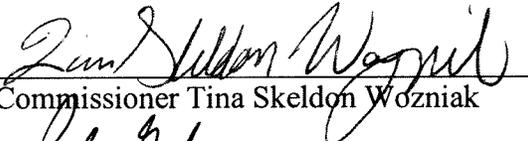
not exceed the lowest fee levied on the generation or disposal of ASR by other counties or host communities located in Ohio and Michigan. This obligation shall survive the termination of the Settlement Agreement.

7. OmniSource and the Board further agree that this Settlement Agreement is being executed solely in order to avoid additional costs and expenses associated with the dispute concerning the Fee and its applicability to the ASR generated by OmniSource. Nothing contained herein shall constitute an admission by either party of the validity of any claims which are, were or could have been asserted by either party regarding the Fee and its applicability to the ASR.
8. The Effective Date of this Settlement Agreement shall be the date of last execution hereof.
9. This Settlement Agreement shall be construed in accordance with and under the laws of the State of Ohio and contains all of the promises and covenants of the parties and may be amended or revised only in writing and signed by the parties hereto.
10. Any notice, including any notice of breach by either party, shall be mailed to the notified party as follows:

As to the Board of County Commissioners:	Board of County Commissioners One Government Center, Suite 800 Toledo, Ohio 43604 Attention: Board President
As to OmniSource Corporation:	OmniSource Corporation The Northern Ohio Group 2453 Hill Avenue Toledo, Ohio 43607 Attention: Thomas E. Tuschman, Senior Vice-President
11. This Settlement Agreement and any exhibits attached hereto contain the entire agreement of the Board and OmniSource and there are no agreements, representations, or warranties, oral or written which are not set forth herein. This Settlement Agreement may not be amended or revised, except by a writing signed by the parties.

IN WITNESS WHEREOF, on the dates set forth below, the parties have executed this Settlement Agreement in Toledo, Ohio.

**BOARD OF COMMISSIONERS
LUCAS COUNTY, OHIO**

By: 
Commissioner Tina Skeldon Wozniak

9-26-07
Date

By: 
Commissioner Pete Gerkin

9-25-07
Date

By: 
Commissioners Ben Konop

9-26-07
Date

OMNISOURCE CORPORATION

By: _____
Thomas E. Tuschman, Senior Vice President

August 16, 2007 —
Date

APPROVED AS TO FORM:
JULIA R. BATES
PROSECUTING ATTORNEY

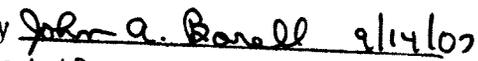
by  9/14/07
Assistant Prosecuting Attorney Date

EXHIBIT A

OPTION AGREEMENT

PARTIES:

This Option Agreement (this "*Agreement*") is made and entered into as of the latest date set forth below (the "*Effective Date*") by and between **OMNISOURCE CORPORATION** ("*Optionor*") whose address is 2453 Hill Avenue, Toledo, Ohio 43607 and **LUCAS COUNTY IMPROVEMENT CORPORATION** ("*Optionee*") whose address is 300 Martin Luther King Jr. Drive, Suite 200, Toledo, Ohio 43604.

RECITALS:

- A. Optionor is the successor in interest to KTI Properties, an Ohio general partnership.
- B. Optionor is the owner of the real estate legally described on Exhibit A attached hereto and made a part hereof consisting of approximately 32.28 acres, more or less (the "*Property*").
- C. Optionor desires to grant to Optionee an exclusive option to purchase the Property, all in accordance with and subject to the terms and conditions hereinafter set forth.

CONSIDERATION AND AGREEMENT:

In consideration of good and valuable consideration, the receipt and sufficiency of which is acknowledged, Optionor and Optionee agree as follows:

1. Grant of Option. Optionor hereby grants to Optionee an exclusive option to purchase the Property (the "*Option*"), together with all improvements, tenements, hereditaments, privileges, rights and appurtenances thereto belonging or in any way appertaining thereto, and all of Optionor's right, title and interest, if any, in and to any land lying within any street, alley or roadway adjoining the Property.

2. Term. The Option shall remain in full force and effect for a period of four (4) years after the Effective Date (the "*Term*"). During the last twelve (12) months of the Term, Optionor shall have the right to attempt to market and sell the Property to others. In the event that a bona-fide third party offer is received that Optionor intends to accept (an "*Offer*"), Optionor shall give Optionee written notice of such intent along with a copy of the Offer. Optionee shall have a period of sixty (60) days after the date Optionee receives a copy of the Offer from Optionor in which to elect to purchase the Property in accordance with the terms and conditions of the Offer. If Optionee fails to exercise its right of first refusal by delivering written notice to Optionor prior to expiration of such sixty (60) day period, Optionor shall be free to sell the Property to the party identified in the Offer on the terms and conditions contained in the Offer and the Option shall automatically terminate.

3. **Purchase Price.** If the Option is exercised, the purchase price of the Property shall be the greater of the (a) appraised fair market value of the Property as of the date that the Option is exercised (as determined by an MAI certified commercial real estate appraiser selected by Optionor and reasonably acceptable to Optionee) or (b) highest per acre price either paid by Optionee, the Board of County Commissioners of Lucas County, Ohio (the "**Board**") or any other person or entity acting for or on behalf of Optionee or the Board (collectively, a "**Relevant Party**") or for which Relevant Party secures an option or purchase contract within the JRS Zone (as hereinafter defined) times the number of acres of the Property (the "**Purchase Price**"). The Purchase Price shall be paid to Optionor at closing by certified check or wire transfer. For purposes of this Agreement, the term "JRS Zone" shall mean any real property bounded by Stickney Avenue, Matzinger Road, Alexis Road and Detroit Avenue.

4. **Memorandum of Option Agreement.** Either party may record a short form Memorandum of Option Agreement against the Property with the County Recorder's Office for the purpose of evidencing the existence of this Option and the interest of Optionee in the Property. Upon request of one party, the other party shall promptly execute such Memorandum of Option Agreement.

5. **Exercise of Option and Closing.** Written notice of exercise of the Option shall be given, if at all, on or before the expiration of the Term. If the Option is exercised, Optionee shall close the purchase of the Property no later than thirty (30) days following Optionee's written notice of exercise of the Option delivered to Optionor (the "**Closing Date**"). The closing shall take place at a location mutually agreeable to Optionor and Optionee; provided, however, neither Optionor nor Optionee shall be required to be physically present for closing.

At closing, the Optionor shall execute and deliver a transferable, recordable Limited Warranty Deed (the "**Deed**") conveying marketable fee simple title to the Property to Optionee subject only to legal highways; governmental ordinances; zoning ordinances; easements, reservations, agreements, conditions and restrictions of record; and taxes and assessments due and payable after closing.

6. **Closing Adjustments.** The following adjustments shall be made at closing:

A. All real estate taxes, assessments certified to the tax duplicate, penalties, charges and interest for the Property, due and payable prior to closing, shall be paid in full by Optionor at closing. The parties shall prorate as of the close of business on the Closing Date (i) the real estate taxes and assessments, both general and special using the rates and valuations shown on the latest available tax duplicate, in accordance with the due and payable method of tax proration customarily used in Lucas County.

B. Optionor shall pay (i) any conveyance fee, (ii) agricultural recoupment charges, if any and (iii) the cost of a Title Guaranty in the amount of the Purchase Price.

C. Optionee shall pay the cost (i) to record the Deed, (ii) of any Title Insurance in excess of a Title Guaranty and (iii) the appraisal referred to in Paragraph 3 above.

D. Each party shall pay one-half (1/2) of closing charges of the title company completing the settlement and their own attorneys' fees.

8. **Possession.** Possession of the Property shall be delivered to Optionee at closing, free of any tenant's rights.

9. **Default; Non-Exercise of Option.**

A. Should Optionor default in the performance of any of its obligations set forth in this Agreement, Optionee shall be entitled to exercise all remedies as may be available to it either by law or in equity. The parties acknowledge that should Optionor default in the performance of any of its obligations under this Agreement, there will be no adequate remedy at law available to Optionee and if Optionee so elects, Optionee shall be entitled to specific performance of all of Optionor's obligations under this Agreement.

B. Should Optionee default in the performance of any of its obligations set forth in this Agreement, Optionor shall be entitled to exercise all remedies as may be available to it either by law or in equity.

10. **Miscellaneous.**

A. **Governing Law.** This Agreement shall be governed by the laws of the State of Ohio.

B. **Binding Effect.** This Agreement shall bind the parties hereto, their respective heirs, administrators, executors, successors and assigns. Time is of the essence.

C. **Right of Entry.** During the term of the Option, Optionee and its agents shall have unrestricted access, during regular business hours and upon reasonable notice to Optionor, to inspect or cause to be inspected any and all aspects of the Property, including, without limitation, soil sampling and analysis for buildability and toxic substances; provided, however, that Optionee shall be responsible for any and all damages to persons or the Property caused by Optionee or its agents in the conduct of any such inspections.

D. **Notices.** Notices shall be deemed given hereunder upon the day of personal delivery to the address set forth above, or on the second business day after being sent by registered or certified mail, postage prepaid to such address, or on the first business day after being posted for delivery with a nationally recognized overnight delivery service (i.e. Federal Express). Notices shall be addressed as provided above.

E. **Entire Agreement.** This Agreement contains the entire agreement between the parties and there are no agreements, representations or warranties, oral or written,

which are not set forth herein. This Agreement may not be amended or modified except by a writing signed by the parties.

F. Tax Deferred Exchange. Each party hereby reserves the right to complete the transaction contemplated hereby as a Section 1031 tax deferred exchange. The parties agree to cooperate in effecting the exchange transaction in accordance with Section 1031 of the Internal Revenue Code, including execution of any documents that may be reasonably necessary to effect the exchange; provided that (i) the party requesting the exchange shall bear all additional costs incurred in connection with the exchange, and (ii) the non-requesting party shall not be obligated to delay the closing or to execute any note, contract or other document providing for any personal liability. If both parties elect to complete the transaction as a Section 1031 exchange, each will bear its own costs relative thereto. Either party's rights under this Agreement may be assigned to a Qualified Intermediary for purpose of completing such an exchange. Each party agrees to cooperate with the other and the Qualified Intermediary in a manner necessary to complete the exchange.

G. No Representations or Warranties. No representations or warranties have been made by Optionor with respect to the condition of the Property or the boundary lines or acreage of the Property. Optionee shall make all investigations as it deems necessary or appropriate and will be relying solely upon its inspection and investigation of the Property for all purposes whatsoever, including, but not limited to, the determination of the conditions of the improvements, soils, subsurface, drainage, surface and groundwater quality, and all other physical characteristics; availability and adequacy of utilities; compliance with governmental laws and regulations; access; encroachments; acreage and other survey matters; and the character and suitability of the Property. Optionee acknowledges and agrees that if the Option is exercised that the Property will be purchased and will be conveyed "AS IS" and "WHERE IS" with all faults and defects, whether patent or latent, as of the date of closing. The provisions of this Paragraph 10.G. shall survive the closing and delivery of the Deed.

Optionor and Optionee have executed this Option Agreement as of the day and year set forth below.

OPTIONOR:

OMNISOURCE CORPORATION

By: Thomas E. Tuschman

Its: Senior Vice President

Date: August 16, 2007

OPTIONEE:

LUCAS COUNTY IMPROVEMENT CORPORATION

By: _____

Its: _____

Date: _____

STATE OF OHIO)
)ss:
COUNTY OF LUCAS)

The foregoing instrument was acknowledged before me this 16 day of August, 2007, by Thomas E. Tuschman as Senior Vice President of OmniSource Corporation, on behalf of the corporation.

(SEAL)

DOROTHY C. HAMILTON, Notary Public
State of Ohio
My Commission Expires Sept. 22, 2010

Dorothy C. Hamilton
Notary Public
My Commission Expires: 9-22-10

STATE OF OHIO)
)ss:
COUNTY OF LUCAS)

The foregoing instrument was acknowledged before me this _____ day of _____, 2007, by _____, as _____ of Lucas County Improvement Corporation, on behalf of the corporation.

(SEAL)

Notary Public
My Commission Expires: _____