STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT



2019–2028 RATIFIED SOLID WASTE MANAGEMENT PLAN UPDATE

November 2, 2018

Prepared by:



Table of Contents

SOLID WASTE MANAGEMENT DISTRICT INFORMATION

Section i	i-1
CHAPTERS	
Chapter 1 – Introduction	1-1
Chapter 2 – District Profile	2-1
Chapter 3 – Waste Generation	3-1
Chapter 4 – Waste Management	4-1
Chapter 5 – Waste Reduction and Recycling	5-1
Chapter 6 – Budget	6-1
APPENDICES	
Appendix A – Reference Year, Planning Period, Goal Statement, Material Change in Circumstances, Explanations of Differences in Data	A-1
Appendix B – Recycling Infrastructure Inventory	B-1
Appendix C – Population Data	C-1
Appendix D – Disposal Data	D-1
Appendix E – Residential/Commercial Reduction and Recycling Data	E-1
Appendix F – Industrial Sector Reference Year Recycling	F-1
Appendix G – Waste Generation	G-1
Appendix H – Strategic Evaluation	H-1
Appendix I – Conclusions, Priorities, and Program Descriptions	I-1
Appendix J – Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1	J-1
Appendix K – Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2	K-1

Appendix L – Minimum Required Education Programs: Outreach and Marketing Plan and General Education Requirements	L-1
Appendix M – Waste Management Capacity Analysis	M-1
Appendix N – Evaluating Greenhouse Gas Emissions	N-1
Appendix O – Financial Data	O-1
Appendix P – Designation	P-1
Appendix Q – District Rules	Q-1
Appendix R – Blank Survey Forms and Related Information	R-1
Appendix S – Siting Strategy	S-1
Appendix T – Miscellaneous Plan Documents	T-1
Appendix U – Ratification Results	U-1
Appendix V – Miscellaneous Documents Required by Ohio Revised Code	V-1

Section i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	Stark-Tuscarawas-Wayne Joint Solid Waste Management District	
Member Counties	Stark, Tuscarawas, and Wayne	
Coordinator's Name (main contact)	David Held	
Job Title	Executive Director	
Street Address	9918 Wilkshire Blvd. N.E.	
City, State, Zip Code	Bolivar, OH 44612	
Phone	(800) 678-9839	
Fax	330-874-2449	
E-mail address	david@timetorecycle.org	
Webpage	www.timetorecycle.org	

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

Member Name	Representing		
Stark County			
Janet Weir Creighton	County Commissioners		
William Bartos	Municipal Corporations (City of Canton)		
Doug Baum	Townships (Pike Township)		
Kirk Norris	Health Departments		
Elaine Campbell	Industrial Generators (Mercy Development Foundation)		
Carl Rose	Citizens		
Mark Cozy	Public		

Member Name	Representing		
Tuscarawas County			
Joe Sciarretti	County Commissioners		
Joel Day	Municipal Corporations (City of New Philadelphia)		
Matt Ritterbeck	Townships (Lawrence Township)		
Michael Chek	Health Departments		
Matt Bender	Industrial Generators (Speedie Recycling)		
Lee Finley	Citizens		
David Bennett	Public		

Member Name	Representing	
Wayne County		
Ron Armstutz	County Commissioners	
Mark Nussbaum	Municipal Corporations (City of Wooster)	
Bill Cletzer	Townships (Congress Township)	
Nicholas Cascarelli	Health Departments	
Becky Foster	Industrial Generators (Buehler's Fresh Foods)	
Robert Holland	Citizens	
Brian Gentry	Public	

Table i-3. Chairperson of the Policy Committee

Name	Janet Weir Creighton
Street Address	110 Central Plaza South
City, State, Zip Code	Canton, OH 44702
Phone	330-451-7376
Fax	330-451-7376
E-mail address	jwcreighton@starkcountyohio.gov

Table i-4. Board of Directors

Commissioner Name	County	Chairperson/President
Bill Smith		
Janet Weir Creighton	Stark	
Richard Regula		
Chris Abbuhl		
Joe Sciarretti	Tuscarawas	
Kerry Metzger		
Sue Smail		
Ann Obrecht	Wayne	✓
Ron Amstutz		

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 November 28, 1988, the county commissioners of all three counties formed the Stark-Tuscarawas-Wayne Joint Solid Waste Management District by resolution. The Board of Directors is comprised of the County Commissioners representing Stark, Tuscarawas and Wayne Counties. The District was created for the purpose of providing for, or causing to be provided for, the safe and sanitary management of solid wastes within all the incorporated and unincorporated territory of the counties.

The District's mission is to assure safe and sanitary disposal of solid waste for district residents and to reduce reusable or renewable wastes from entering landfills within the District. This will be accomplished through the development of residential, commercial, institutional and industrial programs that educate, promote, provide, implement and improve recycling opportunities that will preserve landfill space now and into the future.

The District's administration consists of one centralized office, which is located at 9918 Wilkshire Blvd, NE, Bolivar, Ohio 44612.

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 Stark-Tuscarawas-Wayne Joint County Solid Waste Management District (District) is a multi-county district comprised of Stark, Tuscarawas, and Wayne County. The following table summarizes the population of the District by county with adjustments¹:

Community	Stark		
Before Adjustment	375,165		
Additions			
Village of Magnolia	259		
Village of Minerva	1,734		
City of Alliance			
Subtractions			
None	0		
After Adjustment	377,197		

Community	Tuscarawas		
Before Adjustment 92,9			
Additions			
Village of Baltic 14			
Subtractions			
None	0		
After Adjustment 93,06			

Community	Wayne		
Before Adjustment	116,063		
Additions			
Village of Creston	92		
City of Rittman 11			
Subtractions			
City of Norton	4		
After Adjustment	116,265		
Total District Adjusted Population	586,524		

2. County Overview

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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.

The District is one of the fifteen multi-county Districts in Ohio. The three-county area of the District consists of the following notable communities:

- The City of Canton in Stark County is the largest city in the District.
 In 2015, it had a population of 71,885 people which comprised approximately 12 percent of the District's population.
- The City of Massillon in Stark County had a population of 32,252 in 2015.
- The City of Wooster in Wayne County had a population of 26,749 in 2015.
- The City of New Philadelphia in Tuscarawas County had a population of 17,484 in 2015.
- There are 43 villages ranging in population from 181 people to 3,794 people.
- There are 55 townships ranging in population from 435 people to 40,490 people.

B. Population

1. Reference Year Population

After adjustments, the District had a total of adjusted population of 586,524 people in 2015. Table 2-1 presents the adjusted population, the largest city, and the population of the largest city in each county of the SWMD during the 2015 reference year:

Table 2-1. Population of the District in 2015

Cou	County		Largest Political Jurisdiction	
Name	Population	Community Name	Population	Percent of Total County Population
Stark	377,197	City of Canton	71,885	19%
Tuscarawas	93,062	City of New Philadelphia	17,484	19%
Wayne	116,265	Wooster	26,749	23%
Total	586,524			

Source(s) of information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township." May 2016.

2. Population Distribution

Table 2-2 below presents the distribution of the District's population in cities, villages, and unincorporated areas.

Table 2-2. Population Distribution

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Townships
Stark	42%	5%	53%
Tuscarawas	39%	20%	41%
Wayne	36%	13%	51%

Source(s) of information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township." May 2016.

According to the Ohio Development Services Agency's profile for the three counties, they are comprised of slightly more rural than urban 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 District's population are concentrated around the Canton 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	Stark	Tuscarawas	Wayne
	County	-0.67%	1.80%	2.58%
2000 to 2010	Largest City	-10.67%	1.31%	5.02%
	Unincorporated areas	1.74%	1.91%	1.86%
Planning Period	County	-2.50%	-0.61%	-0.81%
(2015 Reference	Largest City	-2.30%	-0.57%	-1.75%
year to 2028)	Unincorporated areas	-2.55%	-0.62%	-0.53%

Sources of information: Ohio Development Services Agency, "Population Projections: County Totals" (2010-2040). Prepared March 2013. Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township." May 2016.

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 District'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 the City of Canton, the largest city in Stark County, decreased 10.67% from 2000 to 2010. During the planning period, District's overall population is projected to decrease around 1.86%. The population in unincorporated areas of the three counties are projected to decrease around one percent 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 Canton and surrounding areas. Data trends indicate that, while the population in the Canton area is decreasing slowly, residents are moving from the City of Canton to surrounding neighborhoods, thus dispersing the population over a greater geographical area. As populations increase in cities, villages, and townships surrounding Canton, there may be more opportunities to implement or expand residential recycling programs.

C. Profile of Waste Management Infrastructure

Solid waste generated within the tri-county area 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 2015, trash was directly hauled to 18 landfills:

- Four in-district landfills;
- Twelve out-of-district, but in-state landfills; and
- Two out-of-state landfills.

The American Landfill, Inc. and Countywide Recycling & Disposal Facility in Stark County and the Kimble Sanitary Landfill in Tuscarawas County are the primarily used landfills. These three landfills disposed more than 97 percent of the total waste direct-hauled to landfills in 2015. Transfer stations also received a smaller portion of the District's waste (22 percent) prior to being sent for disposal.

Recyclables were collected and hauled to processors to sort, 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 29 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

The District has a strong commercial and institutional sector. The District is home to ten colleges and universities, including:

- The College of Wooster
- Kent State University-Stark Campus
- Brown Mackie College North Canton
- Malone University
- University of Mount Union
- Stark State College

- Walsh University
- Kent State University at Tuscarawas
- University of Akron Wayne College
- Ohio State University Agricultural Technical Institute

Cultural points of interest include the Pro Football Hall of Fame, the National First Ladies' Library, Historic Canton Palace Theatre, Schoenbrunn Village (the first Protestant settlement in Ohio), Warther Carvings Museum, World's Largest Cuckoo Clock, Orrville Railroad Museum, and the J. M. Smucker Company.

The following table presents the major commercial/institutional sector employers in the tri-county area that employ 22,000 or more people.

Table 2-4. Major Commercial/Institutional Sector Employers in District

County	Company Name	Employee Size	Type of Business/Organization
Stark	Atlas Technologies	3,800	Packing & Crating Service
Stark	Aultman Hospital	3,500	Hospitals
Wayne	Buehler's Fresh Foods	2,100	Management Services
Stark	Test America Laboratories Inc	2,400	Laboratories-Testing
Stark	Mercy Medical Center	2,076	Hospitals
Stark	Fisher Foods Inc	1,424	Grocers-Retail
Stark	Elms Country Club	1,200	Golf Courses
Stark	Giant Eagle	1,150	Grocers-Retail
Tuscarawas	Union Hospital	1,007	Hospitals
Stark	Affinity Medical Center	1,001	Hospitals
Stark	Canton City Offices	1,000	Government Offices-US

County	Company Name	Employee Size	Type of Business/Organization
Wayne	Wooster Community Hospital	1,000	Hospitals

^{*}The sources of this information include the ReferenceUSA online database.

The District's commercial/institutional sector is diverse, which contributes to the sector's stability. The healthcare industry is the biggest employer in the District, which employs the most residents. Other types of commercial/institutional sector jobs that employ a significant portion of all the District's employees include governments and retail trade.

Approximately 11,319 active businesses were located in the District in 2015. Since 2010, the number of commercial businesses in the District decreased by only one percent. Over that same time, employment in the commercial sector increased by 7.9 percent.²

E. Profile of Industrial Sector

Manufacturing plays an important role in the District's economy. In 2015, the industries employed 50,595 District residents. Manufacturing employment made up 15.3 percent of all employed people in the District. Ohio's average manufacturing employment in 2015 was 10.4%.

The following table presents the major industrial sector employers in the District that employ 2,000 or more people.

Table 2-5. Major Industrial Sector Employers in District

County	Company Name	Employee Size	Type of Business/Organization
Stark	Timken Co.	14,000	Bearings Manufacturers
Wayne	LuK USA	5,500	Clutch Manufacturers
Wayne	J M Smucker Co.	6,910	Preserves, Jams & Jellies (Mfrs)
Stark	Timken Steel Corp.	2,500	Bearings-Manufacturers
Stark	Republic Steel	2,500	Steel Processing (Mfrs)
Stark	Alfred Nickles Bakery	2,000	Bakery
Stark	Shearer's Foods	1,850	Food Products
Stark	PCC Airfoils	1,000	Aircraft Equipment Parts & Supls-Mfrs
Stark	Fresh Mark Inc.	999	Meat Products (Mfrs)
Stark	Sugardale Foods Inc.	800	Meat Packers (Mfrs)
Stark	Workshops	754	Wood Products NEC (Mfrs)

² Ohio Development Services Agency, "Ohio County Indicators," July 2017, pp 61, 62, 67, 74, 85. http://development.ohio.gov/files/research/C1091.pdf.

2-6

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County	Company Name	Employee Size	Type of Business/Organization
Stark	Republic Steel	600	Steel Processing (Mfrs)
Wayne	Wooster Brush Co.	585	Brush-Manufacturers
Tuscarawas	Gradall Industries Inc.	500	Construction Machinery & Equip (Mfrs)
Stark	Belden Holding & Acquisition	500	Brick-Clay Common & Face- Manufacturers
Stark	Case Farms Canton Division	500	Poultry Processing Plants (Mfrs)
Stark	Fresh Mark Inc.	500	Meat Products (Mfrs)

^{*} The sources of this information include the ReferenceUSA online database.

Major industries in the District are the metal and meat industry.

In 2015, approximately 1,037 manufacturing facilities were located in the District employing approximately 50,595 residents. Since 2010, the number of manufacturing facilities in the District increased by less than one percent. Over that same time, employment in the industrial sector increased by 14.7 percent³.

F. Other Characteristics

Looking at the universities listed earlier in the chapter, the District hosts over 31,000 students. The students comprise a transitory population which fluctuates during the year and results in a variable solid waste generation from the schools.

Institution	Number of Enrollment
The College of Wooster	2050
Kent State University - Stark Campus	4,755
Brown Mackie College - North Canton	323
Malone University	1,722
University of Mount Union	2,191
Stark State College	12,645
Walsh University	2,860
Kent State University at Tuscarawas	2,179
University of Akron Wayne College	1,992
Ohio State University Agricultural Technical Institute	751
Total	31,468

^{*}Enrollment figures obtained from: http://www.collegesimply.com/colleges/ohio

³ Ohio Development Services Agency, "Ohio County Profiles – Stark/Tuscarawas/Wayne County," pp 5, http://www.development.ohio.gov/files/research/C1077.pdf, http://www.development.ohio.gov/files/research/C1080.pdf, http://www.development.ohio.gov/files/research/C1086.pdf,

These facilities have the potential to increase solid waste generation substantially during certain periods of the year.

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. However, some recycling data is obtained by the District tracking the tonnage produced through the programs it operates or grant funding was provided (e.g., Recycling Makes Sense grantees must submit tonnages every quarter to receive funding).

The District obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities are required to 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 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 2015 (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.

1.

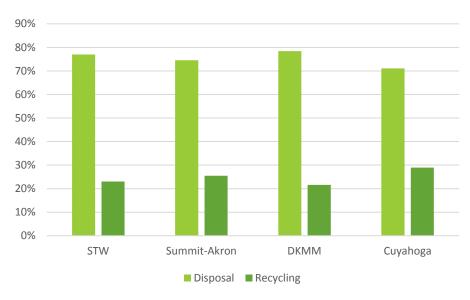
Table 3-1. Solid Waste Generated in the Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	632,626
Industrial	1,370,100
Excluded	0
Total	2,002,726

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 surrounding and rural solid waste districts in Ohio, which is illustrated in Figure 3-1. For these solid waste districts, disposal ranges from 71 to 78 percent of total generation while recycling is estimated at 22 to 29 percent.

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



In terms of the R/C generation rate, the District residents, commercial businesses, and institutions produced daily amounts of waste during 2015 which were in the middle of the range compared to other districts in the area. Figure 3-2 shows that the R/C generation rate for the District was approximately 5.96 pounds per person per day (PPD) in 2015.

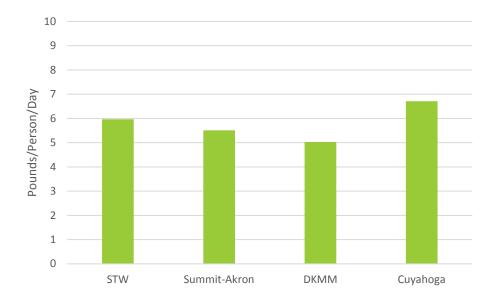


Figure 3-2. 2015 Residential/Commercial Generation Rates

The statewide R/C generation for 2015 was approximately 6.44 PPD, while the average generation rate for all SWMDs above was 5.80 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 many higher education schools which potentially contribute substantial amounts of waste from the residential/commercial sector. The waste generated by the schools 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 surrounding and rural solid waste districts in Ohio for disposal vs. recycling are very similar to the District's percentages (see Figure 3-3).

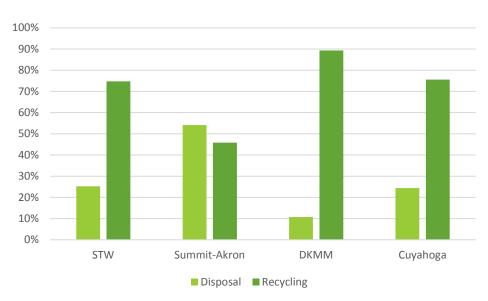


Figure 3-3. Industrial Disposal and Recycling as Percentage of Generation

B. Historical Waste Generated

1. Historical Residential/Commercial Waste Generated

There has been little fluctuation in the past five years for the generation of R/C waste in the District. Disposal has stayed rather flat while recycling has increased almost 26,000 tons during this time period. (See Figure 3-4.) These trends are consistent with other SWMDs in Ohio.

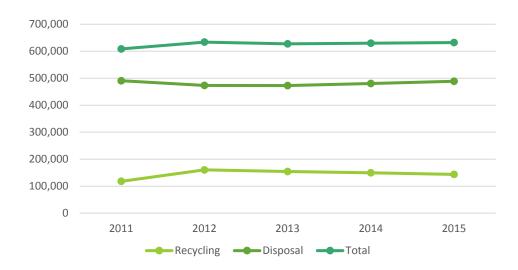


Figure 3-4. District Historical R/C Generation: 2011 – 2015

In general, the R/C waste generation rates for urban SWMDs in Ohio have also declined during the last five 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.

8
7.5
7
6.5
6
4.5
4.5
4.5
STW Summit-Akron DKMM Cuyahoga

Figure 3-5. Residential/Commercial Generation Rates: 2011-2015

2. Historical Industrial Waste Generated

The generation of industrial waste during the past five years has fluctuated a lot less than the R/C generation. As illustrated in Figure 3-6, changes in industrial generation have been negligible. The chart shows a substantial increase in industrial generation from 2011 through 2012, which was due to an increase in recycling and not disposal, but levels off afterwards.

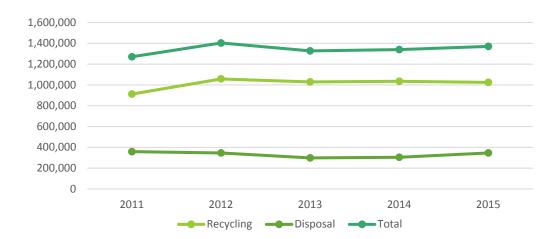


Figure 3-6. District's Historical Industrial Generation: 2011 – 2015

C. Waste Generation Projections

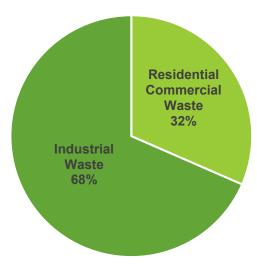
Table 3-2 shown below demonstrates that waste generation within the District is expected to decrease slightly during the first six years of the planning period. However, the projected total for 2019 is smaller than the total for the 2015 reference year due to changes in population.

Residential Industrial Year Commercial Total Waste Waste 2019 626,142 1,985,147 1,359,005 2020 625,298 1,357,544 1,982,842 2021 624.376 1.356.090 1.980.466 2022 623,458 1,354,642 1,978,100 2023 622,543 1,353,200 1,975,743 2024 621.819 1,351,765 1,973,583

Table 3-2. Waste Generation Projections

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 (2019). Projections for both of these sectors have been developed by analyzing historical disposal data, determining trends for the historical data, and 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.





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 steady since 2011, especially in 2015. The disposal rate is expected to remain constant and follow population changes throughout the remainder of the planning period.

Recycling projections were developed using the historical trend, but anticipating the District's population was also a crucial component in determining the total residential/commercial sector recycling expected in future years. 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 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 621,000 tons in 2024.

700,000 600.000 500,000 400,000 300,000 200,000 100,000 2015 2016 2017 2021 2022 2023 2024 2018 2019 2020 → Disposal → Recycle → Total

Figure 3-8. Residential/Commercial Waste Generation: 2015-2024

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 lesser 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 2011 (probably as a result of the economic recession), followed by a substantial increase in 2012, and then lower generation levels in 2013 through 2015. 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 in the industrial surveys not including scrap yards or processors to avoid double counting (1,019,243 tons) will continue throughout the planning period.
- Disposal. It is assumed that the amount of industrial sector disposal will decrease slightly until 2020 then remain constant through year 2028.

The result of these assumptions is that waste generation for the industrial sector is projected to decrease slightly from year 2018 through 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 (2015).¹

3-8

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 the District 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 recycle will continue to comprise the largest category.

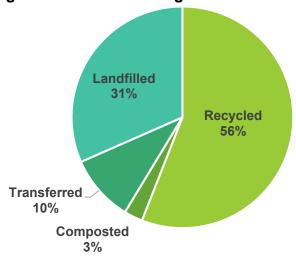
Table 4-1. Methods for Managing Waste

Year	Generate ¹	Recycle ²	Compost ³	Transfer⁴	Landfill⁵
2019	1,985,147	1,112,152	54,156	193,597	627,824
2020	1,984,251	1,111,936	54,156	192,828	625,331
2021	1,982,098	1,111,724	54,156	192,370	623,848
2022	1,979,956	1,111,516	54,156	191,915	622,369
2023	1,977,824	1,111,310	54,156	191,461	620,897
2024	1,977,809	1,111,295	54,156	191,461	620,897

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

The proportion of each method used to manage the District's waste during the first six years of the planning period are predicted to change very little. Figure 4-1 shows the breakdown of total generation.

Figure 4-1. Waste Management Methods: 2019



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

³ "Compost" is the total amount of composting

⁴ "Transferred" is the amount sent to transfer stations, prior to delivery to a landfill.

⁵ "Landfilled" plus the "Transferred" amount equals the total disposal.

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 2015 are shown in Table 4-2 below. This table illustrates that more than 97 percent of the direct-hauled waste was disposed at the American Landfill, Inc., Countywide Recycling & Disposal Facility, and Kimble Sanitary Landfill. These facilities are publicly-available but are owned by a private company. These three 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	% of all SWMD Tons Disposed	Remaining Years
In-District	County	State			
	Stark	Ohio	247.020	34.87%	84.5
American Landfill, Inc.	Stark	OHIO	247,930	34.07%	04.3
Countywide Recycling & Disposal Facility	Stark	Ohio	292,641	41.15%	75.6
Liberty Tire Services of Ohio	Stark	Ohio	1,459	0.2%	n/a
Kimble Sanitary Landfill	Tuscarawas	Ohio	151,589	21.32%	30.8
Out-of-District					
Coshocton Landfill, Inc.	Coshocton	Ohio	10	0.00%	***
Crawford County Sanitary Landfill	Crawford	Ohio	55	0.01%	12.1
Pine Grove Regional Facility	Fairfield	Ohio	8	0.00%	60.1
Hancock County Sanitary Landfill	Hancock	Ohio	2	0.00%	30.1
Carbon Limestone Landfill LLC	Mahoning	Ohio	5,413	0.76%	60.7
Mahoning Landfill, Inc.	Mahoning	Ohio	836	0.12%	45.7
Noble Rd Landfill	Richland	Ohio	5,426	0.76%	8.6
Evergreen Recycling & Disposal	Wood	Ohio	11	0.00%	35.5
County Environmental of Wyandot	Wyandot	Ohio	3	0.00%	156.5
Suburban Landfill, Inc	Perry	Ohio	131	0.02%	20.0
Apex Sanitary Landfill	Jefferson	Ohio	6,909	0.97%	13.0
Tunnel Hill Reclamation Landfill	Perry	Ohio	93	0.01%	22.0
Out-of-State					
Unknown	0	WV	32	0.00%	

Total 559.500 100% --

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

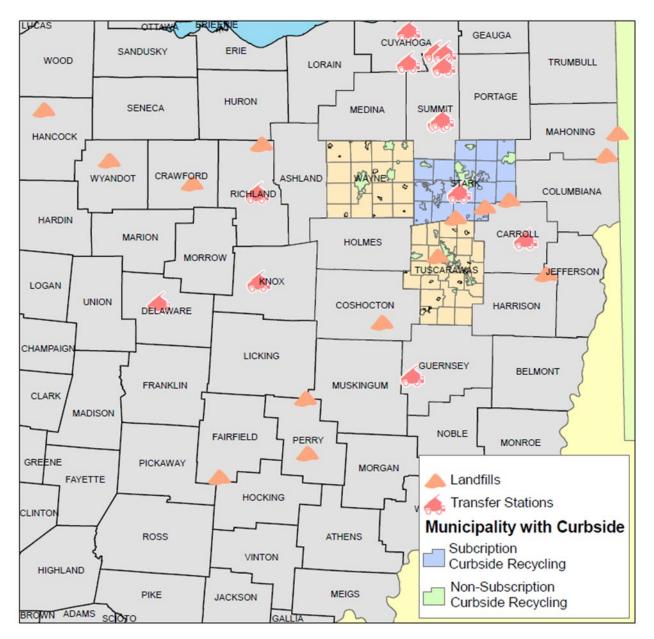
The transfer facilities receiving waste from District entities during 2015 are listed in Table 4-3. Only a fourth of the total waste ultimately sent for disposal was processed by transfer stations, with the Kimble Transfer & Recycling Facility - Canton receiving 84 percent of transferred waste.

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

	Location	on	Tons	% all District	Final Waste		
Facility Name	County	State	Accepted from District	Waste Transferred	Destination		
In-District	n-District						
Kimble Transfer & Recycling Facility - Canton	Stark	ОН	170,962	84%	Kimble Sanitary Landfill		
Out-of-District							
Kimble Transfer & Recycling - Carrollton	Carroll	ОН	356		Kimble Sanitary Landfill		
Broadview Heights Recycling Center	Cuyahoga	ОН	5,338		Noble Road Landfill		
Harvard Road Transfer Station	Cuyahoga	ОН	8		Noble Road Landfill		
Cleveland Transfer/Recycling Station - Oakwood	Cuyahoga	ОН	44		American Landfill		
Delaware County Transfer Station	Delaware	ОН	0	0%	Crawford County Landfill		
Allied Waste - Mt Vernon	Knox	OH	3	0%	unknown		
Richland County Transfer Station	Richland	ОН	6,371		Noble Road Landfill		
Akron Central Transfer Station	Summit	ОН	17,881	9%	American Landfill		
BFI Glenwillow Transfer Station	Cuyahoga	ОН	5	0%	unknown		
Kimble Transfer & Recycling Facility - Cambridge	Guernsey	ОН	235	0%	Kimble Sanitary Landfill		
Republic Waste Recovery (Akron Recyclery)	Summit	ОН	1,484	1%	Countywide Recycling & Disposal Facility		
Kimble Transfer & Recycling - Twinsburg	Summit	ОН	65	0%	Kimble Sanitary Landfill		
Out-of-State	Out-of-State						
none			0	0%	0		

Total 202,752 100%

The following map depicts the locations of the landfills and transfer stations used by the District:



3. Composting Facilities

Table 4-4 shows the composting facilities which received yard waste and food waste from the District in 2015.

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

Facility Name	Location	Material Composted (tons)	Percent of all Material Composted
Earth 'N Wood Products, Inc. 1	5335 Strausser St., North Canton, OH	8,538	0*
Miller Landscaping Materials LLC	6690 Erie St. SW, Navarre, OH	0	0%
Stark C&D Disposal, Inc.	7280 Lisbon St., Louisville, OH	660	1%
Warstler Bros. Landscaping	4125 Salway Rd. NW, Canton, OH	213	0%
Uniontown Topsoil and Mulch LLC	1916 Erie Ave. NW, Massillon, OH	538	1%
Mr. Mulch	3704 Twelfth St. NW, Canton, OH	6,465	15%
Kimble Transfer & Recycling Fac Canton	2295 Bolivar Rd SW, Canton, OH	0	0%
Proper Lawncare & Landscape, Inc.	539 Mill Rd. SE, Canton, OH	0	0%
Minerva Enterprises	9000 Minerva Rd. SE, Waynesburg, OH	5	0%
Mike's Tree & Landscape / Alliance Mulch & Wood	800 W. Bayton St., Alliance, OH	0	0%
Weisgarber Trucking, Inc.	11506 Finefrock Rd. SW, Massillon, OH	313	1%
Yoder Landscape & Nursery, Inc.	215 Market Ave. SW, Hartville, OH	820	2%
Bull Country Composting	10316 Kohr Road NW, Dundee, OH	2,037	5%
Kimble Compost - Dover	3596 State Rte. 39 NW, Dover, OH	0	0%
Village of Tuscarawas	3317 Tuscarawas Rd. SE, Tuscarawas, OH	71	0%
Black Snake Composting Facility	Township Rd. 380, Dover, OH	16	0%
Paradise Composting II ²	4300 Mechanicsburg Rd., Smithville, OH	782	0*
OARDC Ohio Agricultural Research	1680 Madison Ave., Wooster, OH	143	0%
Kellys Kompost	8624 Carr Rd., Fredericksburg, OH	93	0%
Tope's	7717 Dalton-Fox Lk Rd., North Lawrence, OH	72	0%
Zollinger C&D Landfill	11687 Wadsworth Rd., Rittman, OH	809	2%
EDT Restoration Service	3737 West Salem Rd., Burbank, OH	0	0%
Orrville Compost	Apple Ave., Orrville, OH	90	0%
Orrville Compost Village of Shreve	Apple Ave., Orrville, OH S. Wells St., Shreve, OH	90 254	0% 1%

Facility Name	Location	Material Composted (tons)	Percent of all Material Composted
Paradise Lawncare, Inc. ³	6203 Akron Rd., Smithville, OH	1,094	0*
Wayne Lawn and Landscape	1150 West Milltown Rd., Wooster, OH	32	0%
#1 Landscape	3775 Ridge Rd., Medina, OH	0	0%
B-Sharp Property Maintenance	6161 S. Main St., Clinton, OH	584	1%
Smith Bros., Inc.	3087 Marks Rd., Medina, OH	796	2%
Village of Dennison - Tuscarawas County ⁴	N/A	172	0*
Lawrence Township - Tuscarawas County ⁴	N/A	767	0*
Composting Program - Wayne County	N/A	3,674	8%
Jackson Township Yard Waste Drop-Off - Stark County	N/A	5,457	12%
Village of Brewster - Stark County	N/A	528	1%
Canton Township - Stark County	N/A	2,531	6%
Lake Township - Stark County	N/A	4,827	11%
Lawrence Township - Stark County	N/A	1,294	3%
Nimishillen Township - Stark County	N/A	2,909	7%
Perry Township - Stark County	N/A	1,601	4%
Plain Township, Fire Station - Stark County	N/A	3,243	7%
Plain Township, Warstler Brothers - Stark County	N/A	2,442	6%
Tuscarawas Township - Stark County	N/A	1,633	4%
Adjustments to	11,353		
	44,150		

¹ Tonnage removed for Earth 'N Wood Products due to double counting. This facility received tonnage from community yard waste collection programs.

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

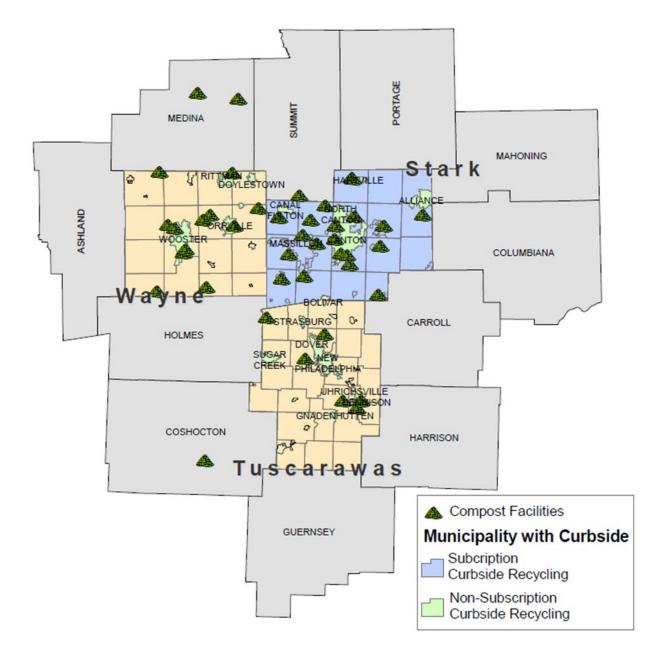
² Tonnage removed for Paradise Composting II due to double counting. This facility received tonnage from community yard waste collection programs.

³ Tonnage removed for Paradise Lawn Care, Inc. due to double counting. This facility received tonnage from community yard waste collection programs.

⁴ Tonnage removed for Village of Dennison and Lawrence Township due to double counting. Tonnage collected for these programs was managed at Bull Country Composting.

^{*}Zero in place to indicate the compost was taken to a compost facility already included.

The following map depicts the compost facilities and yard waste management programs used by the District:



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 2015

Name of Facility		Location		Recyclables		
Training of Fundament	Sector	County	State	Accepted from	Tons	
				District		
In-District						
	les/Com	Stark	OH	LAB	24.00	
Midwest Com-Tel R	les/Com	Stark	OH	EW	24.00	
PSC - Wooster R	les/Com	Wayne	OH	LAB, FM, NFM	6,698.39	
Little Shop of Bargains R	les/Com	Stark	OH	WG, FM, NFM, PL	2.25	
	les/Com	Wayne	OH	OCC, MxP, PL	984.00	
Akron Canton Waste Oil Co.	les/Com	Stark	ОН	Oil, Antifreeze	18.50	
	es/Com	Wayne	ОН	WG, LAB, Oil	6.50	
	les/Com	Tuscarawas	OH	EW	4.00	
•	les/Com	Stark	OH	FM, NFM, OCC	59.00	
	les/Com	Stark	OH	EW	0.50	
	les/Com	Stark	OH	WG	1.00	
	les/Com	Wayne	OH	CoM	2,019.50	
PSC Metals - Warmington	les/Com	Stark	ОН	NFM	42.24	
	les/Com	Stark	ОН	FM, NFM	256.87	
l l	les/Com	Stark	OH	FM, NFM	641.26	
	ndustrial	Stark	OH	FM, NFM, Oil	141,267.80	
l l	ndustrial	Stark	OH	DCB, EW	43.00	
Akron Canton Waste Oil	ndustrial	Stark	ОН	Oil, Antifreeze	127.00	
	ndustrial	Wayne	ОН	FW, FM, ST, CoM	596.19	
PSC Metals - Warmington						
Rd. in Navarre	ndustrial	Stark	ОН	LAB, FM, NFM	4,832.00	
	ndustrial	Stark	OH	FM, NFM	10,302.88	
FPT Canton Ir	ndustrial	Stark	OH	FM, NFM	4,453.12	
Out-of-District						
Republic - Akron Recyclery - (Stark)	mmercial	Summit	ОН	OCC, PL, CoM	4,706.80	
Republic - Akron Recyclery - (Tuscarawas)	mmercial	Summit	ОН	OCC, PL, CoM	17.62	
	esidential	Summit	OH	OCC, PL, CoM	2,076.90	
	mmercial	Summit	ОН	OCC, MxP, PI, CoM	293.51	
Rumpke Recycling - Dayton	mmercial	Montgomery	ОН	GL, FM, NFM, OCC, MxP, PL, CoM	195.96	
Dayton Glass Plant -	mmercial	Montgomery	ОН	GL, OCC, PL, CoM	107.64	
Republic - Akron Recyclery	mmercial	Summit	ОН	OCC, PL, CoM	323.74	
` • ·	mmercial	Summit	ОН	OCC, PL, CoM	65.45	
	esidential	Summit	ОН	OCC, PL, CoM	2,129.90	
Royal Oaks (Paner	les/Com	Cuyahoga	ОН	MxP	1,102.48	

Name of Facility	Sector	Location		Recyclables	
		County	State	Accepted from District	Tons
Royal Oaks (Paper Retriever Program) - (Wayne)	Res/Com	Cuyahoga	ОН	MxP	89.04
Broadway Iron & Metal	Res/Com	Mahoning	OH	WG, LAB, FM, NFM	1,101.50
River Valley Paper Company	Res/Com	Summit	ОН	OCC, MxP, PL	18,124.06
Broadway Iron & Metal	Industrial	Mahoning	OH	WG, LAB, FM, NFM	7,020.00
Medina Recycling	Industrial	Medina	ОН	OCC, MxP, PL, CoM	3,639.48
Out-of-State					
None					
			Total		213,398.08

WG = white goods, DCB = dry-cell batteries, FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = wood, CoM = commingled, EW = Electronic Waste, ST = Scrap Tires

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 2015 is estimated to have a minimum of 14 years remaining capacity.

Transfer stations have not been an important factor 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.

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)].

The District Policy Committee has determined that sufficient disposal capacity exists for the entire planning period. The District does not anticipate constructing any solid waste facility or contracting with a private entity to do so on behalf of the District. As such, and in accordance with the Format 4.0, no siting criteria is necessary for this Plan Update.

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 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 (Board) 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 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.)

1. Description of the SWMD's Designation Process

Decisions regarding designation, if implemented, or the granting of a designation waiver, if applicable, shall be made by the District, following a review of the request by the Policy Committee.

Where if 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(I)(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.
- Other criteria as defined in Section C of this chapter.

The full procedure for granting a designation waiver is included in Appendix P.

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. A complete description of the District's designation policies is included in Appendix P.

2. List of Designated Facilities

There are currently no listed designated facilities for the solid waste generators for the reference year therefore Table 4-6 was omitted.

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 must also ensure 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 14 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 SWMD's abilities, strengths and weaknesses, operations, existing programs and services, outstanding needs, available resources, etc. The Policy Committee then compiled a list of actions the SWMD could take, programs the SWMD could implement, or other things the SWMD could do 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.

After deciding on programs and services, the Policy Committee projected 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 the residential/commercial sector and Appendix F for the industrial sector).

A. Solid Waste Management District's Priorities

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 for each program have been identified. 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 curbside and yard waste recycling within the tri-county area.

Table 5-1 lists the 14 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.

Table 5-1. Listing of District's 14 Analyses from Appendix H

#	Section Name	Subsection		
	Scotion Hamo	A. Drop-off Recycling		
l	Residential Recycling	B. Curbside Recycling		
	Infrastructure Analysis	C. Multi-Family Housing		
		D. Special Events Recycling		
		A. School Recycling Program		
H-2	Commercial Sector Analysis	B. Government Building Recycling		
		C. Technical Assistance Program		
H-3	Industrial Sector Analysis	A. Existing Programs		
	•	A. Yard Waste		
ша	Residential/Commercial Waste	B. Food Waste		
H-4	Composition Analysis	C. Cardboard and Paper		
		D. Plastics		
H-5	Economic Incontivo Analysis	A. Existing Volume-based Programs		
п-э	Economic Incentive Analysis	B. Grants		
	Restricted and Difficult to Manage	A. Scrap Tires		
H-6	Waste Streams Analysis	B. HHW		
	Waste Streams Analysis	C. E-Waste, Appliances, Batteries, Scrap Metals		
H-7	Waste Diversion Analysis	A. Residential/ Commercial Sector		
,	Waste Biversion Analysis	B. Industrial Sector		
		A. Health Department Grants		
H-8	Special Program Needs Analysis	B. Well Monitoring		
		C. Open Dump, Litter Law Enforcement		
		A. Revenues		
H-9	Financial Analysis	B. Expenditures		
11.40	Degianal Analysis	C. Balances		
H-10	Regional Analysis			
H-11	Population Analysis			
H-12	Data Collection Analysis	A. Residential Sector		
		B. Commercial and Industrial Sector		
		A. Education and Awareness Program		
H-13	Education and Outreach Analysis	B. Recycling and Reuse Guide/Newsletter		
		C. Recycling Report Card		
11.44	December Material Durant	D. Web Site		
H-14	Recyclable Material Processing Capacity Analysis			

Where applicable, this evaluation analyzed historical comparisons, performance, weaknesses, participation, impacts, costs, and other factors influencing the District's waste reduction and diversion efforts. This section provides a summary of the analyses performed. See Appendix H for the complete analyses.

The District created a targeted list of priorities for new or expanded programs for the planning period. The following is a list of chosen priorities from Appendix I to address the challenges from Appendix H. These actions were incorporated into the programs for the planning period for section B of Appendix I:

Table 5-2. Prioritized Conclusions from Analyses

Section in App. H	Program Category	Action	District Ranking
	Drop-Offs	Create a map for the drop-offs located in the District and post it on the website.	5
	Diop-Oils	Work with political subdivisions to educate their residents about drop-off program.	4
		Target political subdivisions for implementing curbside recycling programs if population is greater than 20,000.	5
	Curbside	Work with political subdivisions to implement curbside recycling in other areas that are prime candidates based on factors other than population (such as housing density).	4
H-1		Promote the grant funding available vs an incentive for political subdivisions to implement curbside recycling.	5
		Work with political subdivisions when contracts are nearing renewal time to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling container size, and/or requiring the hauler to provide ongoing education, such as a quarterly direct mailer to residents.	5
		Target at least two communities each year to work on improving recovery rates.	5
	Residential Education	Special Events: Increase District's presence at large events	4
		Reduce yard waste program to fit within a \$300,000 per year budget	5
H-4	Yard waste	Increase partnerships with private sector to increase yard waste drop-off locations that do not increase cost to District	5
		Evaluate the use of a yard waste grinder to reduce volumes to improve transportation efficiencies	5

Section in App. H	Program Category	Action	District Ranking
		Improve existing yard waste sites such as implementing cameras, fencing and gates to reduce contamination (if sites are continued)	4
		Conduct a campaign to reduce informational commercial use of yard waste drop-off sites	4
		Conduct an education campaign for residential users of yard waste sites to reduce contamination	5
		Modify drop-off site programs to save money and improve program	5
	Recycle Makes	Develop grant ton limits based on a scale to give incentive for higher performance	5
	\$ense	Develop automated cart incentive option to grant	5
	Grant	Develop PAYT incentive option to grant	5
	HHW	HHW collection increase presence in District	4
		Conduct education campaign to inform residents on alternate local options for HHW materials	4
		Update and send HHW guide or newsletter out annually	5
H-6		Expand HHW collection in District	4
		Evaluate the option for a year-round permanent HHW facility central to the three-county area to supplement weekend collections	5
	Appliances, batteries, Metals	Increase promotion	4
H-8	H-8 Well Monitoring Reallocate some funds to another program since the \$25,000 currently budgeted for Well testing is typically not requested.		5
H-13	Education	Have a sheet in Newsletter that can be ripped out to hang in a home with useful facts, tips, following year dates, website, and contact information	4
		Website ability to track the visitor statistics.	5

B. Program Descriptions

The following section defines the major programs and services the District will have available during the planning period. See Appendix I for the complete list of programs and descriptions.

1. Residential Recycling Programs

Curbside Recycling

The District currently has nineteen non-subscription and 31 subscription curbside programs.

Table 5-3. Curbside Recycling Services

County	Name of Curbside Service	Туре	Community Served	Service Provider
Stark	City of Alliance	NS	City of Alliance	Contract between City and Kimble
Stark	City of Canal Fulton	NS	City of Canal Fulton	Contract between City and Republic
Stark	City of Canton	NS	City of Canton	City Operated
Stark	City of North Canton	NS	City of North Canton	Contract between City and Kimble
Stark	Village of Hartville	NS	Village of Hartville	Contract between Village and Republic
Tuscarawas	Village of Baltic	NS	Village of Baltic	Contract between Village and Kimble
Tuscarawas	Village of Bolivar	NS	Village of Bolivar	Contract between Village and Kimble
Tuscarawas	Village of Dennison	NS	Village of Dennison	Contract between Village and Kimble
Tuscarawas	City of Dover	NS	City of Dover	Contract between City and Kimble
Tuscarawas	Village of Gnadenhutten	NS	Village of Gnadenhutten	Village Operated
Tuscarawas	City of New Philadelphia	NS	City of New Philadelphia	City Operated
Tuscarawas	Village of Strasburg	NS	Village of Strasburg	Contract between Village and Republic
Tuscarawas	Village of Sugarcreek	NS	Village of Sugarcreek	Contract between Village and Kimble
Tuscarawas	City of Uhrichsville	NS	City of Uhrichsville	Contract between City and Kimble
Wayne	Village of Doylestown	NS	Village of Doylestown	Contract between Village and Republic
Wayne	City of Orrville	NS	City of Orrville	Contract between City and Kimble
Wayne	City of Rittman	NS	City of Rittman	Contract between City and Kimble
Wayne	Village of Marshallville	NS	Village of Marshallville	Contract between Village and Kimble
Wayne	City of Wooster	NS	City of Wooster	Contract between City and Waste Management

County	Name of Curbside Service	Туре	Community Served	Service Provider
Stark	City of Massillon	S	City of Massillon	Contract between City and Kimble
Stark	Navarre village	S	Navarre village	DNR
Stark	Bethlehem township	S	Bethlehem township	DNR
Stark	Meyers Lake village	S	Meyers Lake village	DNR
Stark	Canton township	S	Canton township	DNR
Stark	Hills and Dales village	S	Hills and Dales village	DNR
Stark	Jackson township	S	Jackson township	DNR
Stark	Lake township	S	Lake township	DNR
Stark	Lawrence township	S	Lawrence township	DNR
Stark	Limaville village	S	Limaville village	DNR
Stark	Lexington township	S	Lexington township	DNR
Stark	Louisville city	S	Louisville city	DNR
Stark	Marlboro township	S	Marlboro township	DNR
Stark	Nimishillen township	S	Nimishillen township	DNR
Stark	East Canton village	S	East Canton village	DNR
Stark	Osnaburg township	S	Osnaburg township	DNR
Stark	Minerva village	S	Minerva village	DNR
Stark	Paris township	S	Paris township	DNR
Stark	Perry township	S	Perry township	DNR
Stark	East Sparta village	S	East Sparta village	DNR
Stark	Pike township	S	Pike township	DNR
Stark	Plain township	S	Plain township	DNR
Stark	Magnolia village	S	Magnolia village	DNR
Stark	Waynesburg village	S	Waynesburg village	DNR
Stark	Sandy township	S	Sandy township	DNR
Stark	Beach City village	S	Beach City village	DNR
Stark	Brewster village	S	Brewster village	DNR
Stark	Wilmot village	S	Wilmot village	DNR
Stark	Sugar Creek township	S	Sugar Creek township	DNR
Stark	Tuscarawas township	S	Tuscarawas township	DNR
Stark	Washington township	S	Washington township	DNR

NS = Non-subscription, S = Subscription

Curbside Expansion Efforts

District will work to expand non-subscription curbside programs. The District provides assistance to communities that are interested in implementing or expanding a non-subscription curbside recycling program.

Drop-off Recycling

The District currently has 80 drop-off locations open to the public in Stark, Tuscarawas, and Wayne counties.

Table 5-4. Drop-off Recycling Locations

County	Location of Drop-off	Service Provider
Stark	Alliance Recycling Center	Alliance Recycling
Stark	Bethlehem Township (Navarre Village - St. Clement Church)	District
Stark	Bethlehem Township (Navarre Village - Village Hall)	District
Stark	Canton City (Fishers Foods)	District
Stark	Canton City (Kimble Recycling)	Kimble
Stark	Canton City (Timken Dueber Avenue)	District
Stark	Canton Township	District
Stark	Jackson Township (Recycling Station)	Jackson Township
Stark	Lake Township (Hartville Flea Market)	District
Stark	Lake Township (Midway Street)	District
Stark	Lawrence Township	District
Stark	Lawrence Township (Canal Fulton City)	District
Stark	Lexington Township	District
Stark	Louisville City	District
Stark	Massillon City (City Garage)	District
Stark	Massillon City (Fisher Foods)	District
Stark	Massillon City (Recreation Center)	District
Stark	Nimishillen Township (Anthony Petitti Garden)	District
Stark	Nimishillen Township (Township Hall)	District
Stark	Osnaburg Township (Fire Station)	District
Stark	Paris Township (Minerva Village)	District
Stark	Paris Township (Robertsville)	District
Stark	Paris Township (Township Hall)	District
Stark	Perry Township (Administration Building)	District
Stark	Perry Township (Southway Street)	District
Stark	Perry Township (Township Garage)	District
Stark	Plain Township (Diamond Park)	District
Stark	Plain Township (Glenwood Intermediate School)	District
Stark	Plain Township (Oakwood Middle School)	District
Stark	Plain Township (Saint Michael Church)	District
Stark	Plain Township (Taft Elementary)	District
Stark	Sugar Creek Township (Beach City Village)	District
Stark	Sugar Creek Township (Brewster Village)	District
Stark	Sugar Creek Township (Wilmot Village)	District
Stark	Tuscarawas Township (Township Office)	District
Stark	Canton City Recycling Center	Health Department Operated
Stark	Marlboro Township	District
Stark	Pike Township (Countywide RDF)	Countywide RDF
Stark	Pike Township (Fire Station)	District
Stark	Pike Township (Township Office)	District
Stark	Sandy Township (Administrative Building)	District
Stark	Sandy Township (Village of Magnolia)	District
Stark	Washington Township	District
Tuscarawas	Dover City (Gale's Recycle It)	Gale's Recycle It

County	Location of Drop-off	Service Provider
Tuscarawas	Dover City (Parkside Buehlers)	Contract between
Tuscarawas		District and Kimble
Tuscarawas	Lawrence Township (Bolivar Giant Eagle)	Contract between
		District and Kimble
Tuscarawas	Mill Township	Contract between District and Kimble
		Contract between
Tuscarawas	New Philadelphia City (Buehlers)	District and Kimble
_	D T 11 (10 11)	Kimble Recycling
Tuscarawas	Dover Township (Kimble)	and Disposal
Tuesarawas	Fairfield Toursehin	Contract between
Tuscarawas	Fairfield Township	District and Kimble
Tuscarawas	Franklin Township (Strasburg Village)	Contract between
Tuscarawas	Trankiii Township (Ottasburg Village)	District and Kimble
Tuscarawas	Jefferson Township	Contract between
- accarance	- Condition 1 Connectup	District and Kimble
Tuscarawas	Oxford Township	Contract between
	·	District and Kimble
Tuscarawas	Perry Township (West Chester Community)	Contract between District and Kimble
		Contract between
Tuscarawas	Sandy Township	District and Kimble
_	Sugar Creek Township (Sugar Creek Village -	Contract between
Tuscarawas	Bakers' IGA)	District and Kimble
Tuscarawas	Warwick Township	Contract between
Tuscarawas	vvarwick rownship	District and Kimble
Tuscarawas	Washington Township	Contract between
Tuscarawas	vvasilingtori rownsiip	District and Kimble
Tuscarawas	Wayne Township	Contract between
	•	District and Kimble
Wayne	Chippewa Township	District
Wayne	East Union Township (Apple Creek Village)	District
Wayne	Green Township (Orrville City - Buehler's Fresh	District
	Foods) Green Township (Smithville Village)	District
Wayne Wayne	Sugar Creek Township (Dalton Village)	District
Wayne	Sugar Creek Township (Kidron)	District
Wayne	Wooster City (Buehlers)	District
Wayne	Wooster City (Wooster College)	District
Wayne	Baughman Township	District
Wayne	Canaan Township (Creston Village)	District
Wayne	Chester Township	District
Wayne	Clinton Township (Shreve Village)	District
Wayne	Congress Township	District
Wayne	Congress Township (West Salem Village)	District
Wayne	Franklin Township	District
Wayne	Milton Township	District
Wayne	Paint Township	District

County	Location of Drop-off	Service Provider
Wayne	Plain Township	District
Wayne	Salt Creek Township (Fredericksburg Village)	District
Wayne	Wayne Township (Township Garage)	District
Wayne	Wooster Township (Valley College Grange)	District

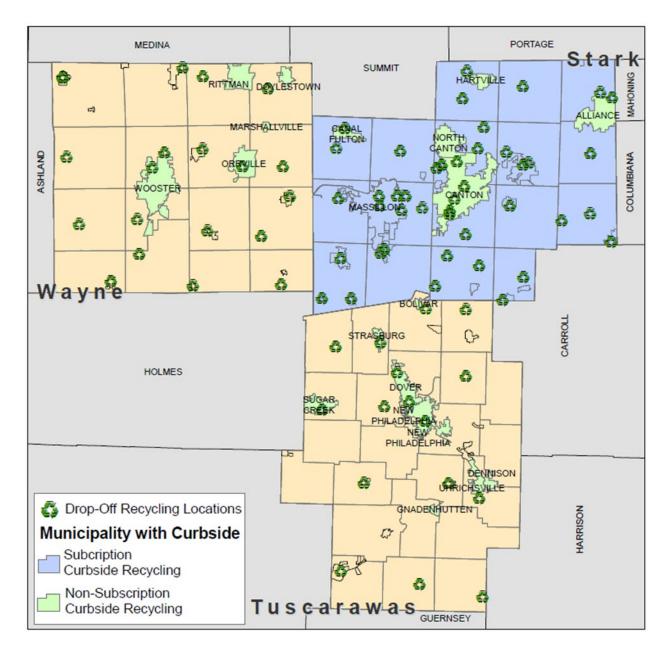
Drop-off Map

A new initiative by the District is to create and maintain a map for the dropoffs located in the District. This map would be posted on the District's website to aid District residents and businesses of their nearest drop-off program.

Drop-Off Program Promotion

A new initiative by the District is to work with political subdivisions to educate their residents about drop-off programs. This may include suggestions on communications with residents via community web sites or links to the District web site, sharing of District publications on the drop-off program, special meetings and presentations and other activities as needed.

The following map depicts the curbside and drop-off recycling programs in the District:



2. Commercial/Institutional Reduction and Recycling Programs

School Recycling Program

This existing program will continue, and the District will evaluate whether or not the program can be expanded to accommodate additional schools. The District collected mixed paper and office paper from schools located throughout the three-county area. Some of the school programs also accepted plastics #1-#7, glass, aluminum, and steel. The District also collected data from local businesses that provided recycling services to schools, which include the Paper Retriever program and Sanmandy.

Government Building Recycling

The District continues to operate the Government Building Recycling program in each of the three counties. The District collected from Stark County government buildings, Stark County libraries, Tuscarawas County government buildings, and from Wayne County government buildings. The District also collected data from local businesses that provided recycling services to government buildings within the District. In Stark County, Royal Oaks Recycling collected from bins at government buildings and from bins at libraries; in Wayne County, Royal Oaks Recycling collected from bins at government buildings.

3. Industrial Sector Reduction and Recycling Programs

Waste Audit Manual

The District will continue to advertise free waste auditing services on its website. Waste audits evaluate the waste streams of each business/industry, current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting. The audits will be offered at the expense of the District and will be used to help businesses/industries realize the costs savings associated with the specific recommendations. The waste audits may also include a marketing component to help the business/industries identify outlets for marketing recyclable materials or reusing the materials.

4. Special Waste Streams

Household Hazardous Waste (HHW)

HHW Management Outreach Program

This program has a focus on education, with potential for collection events if feasible. The District provides HHW information on its website and in various publications (Recycling Guide, Newsletter), which are mailed to residents annually. The publications include information for reducing the amount of HHW generated, alternatives to using chemical pesticides and cleaners, and locations that accept HHW materials year-round.

Permanent HHW Collection

The permanent HHW collection program conducted at the Canton City Recycling Center may continue to operate year-round on an appointment basis.

Moving forward, the District believes that providing an outlet for HHW is the most effective use of District funds and best serves the District's residents.

The District may offer support to appointment-based household hazardous waste collection site(s) and will continue monitoring program expenses. The District reserves the right to limit appointments in order to manage program cost.

Expansion of HHW collection

The District will evaluate the option for additional year-round permanent HHW facilities central to the three-county area to supplement temporary collection events

Yard Waste

Yard Waste Drop-Off Collection Sites

The District will continue to operate the yard waste collection program with a budgetary limit of \$300,000 per year. The District reserves the right to spend less or more as determined by the Board of Directors. The District may provide grants to political subdivisions to offset the costs of operating a yard waste drop-off site. Grants would be competitive and funding level would be based on site location (proximity to higher population), historic volume of material collected, market value of material, etc.

Yard Waste Program Enhancement Initiative

A new initiative by the District is to improve existing yard waste sites such as implementing cameras, fencing and gates to reduce contamination and restrict overall volume.

Yard Waste Management Education and Outreach

The District provides detailed information to residents about local yard waste composting opportunities in the Recycling and Reuse Guide and by posting information on its website. The District is collecting data on contamination levels from yard waste drop-off sites from its contracted yard waste hauler.

Scrap Tire Program

The District operates permanent scrap tire collection sites and the tire pass program for local municipalities to properly manage illegally dumped tires collected.

5. Outreach, Education, Awareness

Education and Awareness Program

This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performs presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation.

Recycling and Reuse Guide or Newsletter

The annual comprehensive Recycling and Reuse Guide or Newsletter will be sent to the households in Stark, Tuscarawas, and Wayne Counties during the last quarter of the year. Newsletters will also be made available to residents and businesses on the District's website. The publications contain the Recycling Report Card, educational articles about recycling, frequently asked questions, information on District recycling programs and drop-off locations, local recycling statistics, and a list of businesses/organizations that accept special materials for recycling such as appliances and electronics.

Web Site

Recycling programs, guides, brochures, statistics, grants, and government meetings are available through the website at www.timetorecycle.org.

Campaign to Educate on Residential Yard Waste

A new initiative by the District is to campaign and focus on the education for residential users of yard waste sites to reduce contamination which has been a problem with the program for several years.

Campaign to Educate on Residential HHW Materials

A new initiative by the District is to inform residents about collection opportunities for HHW as well as non-toxic alternatives to HHW materials.

6. Economic Incentives

Recycling Drop-Off Clean-Up/Host Community Grants

The District continues to utilize Host Communities to assist with the clean-up and operation of recycling drop-off sites. Host Communities also help the District determine if a change in service frequency or container placement is necessary.

Recipients can earn up to \$2,500 annually (\$625 a quarter) for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping.

The District removes previous requirement that recipients of the Host Community Cleanup Grant have to report hours worked and work a minimum of 15 hours per month to receive the funding for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping.

Recycling Makes \$ense Grant Program

This program is only offered to municipal (cities, villages and township) programs that are not operated by the District directly with District equipment and staff. The only exception is the Jackson Township Recycling Station, which is not a municipality but operates separately from the District.

Due to the increasing appropriations for other District programs (Household Hazardous Waste Management, Yard Waste Management, etc.), the District would like to reduce the expenses of the Recycling Makes \$ense Grant Program by restructuring the funding levels to encourage program expansions and enhancements that will achieve greater waste reduction rates while still incentivizing a community's implementation or continuation of a curbside recycling program.

Program Start-Up Grants (for political subdivisions)

The District awards funding to be used to start or improve curbside programs, recycling drop-offs and/or yard waste drop-offs, as well as purchase equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.

Political Subdivisions Contract Renewal Assistance

The District will continue to work with political subdivisions when contracts are nearing renewal time to encourage them to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling container size, and/or requiring the hauler to provide ongoing education, such as a quarterly direct mailer to residents.

Pay-As-You-Throw Grants

This grant option is a part of the Program Start-Up Grant program and is not considered a standalone program. Grant request under the Program Start-Up Grant may include funding for automated carts, PAYT program start-up, and ton limits based on a scale to give incentive for higher performance

7. Special Program Needs

Health Department Grants

These grants are awarded to Health Departments in the District. The grants include funding for solid waste inspection, enforcement, and well monitoring. Enforcement is defined as investigating open burning or open dumping cases. All litter complaints/enforcement is usually directed to the District's litter deputy via the Sheriff Department Grants.

Only approved health departments on the Ohio EPA Director's List of Approved Health Departments are eligible.

Well Monitoring

The District will not allocate fund for well testing in the budget. In previous budgets, \$25,000 of funds were budgeted and is typically not requested. If well testing is requested, the District will move funds to accommodate on a case by case basis.

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 increased a great amount in 2012, then decreased from 2013 through 2015 due to the decrease in organics collected. The following table presents the historic residential/commercial recovery from 2011-2015, which includes recycling and composting:

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

			Residential	Commer (cial		
Year	Organics	Tires	Recycling	Total	Annual Percentage Change	Annual Tonnage Change	
2011	49,444	14,040	54,371	117,855			
2012	70,381	11,968	78,122	160,471	36%	42,617	
2013	69,595	9,212	75,574	154,381	-4%	-6,091	
2014	59,113	12,344	78,032	149,489	-3%	-4,891	
2015	46,555	11,868	85,325	143,748	-4%	-5,741	
	2011-2015 Average						
	Average A	6%	, D				
	Average T	145,1	189				
	Average A	nnual Tor	nage Chang	ge	6,47	73	

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. Further analysis can be found in Appendix E.

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

Year	Projected Tons Collected	Residential/ Commercial WRR¹
2019	147,065	23%
2020	146,849	23%
2021	146,637	23%
2022	146,428	23%
2023	146,223	23%
2024	146,208	24%

¹ "WRR" means waste reduction and recycling rate.

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 1,011,323 tons, or 3.2%. The following table presents the historic industrial sector recovery from 2011-2015, which includes recycling, composting, and waste reduced by incineration:

Table 5-6a. Historical Industrial Sector Waste Reduction Analysis

	Industrial Sector				
Year	Tons	Annual Percentage Change	Annual Tonnage Change		
2011	911,668				
2012	1,057,161	16.0%	145,492		
2013	1,028,677	-2.7%	-28,484		
2014	1,034,672	0.6%	5,995		
2015	1,024,434	-1.0%	-10,237		
	2011-2015 Average				
A	Average Annual Percentage Change 3.29				
Average Tons Over 5 Year Period 1,01					
	Average Annual To	onnage Change	28,191		

Table 5-6b 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 75 percent. Further analysis can be found in Appendix F.

Table 5-6b. Industrial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Industrial WRR ¹
2019	1,019,243	75%
2020	1,019,243	75%
2021	1,019,243	75%
2022	1,019,243	75%
2023	1,019,243	75%
2024	1,019,243	75%

¹ "WRR" means waste reduction and recycling rate.

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 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 is provided in Appendix O.

A. Overview of the District's Budget

During the 2015 reference year, the District's overall revenue was \$3.58 million. During the first five years of the planning period, revenue is projected to increase from \$3.75 million to \$3.86 million in 2023. Current revenue is generated through disposal fees and recycling revenue.

Projected expenditures were developed based on the programmatic needs identified in Appendices D, H, I and L. During the first five years of the planning period, annual expenditures decrease from \$4.40 million to \$4.37 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 2019 with a carryover balance of \$2.2 million and carryover balance with a low of \$97 thousand during the planning period.

B. Revenue

Overview of How Solid Waste Management Districts Earn Revenue

There are a number of 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. Disposal Fees

The District earned the majority of its revenue from tiered solid waste disposal fees in 2015. The disposal fee has always been the primary funding mechanism for the District. In 2015, the disposal fee schedule was \$1.00 per ton for in-district waste, \$2.00 per ton for out-of-district waste and \$1.00 per ton for out-of-state waste. The disposal fee yielded \$3,570,976 in revenue for the District in 2015.

In-District revenue from 2016 to 2028 is based on the tonnages projected in Appendix D. The Out-of-District and Out-of-State revenues is projected to increase by 1% each year from the actual 2016 revenue. This percentage is based on the average percent increases from 2011 to 2016 by 1.067% for Out-of-District and 0.923% Out-of-State.

2. Generation Fees

The District does not have a generation fee.

3. Designation Fees

The District does not have a designation fee.

4. Other Sources of Revenue

Other sources of revenue include:

- 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-5.
- Recycling Revenue This revenue came from the sale of fiber related commodities from the District's drop-off program. Starting in 2015, recycling revenue is credited to the District's General Fund for interest and non-tier disposal fee revenue purposes; therefore, the District projected \$0 throughout the planning period. In 2015, \$303,673 was credited to the General Fund and \$216,985 in 2016.

Contingent Funding

The District reserves the right, on an as needed basis, to transfer recycling revenue from the general fund to the recycling revenue line item of the solid waste plan implementation fund. The purpose of any transfer would be to balance the budget during any month or year throughout the planning period. The District conservatively projected \$50,000 of recycling revenue transferred from the general fund to the plan implementation fund under this line item starting in 2019 through the end of the planning period. The District would conduct the transfer only if needed or required to ensure the District maintains a positive cash balance in any given year of the planning period.

 Miscellaneous Revenue – Miscellaneous revenue represents revenue resulting from untraditional and unforeseen sources. Miscellaneous revenue is usually from donations and other forms of miscellaneous revenue. From 2010 to 2015, miscellaneous revenue ranged from a low of \$0 in 2011 to a high of \$17,702 in 2013. Based on the previous years, the District projects a conservative \$0 per year throughout the planning period

5. Summary of Revenue

The following table presents the District's total revenue by source for the 2015 reference year and the planning period.

Table 6-1. Summary of Revenue

	Disposal	Other	Total				
Year	Fees	Recycling Revenue	Miscellaneous	Revenue			
Reference Year							
2015	\$3,570,976	\$0	\$11,539	\$3,582,515			
Plann	ing Period						
2019	\$3,703,843	\$50,000	\$0	\$3,753,843			
2020	\$3,729,406	\$50,000	\$0	\$3,779,406			
2021	\$3,756,578	\$50,000	\$0	\$3,806,578			
2022	\$3,784,047	\$50,000	\$0	\$3,834,047			
2023	\$3,811,818	\$50,000	\$0	\$3,861,818			
2024	\$3,841,812	\$50,000	\$0	\$3,891,812			
2025	\$3,872,107	\$50,000	\$0	\$3,922,107			
2026	\$3,902,704	\$50,000	\$0	\$3,952,704			
2027	\$3,933,608	\$50,000	\$0	\$3,983,608			
2028	\$3,964,820	\$50,000	\$0	\$4,014,820			

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

C. Expenses

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 of 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 antilittering 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, the majority 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.

- Salaries and benefits;
- Purchasing and operating equipment (such as collection vehicles and dropoff 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 6-2 presents a summary of expenses for the 2015 reference year and for the first 6 years of the planning period (2019 to 2024) broken into specific expense categories.

Table 6-2. Summary of Expenses

		Year												
Expense Category	R	Reference Planning Period												
		2015		2019		2020		2021		2022		2023		2024
1. Plan Monitoring/Prep.	\$	8,314	\$	8,700	\$	8,700	\$	31,854	\$	32,018	\$	8,864	\$	8,864
2. Plan Implementation														
a. District Administration	\$	525,160	\$	654,798	\$	670,207	\$	686,039	\$	702,306	\$	719,021	\$	719,021
b. Facility Operation	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
c. Landfill Closure/Post-Closure	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
d. Recycling Collection	\$2	,070,860	\$2	,127,500	\$1	,885,000	\$2	2,185,000	\$1	,945,375	\$2	2,008,768	\$1	,858,768
e. Special Collections	\$	76,077	\$	387,250	\$	389,568	\$	391,955	\$	394,413	\$	396,946	\$	356,946
f. Yard Waste/Other Organics	\$	440,621	\$	312,500	\$	312,500	\$	312,500	\$	312,500	\$	312,500	\$	12,500
g. Education/Awareness	\$	232,205	\$	281,800	\$	283,654	\$	285,564	\$	287,531	\$	289,556	\$	289,556
h. Recycling Market Development	\$	94,454	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
i. Service Contracts	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
j. Feasibility Studies	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
k. Waste Assessments/Audits	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

								Year						
Expense Category		eference		Planning Period										
		2015		2019		2020		2021		2022		2023		2024
I. Dump Cleanup	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
m. Litter Collection/Education	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
n. Emergency Debris Management	\$	-	\$	25,000	\$	25,000	\$	25,000	\$	25,000	\$	25,000	\$	25,000
o. Loan Payment	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
p. Other	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
3. Health Dept. Enforcement	\$	325,000	\$	325,000	\$	325,000	\$	325,000	\$	325,000	\$	325,000	\$	325,000
4. County Assistance	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
5. Well Testing	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
6. Out-of-State Waste Inspection	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
7. Open Dump, Litter Law Enforcement	\$	285,000	\$	285,000	\$	285,000	\$	285,000	\$	285,000	\$	285,000	\$	285,000
8. Health Department Training	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
9. Municipal/Township Assistance	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
10. Compensation to Affected Community (ORC Section 3734.35)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Total Expenses	\$4	,057,690	\$4	1,407,548	\$4	1,184,628	\$4	1,527,911	\$4	1,309,143	\$4	4,370,655	\$3	,880,655

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

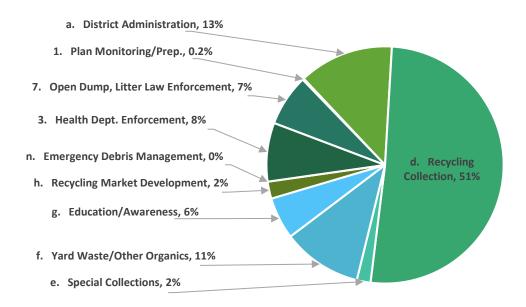
Expense categories in Table 6-2 include the following:

- 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.
- District Administration Budget includes expenditures for salaries, OPERS, workers' compensation, Medicare, and health insurance. Budget includes expenditures for a variety of administrative costs, including but not limited to liability insurance, software subscriptions, supplies, equipment, annual financial audit, postage, utilities, telecommunications, staff training, and trade organization memberships.
- Recycling Collection Expenses reflect the cost of the drop-off recycling program, Recycling Makes Sense grants, Host Community Cleanup grants, and Program Startup grants.
- **Special Collections** Includes expenses for the HHW program and the scrap-tire collection program.
- Yard Waste/Other Organics Includes expenses for yard waste collection contracts and Host Community Cleanup grants for yard waste sites.
- **Education/Awareness** Reflects expenditures for staff for educational presentations, advertisement, and promotion.
- Recycling Market Development in reference year 2015, \$94,454 was awarded to recycling processors in the District through the Recycling and Composting Infrastructure Enhancement Grant program.

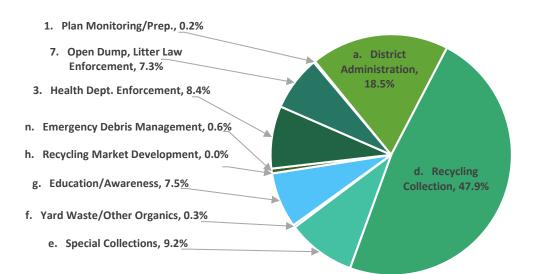
- Emergency Debris Management A flat annual budget of \$25,000 is allocated to this program and will be available to provide financial assistance to local governments in the event a natural disaster occurs and requires debris management and removal.
- Health Dept. Enforcement A flat annual budget of \$325,000 is allocated to this program.
- Open Dump, Litter Law Enforcement A flat annual budget of \$285,000 is allocated to this program.

In 2015, 51% of the District's expenses were attributed to recycling collection.

2015 Distribution of Expenses by Category



Throughout the first five years of the planning period, the distribution of expenses among categories varies slightly. In 2024, the sixth year of the planning period, the top three expense categories include recycling collection at 47.9%, special collections at 9.2%, and Health Department Enforcement at 8.4%.



2024 Distribution of Expenses by Category

D. Budget Summary

Table 6-3 presents a summary of the budget for the 2015 reference year and the first six years of the planning period (2019 to 2024). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue is projected to increase from \$3.58 million in 2015 to \$3.89 in 2024. Expenses decrease from \$4.05 million in 2015 to \$3.88 million in 2024. The District's ending balance during the first six years of the planning period ranges from \$97 thousand million to \$2.2 million annually. Ample funding should be available to operate the programs outlined throughout this Plan.

Table 6-3. Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance		
Referen	ice Year					
2015	\$3,582,515	\$4,057,690	-\$475,175	\$5,744,550		
Plannin	g Period					
2019	\$3,753,843	\$4,407,548	(\$653,705)	\$2,207,809		
2020	\$3,779,406	\$4,184,628	(\$405,223)	\$1,802,586		
2021	\$3,806,578	\$4,527,911	(\$721,333)	\$1,081,252		
2022	\$3,834,047	\$4,309,143	(\$475,095)	\$606,157		
2023	\$3,861,818	\$4,370,655	(\$508,837)	\$97,320		
2024	\$3,891,812	\$3,880,655	\$11,157	\$108,477		

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

1. Reference Year

The reference year for this solid waste management plan is **2015**.

2. Planning Period (first and last years)

The planning period for this solid waste management plan is: 2019 to 2028

3. Goal Statement

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

4. Material Change in Circumstances/Contingencies

In accordance with ORC 3734.56(D), the Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) Board of Directors (Board) will use three criteria to determine if and when a material change in circumstances has occurred. A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to:

- Assure waste disposal capacity during the planning period
- Maintain compliance with applicable waste reduction or access goals
- Adequately finance implementation of the Plan based on waste generation changes

The Ohio Environmental Protection Agency's (EPA) Plan Format v4.0 does not require that the *Plan Update* include a description of the process the Board will use to determine when a material change in circumstances has occurred, and, as a result, requires an amended Plan. However, the Format *recommends* that a process be included in Appendix A, and the District has developed procedures addressing material change in circumstances which are described below.

The Board shall make the determination of whether a material change in circumstances has occurred according to the following guidelines:

a. Assurance of Waste Disposal Capacity

(i) Reduction in Available Capacity
If the Board determines that the extended or permanent closure of a
facility utilized by the District or a combination of the closure of those
landfills accepting solid waste generated in the District, impairs the
capacity assurance requirement of the ORC 3734.53(A) or the Plan

Format, then a material change in circumstances may have occurred. A material change in circumstances has not occurred, however, if the District is able to secure arrangements to manage the waste formerly received at the closed facility by any other properly licensed and permitted solid waste management facility.

The Board will convene within 30 days of the closure of a facility utilized by the District to determine whether alternate capacity is available to the District or whether a material change in circumstances has occurred.

(ii) Increase in Waste Generation

Future capacity needs of the District as outlined in the *Plan Update* are based on waste generation estimates. A significant increase in solid waste generation within the District may affect capacity requirements and result in diminished capacity for handling or disposing of solid waste. A material change in circumstances may have occurred if waste generation increases and the increase have a significant adverse impact on capacity for handling or disposing of solid waste generated within the District at facilities identified in the *Plan Update*. The District will consider a waste generation increase of 30% or greater within a calendar year (January through December) as grounds for the Board to be notified to review, to determine whether a material change in circumstance has occurred. A material change in circumstances has not occurred, however, if District can secure arrangements to manage the increased waste volume at any other properly licensed and permitted solid waste management facility.

District staff, during the term of the *Plan Update*, will review waste generation figures and report to the Policy Committee and the Board quarterly any increase in solid waste generation within the District that warrants the Board's consideration of whether there is adequate capacity available to handle or dispose of the increased solid waste volume. The Board shall review the report and the availability of capacity for District solid waste and determine whether sufficient capacity is available to the District or a material change in circumstances has occurred.

b. Compliance with Applicable Waste Reduction or Access Goals

(i) Delay in Program Implementation or Discontinuance of Essential Waste Reduction or Recycling Activities

Pursuant to the Ohio Revised Code, the Ohio Administrative Code and the State Solid Waste Management Plan (State Plan), the

District has established specific goals regarding waste reduction and recycling within the District. The District will propose several strategies that will greatly reduce materials currently going to area landfills, and also increase local participation rates for existing recycling programs. These strategies will be a major portion of the District's compliance plan for Access and Participation Standards. The Board and Policy Committee will review the implementation of these strategies annually to ensure that the implementation will include an assessment of any changes in these strategies for access Should a significant delay in program and recycling rates. implementation or the discontinuance of essential programs result in the inability of the District to achieve either goal, the Board shall, based on recommendations from the Executive Director, make a determination as to whether a material chance in circumstances has occurred. A material change in circumstances has not occurred. however, where the Board is able to implement new programs or modify existing programs to meet the goals approved in this Plan *Update* to meet State of Ohio requirements.

c. Financing of Plan Implementation

(i) Decrease in Waste Generation

District obtains revenues to finance implementation of the Plan Update from a disposal fee on solid waste received by in-district landfills as authorized by the ORC 3734.573. A significant reduction in the receipt of solid waste within or from outside of the District could result in a significant decrease in revenue and adversely affect the ability of the Board to finance implementation of the Plan Update. The Finance Director for the District monitors revenues and reports financial condition changes in to Board at routine Board meetings. The Board will, based on recommendations from the Executive Director and Finance Director, review and revise the budgets and funding priorities to successfully implement the *Plan Update*. A material change in circumstances may have occurred where a significant reduction in revenue adversely affects the Board's ability to finance plan implementation. The District will consider a waste generation decrease of 30% or greater within a calendar year (January through December) as grounds for the Board to be notified to review, to determine whether a material change in circumstance has occurred. change in circumstances has occurred, however, where the Board is able to maintain critical programs at current funding levels through re-allocation of District funds, or through an increase in District fees,

or creation of other funding mechanisms as permitted by the Ohio Revised Code and the Plan.

d. Change in the Solid Waste Management Facilities Identified or designated by the Plan

Solid waste management facilities are identified in the *Plan Update* to ensure waste disposal options for the District. The District currently is not designating any facilities but reserves the right to do so in this *Plan Update*. If the facilities identified should close, or for some reason they are not able to handle the District waste disposal while no other substitutes are provided, the District would determine a material change. A material change in circumstances has not occurred, however, if the District is able to secure arrangements to manage the waste formerly received at the closed facility by any other properly licensed and permitted solid waste management facility.

The District has chosen to not identify specific trigger points in the above monitoring process. The District feels very comfortable that the above listed procedures will adequately serve the District in determining if a material change has occurred based on the information and data at the time of the evaluation.

e. Procedures Where Material Change in Circumstances has Occurred

If at any time the Board determines that a material change in circumstances has occurred and a revision to the *Plan Update* is necessary, the Board shall direct the Policy Committee to prepare a Draft Amended Plan. The Board shall proceed to adopt and obtain approval of the Amended Plan in accordance with the ORC 3734.55 (A) and (C).

The District shall constantly monitor the circumstances of whether there is a material change in this *Plan Update*. If the District determines a material change in circumstances has occurred the Board shall notify Ohio EPA within 60 days.

5. Explanations of differences between data previously reported and data used in the solid waste management plan.

a. Differences in quantities of materials recovered between the annual district report and the solid waste management plan

The District's Annual District Report (ADR) did not include the part-time Health Department operated drop-off at the Canton City Recycling Center. This drop-off collected 24.57 tons of recyclables.

b. 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 reference year (2015), which includes curbside recycling programs, recycling drop-off sites, collection service providers and compost facilities/activities.

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

Table B-1. Inventory of Curbside Recycling Services
Available in the Reference Year

County	ID#	Name of Curbside	Curk	e of side	How Service is Provided	Pick-Up	Materials Collected ⁽¹⁾	Type of Collection	Tons	
		Service	NS	S			301100100			
Stark	NSC1	City of Alliance	✓		Contract between City and Kimble	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	582	
Stark	NSC2	City of Canal Fulton	✓		Contract between City and Republic	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, manual	152	
Stark	NSC3	City of Canton	✓		City Operated	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	1,958	
Stark	NSC4	City of North Canton	✓		Contract between City and Kimble	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	1,350	
Stark	NSC5	Village of Hartville	✓		Contract between Village and Republic	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	NA	
Tuscarawas	NSC6	Village of Baltic	✓		Contract between Village and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream	44	
Tuscarawas	NSC7	Village of Bolivar	✓		Contract between Village and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	73	
Tuscarawas	NSC8	Village of Dennison	✓		Contract between Village and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, Semi-automated	163	
Tuscarawas	NSC9	City of Dover	✓		Contract between City and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	797	
Tuscarawas	NSC10	Village of Gnadenhutten	✓		Village Operated	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	194	
Tuscarawas	NSC11	City of New Philadelphia	✓		City Operated	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	465	
Tuscarawas	NSC12	Village of Strasburg	✓		Contract between Village and Republic	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	189	
Tuscarawas	NSC13	Village of Sugarcreek	✓		Contract between Village and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, Semi-automated	209	
Tuscarawas	NSC14	City of Uhrichsville	✓		Contract between City and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, Semi-automated	288	
Wayne	NSC15	Village of Doylestown	✓		Contract between Village and Republic	Twice/ Month	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream	84	
Wayne	NSC16	City of Orrville	✓		Contract between City and Kimble	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	549	
Wayne	NSC17	City of Rittman	✓		Contract between City and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	310	
Wayne	NSC18	Village of Marshallville	✓		Contract between Village and Kimble	Once/ 2 weeks	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	26	
Wayne	NSC19	City of Wooster	✓		Contract between City and Waste Management	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	1,435	
Stark	SC1	City of Massillon		✓	Contract between City and Kimble	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	1,554	
Stark	SC2	Navarre village*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A	
Stark	SC3	Bethlehem township*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A	

County	ID#	Name of Curbside	Curk	e of side	How Service is Provided	Pick-Up	Materials Collected ⁽¹⁾	Type of Collection	Tons
		Service	NS	S	11011404				
Stark	SC4	Meyers Lake village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC5	Canton township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC6	Hills and Dales village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC7	Jackson township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC8	Lake township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC9	Lawrence township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC10	Limaville village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC11	Lexington township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC12	Louisville city*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC13	Marlboro township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC14	Nimishillen township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC15	East Canton village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC16	Osnaburg township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC17	Minerva village*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC18	Paris township*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC19	Perry township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC20	East Sparta village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC21	Pike township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC22	Plain township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC23	Magnolia village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC24	Waynesburg village		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC25	Sandy township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC26	Beach City village*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC27	Brewster village*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC28	Wilmot village*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC29	Sugar Creek township*		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC30	Tuscarawas township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Stark	SC31	Washington township		✓	DNR	DNR	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP	Single stream, DNR	N/A
Totals								1	0,422

Notes:

¹Mg = Magazines, Mp = Mixed Paper, N = Newspaper, Cc = Corrugated Cardboard, As = Aseptic Containers, GI = Glass Bottles, PI = Plastic Bottles and Jugs, AI = Aluminum Cans, Sc = Steel Cans, Ph = Phone Books

The PAYT (Pay-As-You-Throw) column was removed from this table. In the reference year, there were no curbside recycling programs that utilized a PAYT fee structure for waste disposal.

Tonnage reported in Table B-1 reflects the most accurate information available, which was reported by cities, villages, townships, and haulers.

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

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
Stark	5	31	5,597
Tuscarawas	9	0	2,422
Wayne	5	0	2,404
Totals	19	31	10,422

Approximately 10,422 tons of materials were recycled between 19 non-subscription and 31 subscription curbside recycling programs in 2015.

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

		Name of Drop-off		Ту	ре						Tons
County	ID#	Name of Drop-off Site	Urk	oan	Rι	ıral	How Service is Provided	Open to Public	Materials Accepted ⁽¹⁾	Access Credit	Collected
		Oite	FT	PT	FT	PT	TTOVIGEU	Tublic	Accepted	Orean	SWMD
Stark	FTU1	Alliance Recycling Center	✓				Alliance Recycling	Mon-Fri, 8am- 4:30pm; Sat, 8am-12pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	N/A²
Stark	FTU2	Bethlehem Township (Navarre Village - St. Clement Church)	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	55.64
Stark	FTU3	Bethlehem Township (Navarre Village - Village Hall)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	165.40
Stark	FTU4	Canton City (Fishers Foods)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	95.16
Stark	FTU5	Canton City (Kimble Recycling)	✓				Kimble	Mon-Fri, 6am- 4pm; Sat, 6am-12pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	N/A1
Stark	FTU6	Canton City (Timken Dueber Avenue)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	31.67
Stark	FTU7	Canton Township	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	264.56
Stark	FTU8	Jackson Township (Recycling Station)	✓				Jackson Township	Mon, Tues, Thurs, Fri, 9am-5pm, Sat, 8am-4pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	1,454.48
Stark	FTU9	Lake Township (Hartville Flea Market)	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	226.52

				Ту	pe						Tons
County	ID#	Name of Drop-off	Urk	oan		ral	How Service is		Materials	Access	Collected
		Site	FT	РТ	FT	PT	Provided	Public	Accepted ⁽¹⁾	Credit	from SWMD
Stark	FTU10	Lake Township (Midway Street)	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	502.82
Stark	FTU11	Lake Township (Quail Hollow (closed in 2016))	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	17.55
Stark	FTU12	Lawrence Township	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	63.94
Stark	FTU13	Lawrence Township (Canal Fulton City)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	236.08
Stark	FTU14	Lexington Township	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	64.75
Stark	FTU15	Louisville City	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	269.43
Stark	FTU16	Massillon City (City Garage)	✓				District	3:30pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	25.38
Stark	FTU17	Massillon City (Fisher Foods)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	256.67
Stark	FTU18	Massillon City (Recreation Center)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	204.76
Stark	FTU19	Nimishillen Township (Anthony Petitti Garden)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	116.14
Stark	FTU20	Nimishillen Township (Township Hall)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	200.08
Stark	FTU21	Osnaburg Township (Fire Station)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	108.63
Stark	FTU22	Paris Township (Minerva Village)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	201.25
Stark	FTU23	Paris Township (Robertsville)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	27.06
Stark	FTU24	Paris Township (Township Hall)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	64.45
Stark	FTU25	Perry Township (Administration Building)	✓				Perry Township		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	182.17
Stark	FTU26	Perry Township (Southway Street)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	428.63
Stark	FTU27	Perry Township (Township Garage)	✓				Perry Township		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	50.37
Stark	FTU28	Plain Township (Diamond Park)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	457.61

				Ту	ре						Tons
County	ID#	Name of Drop-off	Urk	oan		ral	How Service is	Open to	Materials	Access	Collected
		Site	FΤ	РТ	FT	PT	Provided	Public	Accepted ⁽¹⁾	Credit	from SWMD
Stark	FTU29	Plain Township (Glenwood Intermediate School)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	139.75
Stark	FTU30	Plain Township (Oakwood Middle School)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	103.20
Stark	FTU31	Plain Township (Saint Michael Church)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	73.99
Stark	FTU32	Plain Township (Taft Elementary)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	310.62
Stark	FTU33	Sugar Creek Township (Beach City Village)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	52.47
Stark	FTU34	Sugar Creek Township (Brewster Village)	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	149.69
Stark	FTU35	Sugar Creek Township (Wilmot Village)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph		38.31
Stark	FTU36	Tuscarawas Township (Township Office)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	207.68
Stark	PTU1	Canton City Recycling Center		✓			Health Department Operated	Mon, Wed, Fri, 10am-2pm Except for legal holidays.	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	24.57
Stark	FTR1	Marlboro Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	80.16
Stark	FTR2	Pike Township (Countywide RDF)			✓		Countywide RDF	Mon-Fri, 6:30am-4pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	NA
Stark	FTR3	Pike Township (Fire Station)			✓		District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	76.68
Stark	FTR4	Pike Township (Township Office)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	139.79
Stark	FTR5	Sandy Township (Administrative Building)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	67.12
Stark	FTR6	Sandy Township (Village of Magnolia)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	32.62
Stark	FTR7	Washington Township			✓		District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	133.93
Tuscarawas	FTU37	Dover City (Gale's Recycle It)	✓				Gale's Recycle It	4pm; Sat,	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	N/A
Tuscarawas	FTU38	Dover City (Parkside Buehlers)	✓				Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	233.98

				Ту	pe						Tons
County	ID#	Name of Drop-off	Urk	oan		ıral	How Service is	Open to	Materials	Access	Collected
		Site	FΤ	РТ	FΤ	РТ	Provided	Public	Accepted ⁽¹⁾	Credit	from SWMD
Tuscarawas	FTU39	Lawrence Township (Bolivar Giant Eagle)	✓				Contract between District and Kimble	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph		197.29
Tuscarawas	FTU40	Mill Township	✓				Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	137.23
Tuscarawas	FTU41	New Philadelphia City (Buehlers)	✓				Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	369.49
Tuscarawas	FTR8	Dover Township (Kimble)			✓		Kimble Recycling and Disposal		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph		21.95
Tuscarawas	FTR9	Fairfield Township			✓		Contract between District and Kimble	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	19.71
Tuscarawas	FTR10	Franklin Township (Strasburg Village)			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	105.86
Tuscarawas	FTR11	Jefferson Township			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	45.49
Tuscarawas	FTR12	Oxford Township			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	136.28
Tuscarawas	FTR13	Perry Township (West Chester Community)			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	Opened in 2016
Tuscarawas	FTR14	Sandy Township			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	122.65
Tuscarawas	FTR15	Sugar Creek Township (Sugar Creek Village - Bakers' IGA)			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	43.84
Tuscarawas	FTR16	Warwick Township			√		Contract between District and Kimble	Mon-Fri, 7:30am- 3:30pm Sat, 12pm- 7pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	24.35
Tuscarawas	FTR17	Washington Township			√		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	22.27
Tuscarawas	FTR18	Wayne Township			✓		Contract between District and Kimble		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	50.03
Wayne	FTU42	Chippewa Township	√				District	Mon-Fri, 7am- 3:30pm 2nd & 4th Sat, 9am-12pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	49.69
Wayne	FTU43	East Union Township (Apple Creek Village)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	122.18
Wayne	FTU44	Green Township (Orrville City - Buehler's Fresh Foods)	√				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	124.51

				Ту	pe						Tons
County	ID#	Name of Drop-off	Urk	oan		ıral	How Service is	Open to	Materials	Access	Collected
,		Site		РТ			Provided	Public	Accepted ⁽¹⁾	Credit	from SWMD
Wayne	FTU45	Green Township (Smithville Village)	~				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	162.84
Wayne	FTU46	Sugar Creek Township (Dalton Village)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	197.21
Wayne	FTU47	Sugar Creek Township (Kidron)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	105.74
Wayne	FTU48	Wooster City (Buehlers)	✓				District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	231.15
Wayne	FTU49	Wooster City (Wooster College)	✓				District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	53.46
Wayne	FTR18	Baughman Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	55.94
Wayne	FTR19	Canaan Township (Creston Village)			✓		District	Mon-Fri, 7am- 7pm; Sat, 9am-12pm	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	63.91
Wayne	FTR20	Chester Township			√		District	·	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	96.38
Wayne	FTR21	Clinton Township (Shreve Village)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	173.98
Wayne	FTR22	Congress Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	35.69
Wayne	FTR23	Congress Township (West Salem Village)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	92.44
Wayne	FTR24	Franklin Township			√		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	67.95
Wayne	FTR25	Milton Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	57.61
Wayne	FTR26	Paint Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	33.58
Wayne	FTR27	Plain Township			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	56.24
Wayne	FTR28	Salt Creek Township (Fredericksburg Village)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	65.56
Wayne	FTR29	Wayne Township (Township Garage)			✓		District	Dawn to Dusk	Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	105.61
Wayne	FTR30	Wooster Township (Valley College Grange)			✓		District		Mg, Mp, N, Cc, As, Gl, Pl (#1- #7), Al, Sc, Ph	Yes	142.68
Total									<u> </u>		11,026.54

Notes:

¹ Mg = Magazines, Mp = Mixed Paper, N = Newspaper, Cc = Corrugated Cardboard, As = Aseptic Containers, GI = Glass Bottles, PI = Plastic Bottles and Jugs, AI = Aluminum Cans, Sc = Steel Cans, Ph = Phone Books, Tx = Textiles

FT = Full-Time, PT = Part-Time, DNR = Did Not Report

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	Tons of Materials Collected
Stark	35	1	7	0	7,402
Tuscarawas	5	0	11	0	1,530
Wayne	8	0	13	0	2,094
Total	48	1	31	0	11,027

FT = Full-Time, PT = Part-Time

Approximately 11,010 tons of materials were recycled by 48 full-time urban drop-offs, 31 full-time rural drop-offs, and 1 part-time urban drop-off.

In 2015, there were no mixed municipal solid waste material recovery facilities used to manage District-generated waste.

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	Total Waste	Recovery Rate in 2015
None					0	0

The following table presents haulers that provided waste and recycling collection services within the District during the reference year.

²Tonnage from drop-off excluded to avoid double-counting.

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

Name of Provider	Trash	Collect	tion Ser	vice	Recycling Collection Service		
Tallio of Florido.	PAYT	RES	СОМ	IND	RES	СОМ	IND
Public Sector							
Canton Sanitation Department (Superintendent)		✓	✓		✓		
New Philadelphia City		✓	✓		✓		
Gnadenhutten Village		✓	✓		✓		
Private Sector	<u>'</u>						
123 Disposal, Inc.			✓				
Ace Roll-Off Service		✓	✓				
American Waste Management Services		✓	✓				
Bailey's Waste Service		✓	✓				
C. Martin Trucking		✓	✓	✓			
Cardinal Waste Service		✓	✓		✓	✓	
Cobra Rolloff		✓	✓	✓			
R & R Sanitation		✓	✓				
Darrel's Disposal LLC		✓	✓				
Earth 'N Wood Landscaping Supply		✓			✓		
J & J Refuse/Kimble Companies		✓	✓		✓	✓	
Toles and Son Waste Collection LLC		✓	✓				
Jim Bob's Refuse		✓	✓				
JMW Trucking Services			✓				
Kenstar Services		✓	✓				
Klein Hauling		✓	✓				
Jones Rolloff		✓	✓	✓			
Just Us Disposal		✓	✓				
Meta Waste		✓	✓				
Miller and Company		✓	✓	✓			
Miller's Reliable Waste Service		✓					
Pitstop Refuse		✓	✓				
Waste Management of Ohio (formerly listed as Metro)		✓	✓	✓	✓	✓	✓
Republic Service		✓	✓		✓	✓	
Rumpke Transportation		✓	✓		✓	✓	
Shaffing Hauling		✓	✓				
Spenser White Waste		✓	✓				
Stevens Hauling & Rubbish		✓	✓		✓		
Tippel's Rubbish Removal		✓	✓				
Tony's Hauling		✓	✓				
Trissel Rolloff		✓	✓				

Name of Provider	Trash	Collect	Recycling Collection Service				
	PAYT	RES	COM	IND	RES	COM	IND
Vaughn's Refuse		✓	✓				
Waste Management of Ohio		✓	✓		✓		
Whetstone Hauling		✓	✓				
William's Waste Service		✓	✓				

Notes:

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

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

			Open			eceived e SWMD
ID#	Facility or Activity Name	Class	to Public	Location	Food Waste	Yard Waste
	est Facilities					
Stark C	County					
YW1	Earth 'N Wood Products, Inc. 1	IV	✓	5335 Strausser St., North Canton, OH	0	23,905
YW2	Miller Landscaping Materials LLC	IV		6690 Erie St. SW, Navarre, OH	0	0
YW3	Stark C&D Disposal, Inc.	IV		7280 Lisbon St., Louisville, OH	0	660
YW4	Warstler Bros. Landscaping	IV		4125 Salway Rd. NW, Canton, OH	0	213
YW5	Uniontown Topsoil and Mulch LLC	IV		1916 Erie Ave. NW, Massillon, OH	0	538
YW6	Mr. Mulch	IV		3704 Twelfth St. NW, Canton, OH	0	6,465
YW7	Kimble Transfer & Recycling Fac Canton	IV		2295 Bolivar Rd SW, Canton, OH	0	0
YW8	Proper Lawncare & Landscape, Inc.	IV		539 Mill Rd. SE, Canton, OH	0	0
YW9	Minerva Enterprises	IV		9000 Minerva Rd. SE, Waynesburg, OH	0	5
YW10	Mike's Tree & Landscape / Alliance Mulch & Wood	IV		800 W. Bayton St., Alliance, OH	0	0
YW11	Weisgarber Trucking, Inc.	IV		11506 Finefrock Rd. SW, Massillon, OH	0	313
YW12	Yoder Landscape & Nursery, Inc.	IV		215 Market Ave. SW, Hartville, OH	0	820
Tuscar	awas County			,		
YW13	Bull Country Composting ²	III		10316 Kohr Road NW, Dundee, OH	0	2,037
YW14	Kimble Compost - Dover	IV		3596 State Rte. 39 NW, Dover, OH	0	0
YW15	Village of Tuscarawas	IV	✓	3317 Tuscarawas Rd. SE, Tuscarawas, OH	0	71
YW16	Black Snake Composting Facility	IV		Township Rd. 380, Dover, OH	0	16
YW17	Earth 'N Wood Products, Inc. ³	IV	✓	5335 Strausser St., North Canton, OH	0	1,708
Wayne	County					
YW18	Paradise Composting II ⁴	II	✓	4300 Mechanicsburg Rd., Smithville, OH	758	782
YW19	OARDC Ohio Agricultural Research	III		1680 Madison Ave., Wooster, OH	0	143

	fr					Tons Received from the SWMD		
ID#	Facility or Activity Name	Class	to	Location	Food	Yard		
			Public		Waste	Waste		
YW20	Kellys Kompost	Ш		8624 Carr Rd., Fredericksburg, OH	0	93		
YW21	Tope's	III		7717 Dalton-Fox Lk Rd., North Lawrence, OH	0	72		
YW22	Zollinger C&D Landfill	IV		11687 Wadsworth Rd., Rittman, OH	0	809		
YW23	EDT Restoration Service	IV		3737 West Salem Rd., Burbank, OH	0	0		
	Orrville Compost	IV	✓	Apple Ave., Orrville, OH	0	90		
	Village of Shreve	IV		S. Wells St., Shreve, OH	0	254		
YW26	Paradise Lawncare, Inc. ⁵	IV	✓	6203 Akron Rd., Smithville, OH	0	1,094		
YW27	Wayne Lawn and Landscape	IV		1150 West Milltown Rd., Wooster, OH	0	32		
Out-of-	District Facilities							
	#1 Landscape	IV		3775 Ridge Rd., Medina, OH	0	0		
	B-Sharp Property Maintenance	IV		6161 S. Main St., Clinton, OH	0	584		
	Smith Bros., Inc.	IV	✓	3087 Marks Rd., Medina, OH	0	796		
11100	Crimer Brees, me.			Tota				
Commi	unity Yard Waste Collection Progra	me		. 500	.,	11,000		
	Village of Dennison - Tuscarawas County					172		
	Lawrence Township - Tuscarawas Count					767		
	Composting Program - Wayne County	у			1,716			
	Jackson Township Yard Waste Drop-Off	Stork (County		1,710	5,457		
	Village of Brewster - Stark County	- Stark C	Journey			528		
VW26	Canton Township - Stark County					2,531		
	Lake Township - Stark County					4,827		
	Lawrence Township - Stark County					1,294		
	Nimishillen Township - Stark County							
						2,909		
	Perry Township - Stark County	4				1,601		
Y VV 4 1	Plain Township, Fire Station - Stark Cour	ily Countri				3,243		
	Plain Township, Warstler Brothers - Stark	County				2,442 1,633		
10043	Tuscarawas Township - Stark County			Tota	1 4 740			
1/1.1.2	na Onevetiene			Tota	I 1,716	31,121		
wuichi	ng Operations							
	None							
					Total	0		
Land A	pplication							
	None							
				Tota	I 0	0		
	bic Digestion							
YW44	Wooster Renewable Energy					DNR		
				Tota	I 0	0		
Hauler	and Walmart Food Waste Data							
YW45	Hauler and Walmart				1,530	0		
				Grand Tota		72,621		

Notes

¹ Tonnage will be removed for Earth 'N Wood Products due to double counting. This facility received tonnage from community yard waste collection programs. Tonnage corrected due to report sent to EPA was originally marked with cubic yards and not tons.

² The tonnage for this facility includes materials received from Stark County.

³ Tonnage corrected due to report sent to EPA was originally marked with cubic yards and not tons.

There were 29 registered compost facilities in Ohio that managed food waste and yard waste generated in the District during the reference year. Additionally, there were 15 community yard waste programs in operation. Table B-5b summarizes the facilities and activities that managed the District's organics during the reference year. Table B-5b demonstrates the adjustments that were made to calculate the actual organics tonnage diverted from landfills.

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

Number of Each Type of Facility/Program						Tons	
Compost Facilities	Community Collection Programs	Mulching Operations	Land Applications	Anaerobic Digestion	Food Waste	Yard Waste	Total
30	13	0	0	1	3,246	72,621	78,004
			Quantity Ad	justments			
Tonnage removed for Earth 'N Wood Products due to double counting. This facility received tonnage from community yard waste collection programs.						-23,905	
Tonnage removed for Paradise Composting II due to double counting. This facility received tonnage from community yard waste collection programs.						-782	
Tonnage removed for Paradise Lawn Care, Inc. due to double counting. This facility received tonnage from community yard waste collection programs.						-1,094	
Tonnage removed for YW-30 and YW-31 due to double counting. Tonnage collected for these programs was managed at Bull Country Composting.						-939	
Food waste tonnage recycled by industries at facilities that do not qualify for Table B-5 was added.						-	
Food waste to Table B-5 was	onnage recycled s added.	by grocery store	74				
Adjusted To	otals				5,120	45,901	51,021

A total of 51,021 tons of District-generated organics were diverted during 2015.

⁴ Tonnage will be removed for Paradise Composting II due to double counting. This facility received tonnage from community yard waste collection programs.

⁵ Tonnage will be removed for Paradise Lawn Care, Inc. due to double counting. This facility received tonnage from community yard waste collection programs.

⁶ The tonnage for this facility will be removed to avoid double counting. Tonnage included in YW13.

⁷ The tonnage for this facility will be removed to avoid double counting. Tonnage included in YW13.

APPENDIX C POPULATION DATA

APPENDIX C. Population Data

As of July 1, 2015, the population of the three counties (Stark, Tuscarawas, Wayne) comprising the District totaled 584,144. The community populations which need to be added or subtracted to the District 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, "2015 Population Estimates for Cities, Villages and Townships", published in May, 2016. As indicated in the table, the total adjusted population for the district is 586,524 for the reference year of 2015.

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

Community	Stark
Before Adjustment	375,165
Additions	
Village of Magnolia	259
Village of Minerva	1,734
City of Alliance	39
Subtractions	
None	0
After Adjustment	377,197

Community	Tuscarawas
Before Adjustment	92,916
Additions	
Village of Baltic	146
Subtractions	
None	0
After Adjustment	93,062

Community	Wayne
Before Adjustment	116,063
Additions	
Village of Creston	92
City of Rittman	114
Subtractions	
City of Norton	4
After Adjustment	116,265

Total District Adjusted	586,524
Population	300,324

Source of Information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township," May 2016. https://development.ohio.gov/files/research/P5027.pdf

Population projections for entire planning period are shown below in Table C-2. Reference year 2015 populations represent the actual estimates for that year after applying the adjustments listed in Table C-1. Population for succeeding five-year projections (i.e., 2020 and 2025) have been determined individually for each county in the District by:

- Calculating the percent change in population for each 5-year interval projection estimate in the Ohio Development Services Agency (ODSA) publication ("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);
- 2. Multiplying the percent change calculated in "1" by prior 5-year estimate. For example, the unadjusted Stark County projection for 2020 has been calculated by:

2020 unadjusted estimate = (% change between 2015 and 2020 ODSA projections x 2015 unadjusted estimate) = (-0.93% + 1) x 375,165 = 371,692

3. Adding the adjustments to the unadjusted estimate. The adjusted 2020 population for Stark County would be:

2020 adjusted estimate = 371,692 + 2,032 = 373,724

Table C-2. Population Projections

Year	Stark	Tuscarawas	Wayne	Total District Population
2015	377,197	93,062	116,265	586,524
2016	376,502	93,020	116,237	585,759
2017	375,808	92,978	116,208	584,994
2018	375,113	92,935	116,180	584,229
2019	374,419	92,893	116,152	583,464
2020	373,724	92,851	116,123	582,699
2021	373,006	92,801	116,028	581,834
2022	372,287	92,751	115,933	580,970
2023	371,568	92,700	115,837	580,106
2024	370,850	92,650	115,742	579,242
2025	370,131	92,600	115,647	578,378
2026	369,420	92,566	115,541	577,527
2027	368,709	92,532	115,436	576,677
2028	367,999	92,498	115,331	575,827

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.

Population projections for years between the five-year intervals has been determined as follows:

 Using a straight-line projection to calculate the unadjusted population change each year. For Stark County, the unadjusted annual change in population from 2015 to 2020 was calculated by:

```
Unadjusted annual change = (ODSA 2020 projection – ODSA 2015 projection) / 5 years = (368,210 – 371,650) / 5 = -695
```

 Adding the unadjusted annual change to the adjusted population for the previous year. Once again using Stark County as an example, the adjusted population for 2016 has been calculated as follows:

```
Adjusted projection (2016) = Adjusted 2015 projection + unadjusted annual change = 377,197 + (-695) = 376,502
```

The procedure for developing population projections as described above is slightly modified from the default method suggested in the Format v4.0. These modifications have been used to present a more consistent and smoother transition from actual population estimates in 2015 to projections. The May 2016 publication from ODSA shows that the 2015 population in the each of the District's three counties declined less than predicted based on ODSA's population projection document published in 2013.

Figure C-1 shows a steady decrease in the population throughout the planning period. The population is expected to decrease by 1.1 percent from 2015 until the fifth year of the planning period (year 2023), and decrease by 2.5 percent by the end of the planning period.

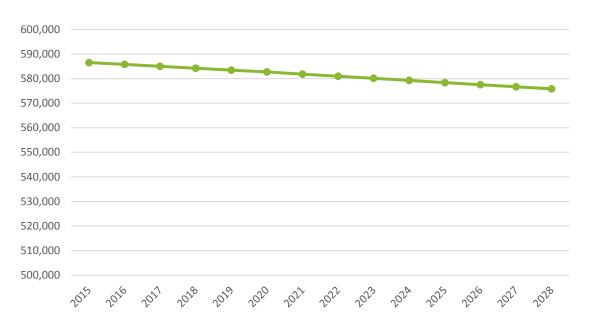


Figure C-1. District Population: 2015 through 2028

APPENDIX D DISPOSAL DATA

APPENDIX D. Disposal Data

A. Reference Year Waste Disposed

The majority of the District waste which was direct-hauled for disposal in the reference year was sent to the in-district landfills (see Table D-1a). The American Landfill, the Countywide Recycling & Disposal Facility, and the Kimble Sanitary Landfill received 35 percent, 41 percent, and 21 percent of the District's direct-hauled waste, respectively. Out-of-district landfills accepted less than three percent of the directed-hauled waste.

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

	Locatio	n	Waste R	eceived fro	m SWMD (1	ГРҮ)
Facility Name	County	State	Residential/ Commercial	Industrial	Excluded	Total
In-district facilities						
American Landfill	Stark	ОН	58,051	187,942	1,937	247,930
Countywide Recycling & Disposal Facility	Stark	ОН	133,433	121,018	38,190	292,641
Kimble Sanitary Landfill	Tuscarawas	OH	92,052	25,216	34,321	151,589
Liberty Tire Services of Ohio	Stark	ОН	1,459	0	0	1,459
Out-of-district facilities		·				
Coshocton Landfill	Coshocton	OH	10	0	0	10
Crawford County Sanitary Landfill	Crawford	ОН	5	0	50	55
Pine Grove Regional Facility	Fairfield	OH	2	6	0	8
Hancock County Sanitary Landfill	Hancock	ОН	2	0	0	2
Carbon Limestone Landfill LLC	Mahoning	ОН	4,950	423	40	5,413
Mahoning Landfill	Mahoning	OH	4	823	9	836
Noble Rd Landfill	Richland	OH	674	4,732	20	5,426
Evergreen Recycling & Disposal	Wood	ОН	0	0	11	11
County Environmental of Wyandot	Wyandot	ОН	3	0	0	3
Suburban Landfill	Perry	OH	6	28	97	131
Apex Sanitary Landfill	Jefferson	OH	6,909	0	0	6,909
Tunnel Hill Reclamation Landfill	Perry	ОН	93	0	0	93
Out-of-state facilities						
Unknown		WV	1	31		32
Unknown		IN	0	15		15
Total Direct Haul Waste Di	sposed in La	ndfills	297,654	340,234	74,675	712,563

Source(s) of Information: Ohio Environmental Protection Agency, "2015 Annual District Review Forms for Stark-Tuscarawas-Wayne SWMD."

There were no captive landfills located within the District during the reference year. In addition, no captive landfills located outside the District were used to manage waste generated within the District.

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

Facility Nama	Location	on	Tons Re	Tons Received from SWMD			
Facility Name	County	State	Industrial	Excluded	Total		
In-district facilities							
None			0	0	0		
Total Waste Disposed	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 the transferred waste (84 percent) was sent to the Kimble Transfer Station located in Stark County, which then sent the waste to the Kimble Sanitary Landfill.

Table D-2. Reference Year Waste Transferred

	Locatio	on	Waste Received from the SWMD (TPY)						
Facility Name	County	State	Residential/ Commercial	Industrial	Excluded	Total	Destination		
In-district facilities									
Kimble Transfer & Recycling Facility - Canton	Stark	ОН	159,846	5,432	5,684	170,962	Kimble Sanitary Landfill		
Out-of-district fac	ilities								
J & J Refuse and Recycling	Carroll	ОН	287	0	69	356	Kimble Sanitary Landfill		
Broadview Heights Recycling Center	Cuyahoga	ОН	5,326	0	12	5,338	Noble Road Landfill		
Harvard Road Transfer Station	Cuyahoga	ОН	8	0	0	8	Noble Road Landfill		
Cleveland Transfer/Recycling Station	Cuyahoga	ОН	44	0	0	44	American Landfill		
Delaware County Transfer Station	Delaware	ОН	0	0	0	0	Crawford County Landfill		
Allied Waste - Mt	Knox	ОН	0	0	3	3	unknown		

	Locatio	on	Waste Rece				
Facility Name	County	State	Residential/ Commercial	Industrial	Excluded	Total	Destination
Vernon							
Richland County Transfer Station	Richland	ОН	6,099.0	0	272	6,371	Noble Road Landfill
Akron Central Transfer Station	Summit	ОН	17,881	0	0	17,881	American Landfill
BFI Glenwillow Transfer Station	Cuyahoga	ОН	5	0	0	5	unknown
Kimble Transfer & Recycling Facility - Cambridge	Guernsey	ОН	235	0	0	235	Kimble Sanitary Landfill
Republic Waste Recovery (Akron Recyclery)	Summit	ОН	1,484	0	0	1,484	Countywide Recycling & Disposal Facility
PennOhio Coal Co, dba Kimble Transfer & Recycling	Summit	ОН	53	0	12	65	Kimble Sanitary Landfill
Out-of-state facilities							
none							
Total 1	ransferred \	Waste	191,268	5,432	6,052	202,752	

Source(s) of Information: Ohio Environmental Protection Agency, "2015 Annual District Review Forms for Stark-Tuscarawas-Wayne SWMD" and "2015 Facility Data Report."

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 less than 10 percent of the total waste disposed.¹

Table D-3. Reference Year Total Waste Disposed

Disposal Method	Residential/ Commercial	Industrial	Total	% of Total Waste Disposed
Direct-Hauled	297,654	340,234	637,888	76%
Transferred	191,268	5,432	196,700	24%
Total	488,922	345,666	834,588	100%
% of Total	59%	41%	100%	

Source(s) of Information: Ohio Environmental Protection Agency, "2015 Annual District Review Forms for Stark-Tuscarawas-Wayne SWMD."

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

D-3

B. Historical Waste Analysis

2012

2013

2014

2015

582,688

594,070

584.414

586,524

4.45

4.36

4.50

4.57

The amount of solid waste disposed from the District since 2006 has decreased substantially (see Table D-4).

Residential/Commercial Industrial **Total Waste Solid Waste Solid Waste** Year **Population** Rate (ppd) Tons Tons Tons 2006 587,199 6.11 654.534 358,702 1,013,235 5.48 387,281 2007 588,429 588,779 976,060 5.54 2008 589.668 595.668 389.395 985.063 4.89 527.156 795.233 2009 590.916 268.077 2010 589,480 4.49 483,175 331,639 814,814 2011 4.61 490,745 358,609 849,354 582,688

Table D-4. Historical Disposal Data

Source(s) of Information: Ohio Environmental Protection Agency, Annual District Review Forms for Stark-Tuscarawas-Wayne SWMD.

473,266

472,815

480.127

488,922

345,930

298,329

304.808

345,666

819,196

771,144

784.935

834,588

However, the disposal tonnage seems to have stabilized somewhat during the last five or six years as shown in Figure D-1.

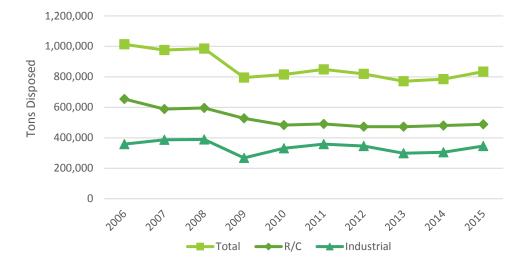


Figure D-1. District Disposal: 2006 – 2015

Residential-Commercial Disposal

Residential/commercial (R/C) disposal has decreased from more than 650,000 tons in 2006 to approximately 489,000 tons in 2015. During the last five years, there has been much less variability in the amount of disposal from the R/C sector, and the average annual disposal over this time period was approximately 481,000 tons.

The per capita disposal rate for residential/commercial waste has also decreased from 6.11 pounds per person per day (ppd) in 2006 to 4.57 ppd in 2015. As shown in Figure D-2 below, the disposal rate has been slightly more variable than changes in the tons disposed during this time period. The average disposal rate from 2010 through 2015 was 4.50 ppd. The average disposal rate for 2011 through 2015 was also 4.50 ppd. The annual rate of change in the disposal rate from 2011 through 2015 was approximately -0.26 percent per year.



Figure D-2. R/C Tons Disposed vs. Disposal Rate: 2006 - 2015

The R/C disposal rate for the District was also compared with other solid waste district in Ohio, similar in square miles, population, and/or population density (see Figure D-3 below). The District is:

- Very similar to Geauga-Trumbull (GT) and Clark regarding population density;
- Reasonably similar to Geauga-Trumbull, Coshocton-Fairfield-Licking-Perry (CFLP), and Delaware-Knox-Marion-Morrow (DKMM) in population; and
- Similar to CFLP and DKMM in physical size (square miles).

Figure D-3 shows that each of these SWMDs experienced a decline in the R/C disposal rate from 2006 through 2009. Since 2009, the disposal rates have been less variable, and each of the disposal rates has increased slightly since 2013 with the exception of CFLP's rate. The R/C disposal rate for STW has been

consistently higher than the other districts included in Figure D-3, which may be explained by the larger urban areas and higher population in the District.

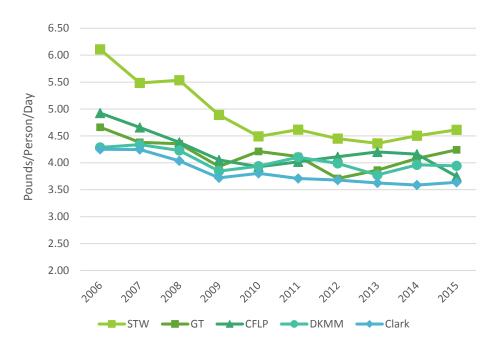


Figure D-3. R/C Disposal Rate for Selected SWMDs: 2006-2015

The residential/commercial tons disposed for the District is also shown in Figure D-4 with a trend line included. The trend line suggests a disposal increase of approximately 2,000 tons over the five-year period.



Figure D-4. Residential/Commercial Sector Disposal Trends: 2011-2015

The actual disposal of residential/commercial waste from the District is slightly lower than the amounts projected for 2011 through 2015 in the currently-approved plan. The table below shows that the difference between plan projections and actual disposal has lessened since 2012. The reference year for the currently-approved plan was recent (2011), which is a likely reason for the small divergence between these sets of estimates.

Table D-5. Actual vs. Current Plan Projections for Residential/Commercial Disposal: 2012-2015

F	Residential/Commercial Sector Tons Disposed											
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)									
2012	473,266	491,872	3.9%									
2013	472,815	493,102	4.3%									
2014	480,127	494,300	3.0%									
2015	488,922	495,465	1.3%									

Industrial Sector Disposal

As shown in Figure D-5 above, industrial disposal has decreased since 2006, however, the extent of the decline has been less than in the R/C sector. In addition, the variability in disposal tonnages in the industrial sector has been less, especially when the amount from 2009 is removed from the analysis as an anomaly.² The annual average industrial disposal from 2006 through 2015 was 346,700 tons, and the annual average rate of change was a 0.41 percent decrease per year.

Using the most recent five years of data (2011-2015) results in an average of 330,668 tons of disposal from the industrial sector. Figure D-5 illustrates this data with a linear trend line included.

D-7

² It is likely that the industrial sector disposal of 268,000 tons in 2009 was greatly affected by the economic recession.



Figure D-5. Industrial Sector Disposal: 2011 – 2015

Actual industrial disposal during 2012 and 2015 was very similar to the tonnages projected in the current plan. See Table D-6.

Table D-6. Actual vs. Current Plan Projections for Industrial Sector Disposal: 2012-2015

	Industrial Sector Tons Disposed											
Year	Actual	Projected in Current Plan	% Difference (Actual vs. Projected)									
2012	345,930	355,348	-2.7%									
2013	298,329	352,075	-18.0%									
2014	304,808	348,832	-14.4%									
2015	345,666	345,618	0.0%									

C. Disposal Projections

A number of 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-6 shows the results of using this methodology, assuming two different disposal rates:

- 1. The average per capita disposal rate for 2011 through 2015 (4.50 ppd); and
- 2. The per capita disposal rate for 2015 (4.57 ppd).

By the end of the planning period, these projections result in disposal decreases of roughly 14,000 tons using the 4.57 ppd generation rate and 21,000 tons based upon the 4.50 ppd disposal rate. The decline in tonnage throughout the planning period is due to the projected decrease in population.



Figure D-6. R/C Disposal Projections: 4.50 PPD vs. 4.57 PPD

A comparison of the disposal rate for the District with other selected SWMDs in Ohio was shown above in Figure D-3. 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, and has increased during the last two or three years for some SWMDs. Using STW's annual rate of change in the per capita disposal rate for 2011 through 2015 (-0.26 percent per year) to develop R/C projections results in a decrease of approximately 16,000 tons by the end of planning period. See Figure D-7.

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.

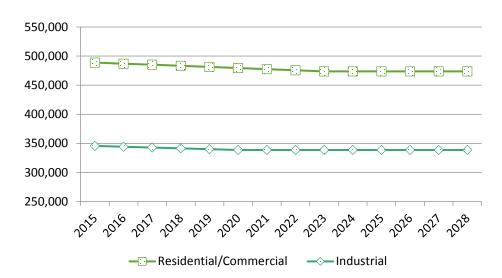


Figure D-7. Projections Using the R/C Disposal Rate of Change (2011-2015) and Industrial Employment

Figure D-7 also shows industrial disposal projections which have been developed using 2012-2022 employment projections for the northeast region of JobsOhio manufacturing sector. Employment can be a useful predictor for industrial disposal, and the JobsOhio data results in an annual average employment decrease of 0.87 percent per year. Applying this percentage to the District's data results in a projected decrease of 23,000 tons in industrial disposal by year 2023. Industrial disposal years 2024 through 2028 have been projected constant using the year 2023 value in Figure D-7.

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

- For the residential/commercial sector:
 - 1. using the year 2015 disposal rate of 4.57 ppd as the basis for projections;
 - 2. applying the rate of change in the disposal rate based upon 2011 through 2015 data (-0.26 percent per year);
- For the industrial sector, applying the annual average rate of change in disposal based upon 2006 through 2015 data (-0.41 percent per year); and
- For both the R/C and industrial sectors, holding the disposal amounts constant after the year 2023. The District believes it is reasonable to hold these disposal projections constant after the year 2023 for reasons of uncertainty, somewhat conflicting evidence or data, and the notion that

projections become more uncertain the farther into the future they are extended.

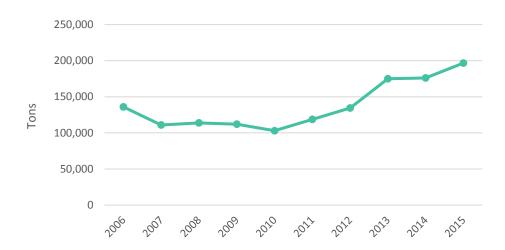
Table D-7 represents the results of using the approaches proposed above by the District for disposal projections.

Table D-7. Projections for Waste to be Disposed and Transferred

	Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Total Waste	Waste Tra (as part Disp	of Total
		Tons	Tons	Tons	Tons	Percent
	2015	488,922	345,666	834,588	196,700	
	2016	487,030	344,248	831,278	195,920	
	2017	485,145	342,835	827,980	195,142	
	2018	483,266	341,427	824,694	194,368	
X	2019	481,394	340,026	821,420	193,597	
	2020	479,528	338,630	818,159	192,828	
ing	2021	477,588	338,630	816,218	192,370	23.6%
Planning →	2022	475,654	338,630	814,284	191,915	25.070
1 2 1 1	2023	473,727	338,630	812,357	191,461	
ear of Period	2024	473,727	338,630	812,357	191,461	
ear Pei	2025	473,727	338,630	812,357	191,461	
First Year Per	2026	473,727	338,630	812,357	191,461	
Fig	2027	473,727	338,630	812,357	191,461	
	2028	473,727	338,630	812,357	191,461	

The estimates shown in the "Waste Transferred" column in Table D-7 have been developed by multiplying the total waste projected for disposal by the percentage of waste which was first sent to transfer facilities in 2015, or approximately 24 percent. The amount of waste sent to transfer stations from the STW SWMD has been steadily increasing since 2010. See Figure D-8 below. However, the District has no information suggesting that this quantity will continue to increase. In order to be conservative, the District has assumed that the percentage of total waste disposed sent to transfer stations will remain at the 2015 level.

Figure D-8. Transfer Station Tonnage Received from the District: 2006 – 2015



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 2015 reference year. In order to avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as programs, 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 2016 to the end of the planning period (2028) which are included at the end of this Appendix.

NAICS WG EW LAB FW GL FM NFM occ MxP PL W DC SS YW ST UO HHW OF OTH Total Adj. Total 0 0 1,902 0 0 1,800 32 1,077 0 0 0 59 0 0 4,916 -1,179 3,737 3,792 3,118 -476 3,316 0 178 2,243 0 0 3,077 -71 3,006 0 0 0 -13 0 147 0 -85 0 4 0 -8 15 0 -72 -91 0 0 -41 0 5.301 1.723 1.202 0 0 9.046 -6.509 2.537 0 0 0 -165 0 0 | 0 -52 0 -212 -70 104 0 -110 -163 0 -22 Other: -11 Other: Other: Other: -145 Other: 23,581 182 3,058 74 7,287 1,859 4,607 3,055 121 2,256 272 -9,497 14,084 Total 2 Adjust--5 -105 -1 -5,483 -96 -728 -2,660 -2 -274 -4 -134 -2 -4 -9,497 ments 2 181 2,953 74 1 1,805 1,763 3,879 119 2,256 272 1 0 105 89 14,084

Table E-1. Commercial Survey Results

NAICS = North American Industrial Classification System, WG = white goods, EW = electronic waste, LAB = lead-acid batteries, FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, Tx = textiles, W = wood, DC = dry-cell batteries, SS = single-stream/commingled, YW = yard waste, ST = scrap tires, UO = used motor oil, HHW = household hazardous waste, OF = oil filters, OTH = other, Adj. = Adjusted or Adjustments

Data from a total of approximately 100 commercial businesses was used to complete Table E-1. Companies reported recycling 23,581 tons of materials in 2015. Approximately 9,500 tons were removed to avoid double-counting.

Table E-2 contains tonnage collected from scrap yards, processors, and material recovery facilities (MRFs). Adjustments were made to avoid double counting. For example, processors sent some materials to scrap yards that also reported to the District. These materials were adjusted to ensure tonnage was counted only once.

Table E-2. 2015 Data from Other Recycling Facilities

Source of Materials	WG	LAB	GL	FM	NFM	осс	MxP	PI	w	EW	CoM	UO	HHW	Total	Adj.	Adj. Total
Buybacks																
None														0		0.0
Scrap Yard	s															
SY1				264	377									641	0	641.3
SY2				200	57									257	0	256.9
SY3		5		20,217	22									20,244	-13,545	6,698.4
SY4		24												24	0	24.0
Total	0	29	0	20,680	499	0	0	0	0	0	0	0	0	21,208	-13,545	7,662.8
Adj.	0	0	0	-13,545	0	0	0	0	0	0	0	0	0	-13,545		
Adj. Total	0	29	0	7,135	499	0	0	0	0	0	0	0	0	7,663		
Processors	;															
PR1												18	1	19	-18	0.5
PR2										1				1	0	0.5
PR3										4				4	0	4.0
PR4	2			0										2	-0.25	1.5
PR5										24				24	0	24.0
PR6						14,166	3,938	20						18,124	0	18,124.1
PR7							1,102							1,102	0	1,102.5
PR8							89							89	0	89.0
PR9						306	661	17						984	0	984.0
PR10	4	2										1		7	-0.5	6.0
Total	6	2	0	0	0	14,472	5,790	37	0	29	0	19	1	20,355	-19	20,336.1
Adj.				0								-18.5		-18.8		
Adj. Total	6	2	0	0	0	14,472	5,790	37	0	29	0	0	1	20,336		
MRFs																
MRF1						5,048								5,048	0	5,048.2
MRF2						165	190	4			6,226			6,585	-2,020	4,565.8
MRF3			35	4	3	47	90	16						196	0	196.0
MRF4	1,000	40		2,005	54							5		3,104	-2,008	1,096.5
MRF5			108	_										108	0	107.6
Total	1,000	40	143	2,009	57	5,261	280	20	0	0	6,226	5	0	15,041	-4,027	11,014.0
Adj.	- 1,000	0	0	-1,003	0	0	0	0	0	0	-2,020	-5.0	0.0	-4,027		
Adj. Total	0	40	143	1,007	57	5,261	280	20	0	0	4,207	0	0	11,014		
Grand Total	6	71	143	8,142	556	19,733	6,070	57	0	29	4,207	0	1	39,013		

WG = white goods, LAB = lead-acid batteries, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = corrugated cardboard, MxP = mixed paper, Pl = plastics, W = wood, EW = electronic waste, CoM = commingled, UO = used motor oil, HHW = household hazardous waste, Adj. = Adjusted or Adjustments

Source(s) of Information: 2015 Annual District Report calculation spreadsheets Table E-3 contains tonnage collected from Ohio EPA's MRF and commercial box stores report.

Table E-3. 2015 Data Reported to Ohio EPA

Ohio EPA Data Source	GL	PL	ONP	осс	МхР	NF	FM	W	FW: C	FW: O	CoM	ST	UO	LAB	Oth	Total	Adj.	Adj. Total
Aldi, Inc.	0	6	0	661	0	0	0	0	0	0	0				0	666	0	666
Big Lots	0	0	0	170	0	0	0	0							0	170		170
Buehler's	0	52	2	1,085	29	0	0								0	1,169	-31	1,138
Dollar General	0	0	0	1,299	2	0	0	0	0	0	0				0	1,301	-2	1,299
Home Depot	0	1	0	134	0	0	14	296	0	0	0				0	445	0	445
Jo-Anne Fabrics				47												47		47
JC Penney Distribution Ctr.	0	22	0	165	5	0	0	0							0	192	-5	187
Kohl's	0	41	0	329	0	0	0	0	0	0	0				0	371		371
Michaels				28												28		28
Lowe's Companies	0	11	0	639	0	0	561	135	0	0	0				0	1,346	0	1,346
Target		9		259	2		4				1				1	276	-2	274
Wal-Mart		129		5,813	31	1	1		1,020	455		474	107	171	48	8,250	-1,565	6,685
Total	0	270	2	10,631	68	1	581	431	1,020	455	2	474	107	171	49	14,262	-1,605	12,658
Adj.	0	0	-2	0	-69	0	0	0	-1,020	0	0	-474	0		-40	-1,605		
Adj. Total	0	270	0	10,631	0	1	581	431	0	455	2	0	107	171	9	12,658		

GL = glass, PL = plastics, ONP = newspaper, OCC = corrugated cardboard, MxP = mixed paper, NF = non-ferrous metals, FM = ferrous metals, W = wood, FW: C = food waste composted, FW: O = food waste other (donated), CoM = commingled, ST = scrap tires, UO = used motor oil, LAB = lead-acid batteries, Oth = other, Adj. = Adjusted or Adjustments

Source(s) of Information: 2014 and 2015 Ohio EPA MRF Report, 2015 Wal-Mart data (differs slightly from Ohio EPA MRF Report)

Note: Jo-Ann Fabrics, Aldi, and Michaels are from 2014 Ohio EPA MRF Report.

Assumptions: No adjustments were made to data reported to Ohio EPA.

Table E-4 contains tonnage collected from other recycling programs and other data sources.

Table E-4. 2015 Other Recycling Programs/Other Sources of Data

Other Sources of Data	HHW	EW	ST	DCB	LAB	FW	MxP	GL	FM	NF	осс	PL	Tx	CoM	YW	Oth: Misc.	Total	Adj.	Adj. Total
Ohio EPA Scrap Tire Data			11,868														11,868		11,868
Curbside							15							10,407			10,422	-2,169	8,253
Drop-Off Program							4,529							5,043			9,572		9,572
Drop-Off Program for Yard Waste															21,946		21,946	-939	21,007
Jackson Twp. Drop-Off		145	26				457	172	102	16	257	224	11			45	1,454	-183	1,271
Jackson Twp. Drop-Off for Yard Waste															5,457		5,457		5,457
District School Recycling Program							363	1	3	0	14	5		57			442		442
District Government							69	1		0	1	0		33			104		104

Other Sources of Data	HHW	EW	ST	DCB	LAB	FW	MxP	GL	FM	NF	осс	PL	Тх	CoM	YW	Oth: Misc.	Total	Adj.	Adj. Total
Recycling Program																			
District Library Recycling Program (Stark Co.)							5										5		5
District Misc. Collections							2	2	1	1		0		15			22		22
District Composting Program (Wayne Co.)						1,716									3,717		5,433		5,433
Ohio EPA Compost Report ¹						758									26,133		26,891	-11,171	15,719
Food Waste Hauler Data						1,530											1,530		1,530
Pharmaceutical Take-Back Programs	7																7		7
Total	7	145	11,894	0	0	4,004	5,441	175	106	18	272	229	11	15,554	57,254	45	95,154	-14,463	80,691
Adj.	0	0	-26	0	0	-758	0	0	-102	0	0		-11	-2,169	-11,353	-45	-14,463		
Adj. Total	7	145	11,868	0	0	3,246	5,441	175	4	18	272	229	0	13,385	45,901	0	80,691		

HHW = household hazardous waste, EW = electronic waste, ST = scrap tires, FW = food waste, MxP = mixed paper, GL = glass, FM = ferrous metals, NF = non-ferrous metals, OCC = old corrugated cardboard, PL = plastics, Tx = textiles, CoM = commingled, YW = yard waste, DCB = Dry Cell Batteries, LAB = lead-acid batteries, Oth: Misc. = other: miscellaneous, Adj. = Adjusted or Adjustments

Source(s) of Information: 2015 Ohio EPA Scrap Tire Report, 2015 Ohio EPA Compost Report, Survey Data

Sample Calculations:

Curbside total – Adjustments = Adjusted Total

10,421 tons - 2,169 tons = 8,252 tons

Notable Adjustments: An adjustment for Curbside were made for City of Canal Fulton, Village of Strasburg, Village of Doylestown, City of Rittman, and City of Wooster Curbside (2,169 tons) due to tonnages included in the broker tonnages. Another adjustment was made for the drop-off program (939.17 tons) due to Kimble which took to Bull Co. Compost. This adjustment was made to avoid double counting.

Table E-5 summarizes all data sources by commodity after double counting adjustments were made.

¹ Tonnage includes YW17 from Appendix B. Tonnage corrected due to report sent to EPA was originally marked with cubic yards and not tons.

Table E-5. Reference Year (2015) Residential/Commercial Material Reduced/Recycled

Material	Tons
Appliances/ "White Goods"	7
Household Hazardous Waste	7
Used Motor Oil	163
Electronics	355
Scrap Tires	11,868
Dry Cell Batteries	1
Lead-Acid Batteries	3,195
Food	3,320
Glass	319
Ferrous Metals	10,531
Non-Ferrous Metals	2,337
Corrugated Cardboard	34,515
All Other Paper	11,905
Plastics	676
Textiles	2,256
Wood	703
Commingled Recyclables (Mixed)	17,728
Yard Waste	45,901
Other (Aggregated)	648
Recycling Subtotals	146,438
Incineration	0
Grand Total	146,438

Note: Tonnage presented in this Plan Update reflects the most up-to-date and accurate data available. Tonnage presented in the Plan Update differs from the amended Annual District Report.

Source(s) of Information: Plan Update Tables E-1, E-2, E-3, E-4

Table E-6, "Quantities Recovered by Program/Source," presents a summary of the sources of residential/commercial sector recycling tonnage. Tonnage listed in this table reflects quantities that were adjusted to avoid double-counting, so this table does not reflect the true tonnage from each source. For example, a total of 10,422 tons were collected from curbside recycling programs; however, Table E-6 only credits 8,253 tons toward curbside recycling.

Table E-6. 2015 Quantities Recovered by Program/Source

Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	14,084
Scrap Yards	7,663
Processors	20,336
MRFs/Processors/Brokers	11,014
Ohio EPA Commercial Retail Data	12,658
Ohio EPA Scrap Tire Data	11,868
Curbside	8,253
Drop-Off	10,843
YW Drop-Offs	26,464
School/Government/Library Collection	552
Misc. District Collections	22
Ohio EPA Compost Report	15,719
District Composting Program (Wayne Co.)	5,433
Food Waste Hauler Data	1,530
Total	146,439

Source(s) of Information: Plan Update Tables E-1, E-2, E-3, E-4

The District did not track historical annual recycling data in a format that was consistent with Table E-6b. Tables E-6a 1-3 have been omitted.

Table E-6b. Historical Recycling Analysis

			Res	sidential/0	Commercial			
Year	Organics	Tires	Recycling	Total	Annual Percentage Change	Annual Tonnage Change		
2011	49,444	14,040	54,371	117,855				
2012	70,381	11,968	78,122	160,471	36%	42,617		
2013	69,595	9,212	75,574	154,381	-4%	-6,091		
2014	59,113	12,344	78,032	149,489	-3%	-4,891		
2015	49,221	1,868	85,351	146,439	-2%	-3,050		
			201	1-2015 Av	verage			
	Average A	nnual Pe	ercent Chan	7%				
	Average T	ons over	5 Year Peri	145,727				
	Average A	nnual To	nnage Char	ige	7,14	6		

The District's historical recovery for the residential/commercial sector over a five-year period spanning from 2011 to 2015 is presented in Table E-6b, "Historical Recycling

Analysis." The table presents organics (food waste and yard waste), scrap tire tonnage, and all other recycling.

An examination of the overall recovery patterns over the five-year period reveals that in 2011, a low of 117,855 tons were recovered and in 2012, a high of 160,471 tons were recovered. Waste recycling/reduction increased from 2011 to 2012, then decreased from 2012 to 2015. Over the five-year period, recovery increased by an average of 6,462 tons, or 6%, annually. The District's recovery of 148,576 tons in 2015 was approximately 0.4% more than the 2011-2015 average of 145,727 tons. The following figure presents the District's historical residential/commercial recovery totals from 2011 to 2015.

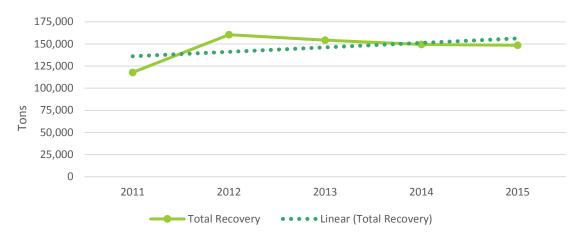


Figure E-1. Historical Recycling Analysis: 2011-2015

The following figure shows District recycling from 2011 to 2015, and separates recyclables into organics, tires, and all other recycling. Scrap tire recycling was consistent from 2011 to 2015. Organics recycling fluctuated from approximately 40,000 tons to 70,000 tons annually. Recycling increased annually with the exception of a slight decrease in 2013.

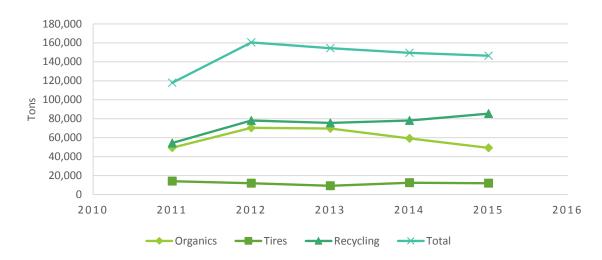


Figure E-2. Historical Recycling: 2011-2015

Based upon the strategic analysis conducted by the District and discussed in Appendix H, and the District program priorities identified in Appendix I, the majority of programs will continue without substantial changes during the subsequent planning period. As a result, the District believes that it is appropriate to estimate tonnages recovered through the various programs and sources using the following assumptions:

- Totals for 2015 and 2016 represent the actual tonnages reported for recycling.
- Ohio EPA scrap tire data, Ohio EPA commercial retail data, district school recycling, and food waste, District government, library, and misc. collections and other recycling for 2017 represent the average reported tonnages for 2015 and 2016. Tonnages are projected to remain constant at the 2017 estimates throughout the planning period.
- Curbside recycling for 2017 through 2028 is projected to decrease based on percent changes in population (average 0.02 percent decrease).
- Drop-off recycling for 2017 through 2028 is projected to increase by one percent based conservatively on historical trends and the additional drop-off in Stark county.
- Pharmaceutical Take-Back projections for 2017 to 2028 are based on 2016 tonnage.
- Yard waste for 2017 represent the average reported tonnages for 2015 and 2016. The tonnage is projected to decrease by 0.75 percent (half the difference of 2015 to 2016) based on the reduction of funding to the yard waste program.

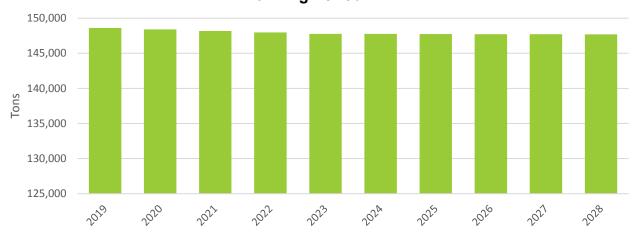
Table: E-7. Residential/Commercial Recovery Projections by Program/Source

	Year	Curbside	Drop-Off Program		District Government, Library, and Misc. Collections	Yard Waste Com- posting	Food Waste Com- posting	Ohio EPA Data Source	Ohio EPA Scrap Tire Data	Pharma- ceutical Take- Back	Other Recycling	Totals
	2015	10,422	11,027	442	131	45,901	3,320	12,769	11,868	7	50,553	148,575
	2016	10,724	11,505	527	126	43,542	3,209	13,709	9,222	4	54,156	146,724
	2017	10,709	11,620	485	126	43,216	3,264	13,709	10,698	4	54,156	149,055
	2018	10,694	11,736	485	126	42,891	3,264	13,709	10,698	4	54,156	148,832
×	2019	10,679	11,854	485	126	42,570	3,264	13,709	10,698	4	54,156	148,612
	2020	10,664	11,972	485	126	42,251	3,264	13,709	10,698	4	54,156	148,396
ug ↓	2021	10,649	12,092	485	126	41,934	3,264	13,709	10,698	4	54,156	148,184
Planning eriod →	2022	10,634	12,213	485	126	41,619	3,264	13,709	10,698	4	54,156	147,976
of Planr Period	2023	10,619	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,770
0 —	2024	10,604	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,755
Year	2025	10,589	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,740
First \	2026	10,574	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,725
证	2027	10,559	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,710
	2028	10,544	12,335	485	126	41,307	3,264	13,709	10,698	4	54,156	147,696

Note: OEPA Data matches unadjusted table E-3, but has scrap tires and food waste composted removed.

Drop-Off Program excludes yard waste from yard waste drop-offs. Yard waste from yard waste drop-offs was included in the total for the drop-off program in Table E-6.

Figure E-3. Residential/Commercial Recovery Projections Totals during **Planning Period**



^{*} District Government, Library, and Misc. Collections ** Pharmaceutical Take-Back

APPENDIX F INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING

APPENDIX F. Industrial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the industrial sector in the 2015 reference year. To avoid double-counting tonnage, adjustments made to tonnage reported by different types of entities, such as generators, processors, brokers, material recovery facilities (MRFs), and scrap yards, will be demonstrated. A historic analysis of the industrial sector's recycling and recycling projections for the planning period are included in this Appendix.

A. Reference Year Recovery Data

The North American Industry Classification System (NAICS) classifies business establishments for 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 Manufactuing
- 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). This table was not applicable to the District.

There were no additional sources of industrial sector recycling data during the reference year; therefore, Table F-3, *Other Recycling Programs/Other Sources of Data*, has been omitted.

NAICS WG DCB FW GL FΜ NFM NFS occ MxP PL CoM Other¹ Total Adj. Adj. Total 22 0 0.0 0 0 1 0 0 0 0 0 0 0 1 0 31 0 0.05 1,800 0 62 21 0 1,628 57 23 1,413 0 5,004 5,001 32 2 0.1 1 1,659 154 0 233,676 11,891 377 17,520 23 265,303 -92 265,211 0 0.7 1,891,872 2.428 18.549 708 8.397 253 1,923,933 -1,174,902 749,031 2,194,240 -1,174,997 Total 1 1,803 1,893,593 2,603 18,549 236,013 12,419 8,797 19,800 276 365 1,019,243 -1 Adj. 0 -3 0 -1,173,059 0 -2 0 0 -1,174,997 715 18,549 236,013 12,375 8,795 19,800 276 1,019,243 0 1,800 720,534

Table F-1. Industrial Survey Results

WG = white goods, DCB = dry-cell batteries, FW = food waste, GL = glass, FM = ferrous metals, NFM = non-ferrous metals, NFS = non-exempt foundry sand, OCC = old corrugated cardboard, MxP = mixed paper, PL = plastics, W = wood, CoM = commingled, $Other^1$ = refractory brick and miscellaneous materials, Adj. = adjusted/adjustments

Source(s) of information: 2013-2015 District Industrial Surveys

Sample Calculation: NAICS 31 Unadjusted Tonnage – Adjustments = NAICS 31 Adjusted Total

5,004.37 tons - 3.58 tons = 5,000.8 tons

The District annually surveys industrial generators, scrap yards, processors, and MRFs that are located in the District or those that are known to accept materials generated in Stark, Tuscarawas, and Wayne Counties. The District maintains a list of scrap yards, processors, and brokers that is regularly updated. New entities are added to this list throughout the year as they are identified. Each year during the preparation of the Annual District Report, a list of scrap yards and secondary materials processors and brokers is compiled based on NAICS codes using Reference USA, a business database. Entities on the survey list are sent a cover

letter containing a link to a survey that can be completed online. Companies that have participated in the survey in previous years are send e-mail reminders. Follow-up requests are made via telephone and e-mail to entities that do not respond. This process is described in more detail in Appendix H Section 12 Data Collection Analysis

Responses are evaluated by comparing data submitted by each entity from previous years. Significant increases or decreases in overall tonnage, or tonnage reported for each sector are investigated using a variety of strategies, which include (1) contacting the respondent, verifying tonnage, and asking for an explanation, (2) identifying fluctuations in the economy/market that could cause tonnage to fluctuate, and (3) researching changes to the survey respondent's establishment such as a company merger, receiving a Notice of Violation, or unexpected events impacting operations such as a facility fire, etc.

Clear instructions are presented on the survey which instruct survey respondents to only include tonnage generated within the District's jurisdiction. Survey respondents are also instructed to refrain from reporting any metals from auto bodies, train boxcars, or construction and demolition debris (C&DD).

Responses are thoughtfully reviewed to ensure materials are not handled by more than one entity surveyed. The data used to compile the industrial sector's annual recycling totals are reported typically by end users, brokers, processors, and MRFs. Adjustments are not frequently necessary for the industrial sector because program data is not factored in, as it is on the residential/commercial sector totals.

Table F-2. Data From Other Recycling Facilities/Programs

Data Sources	WG	LAB	DCB	FW	FM	NFM	осс	MxP	PL	CoM	Total	Adj.	Adj. Total
Buybacks	Buybacks												
None	0	0	0	0	0	0	0	0	0	0	0	0	0
Scrap Yards	Scrap Yards												
SY1	3,000	20	0	0	4,000	80	0	0	0	0	7,100	-7,100	0
SY2	0	0	0	0	1,053	3,400	0	0	0	0	4,453	-1,053	3,400
SY3	0	0	0	0	10,181	122	0	0	0	0	10,303	-10,181	122
SY4	0	0	0	0	140,463	758	0	0	0	0	141,221	-140,463	758
SY5	0	27	0	0	4,255	550	0	0	0	0	4,832	-4,282	550
Total	3,000	47	0	0	159,952	4,910	0	0	0	0	167,909	-163,079	4,830
Adj.	-3,000	-47	0	0	-159,952	-80	0	0	0	0	-163,079		
Adj. Total	0	0	0	0	0	4,830	0	0	0	0	4,830		
Processors													
PR1	0	0	0	0	0	0	0	0	0	0	0	0	0
PR2	0	0	0	0	0	0	2,290	358	980	12	3,639	-3,282	358
PR3	0	0	3	0	0	0	0	0	0	0	3	0	3

Data Sources	WG	LAB	DCB	FW	FM	NFM	осс	MxP	PL	СоМ	Total	Adj.	Adj. Total
Total	0	0	3	0	0	0	2,290	358	980	12	3,642	-3,282	361
Adj.	0	0	0	0	0	0	-2,290	0	-980	-12	-3,282		
Adj. Total	0	0	3	0	0	0	0	358	0	0	361		
MRF's	MRF's												
MRF1	0	0	0	217	43	0	0	0	0	272	532	-532	0
Total	0	0	0	217	43	0	0	0	0	272	532	-532	0
Adj.	0	0	0	-217	-43	0	0	0	0	-272	-532		
Adj. Total	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	0	0	3	0	0	4,830	0	358	0	0	5,191		

Source(s) of Information: 2013-2015 District Surveys

Sample Calculations:

SY5 Unadjusted total – adjustments = SY5 Adjusted Total

4,832 tons -4,282 tons = 550 tons

Table F-4. Reference Year (2015) Industrial Waste Reduced

Material	Quantity
Appliance/"White Goods"	2
Dry Cell Batteries	3
Food	1,800
Glass	20
Ferrous Metals	720,534
Non-Ferrous Metals	5,546
Cardboard	236,013
Paper	12,733
Plastics	8,795
Wood	19,800
Commingled Recyclables (Mixed)	276
Non-Exempt Foundry Sand	18,549
Other (Aggregated)	365
Grand Total	1,024,434

Source(s) of Information: 2015 ADR Calculation Spreadsheets, 2015 ADR Review Forms

Table F-5a. Reference Year (2015) Industrial Material Recovered

Data Source	Tons
Industrial Survey	1,019,243
Scrap Yards	4,830
Processors	361
Total	1,024,434

Source(s) of Information: Tables F-1 and F-2

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 2011 to 2015 is presented in the following table.

Table F-5b. Recycling Program/Source

		Industrial Sector							
Year	Tons	Annual Percentage Change	Annual Tonnage Change						
2011	911,668								
2012	1,057,161	16.0%	145,492						
2013	1,028,677	-2.7%	-28,484						
2014	1,034,672	0.6%	5,995						
2015	1,024,434	-1.0%	-10,237						
	20	11-2015 Average							
Aver	Average Annual Percentage Change								
Ave	1,011,323								
Ave	erage Annual Toi	nnage Change	28,191						

An examination of the recovery patterns over the five-year period reveals that in 2011, a low of 911,668 tons were recovered and in 2012, a high of 1,057,161 tons were recovered. Waste recovery fluctuations were the greatest between 2011 and 2013. Recycling totals have been moderately stable from 2013 to 2015. Over the five-year period, recovery increased by an average of 28,191 tons, or 3.2%, annually. The District's recovery of 1,024,434 tons in 2015 was approximately 1.3% greater than the 2011-2015 average of 1,011,323 tons. The following figure presents the District's historical industrial recovery totals from 2011 to 2015.

1,100,000 1,000,000 950,000 850,000 800,000 2011 2012 2013 2014 2015 Tons Linear (Tons)

Figure F-1. 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 2015 reference year, the industrial sector exceeded the reduction/recycling goal of 66% and achieved an 75% recycling rate. Tonnage is projected as a constant rate for the remainder of the planning period based on 2015 tonnage, which was the most recent recycling and waste generation statistics available for the District at the time this appendix was prepared. The following table presents the industrial sector recovery statistics and projections from 2015 to 2028.

Table F-6. Industrial Recovery Projections

Year	Totals
2015	1,019,243
2016	1,019,243
2017	1,019,243
2018	1,019,243
2019	1,019,243
2020	1,019,243
2021	1,019,243
2022	1,019,243
2023	1,019,243
2024	1,019,243
2025	1,019,243
2026	1,019,243
2027	1,019,243
2028	1,019,243

APPENDIX G WASTE GENERATION

APPENDIX G Waste Generation

A. Historical Year Waste Generated

The historical waste generation for the District from 2006 through 2015 is shown in Table G-1 below. Generation has been calculated based on the sum of reported tons disposed and recycled for each year. In general, disposal decreased while recycling has increased during this time period. However, significant fluctuation occurred in these trends for both residential/commercial (R/C) and industrial sectors. The per capita generation rate for total generation decreased from 18.1 pounds per person per day (PPD) in 2008 to 15.3 PPD the following year. Generation rates were at their lowest for this time range from 2009 to 2011, which was likely a result of the economic recession. Generation rates increased from 2013 to 2015.

Table G-1. Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial		Indu	strial	Total Generated	Per Capita Generation	Annual % Change in
		Disposal	Recycled	Disposal	Recycled	Generateu	(ppd)	Total Tons
2006	587,199	654,534	82,358	358,702	833,987	1,929,581	18.0	-
2007	588,429	588,779	103,246	387,281	898,769	1,978,075	18.4	2.5%
2008	589,668	595,668	112,519	389,395	852,366	1,949,948	18.1	-1.4%
2009	590,916	527,156	86,331	268,077	771,303	1,652,868	15.3	-15.2%
2010	589,480	483,175	95,885	331,639	801,113	1,711,812	15.9	3.6%
2011	582,688	490,745	117,855	358,609	911,668	1,878,877	17.7	9.8%
2012	582,688	473,266	160,471	345,930	1,057,161	2,036,828	19.2	8.4%
2013	594,070	472,815	154,381	298,329	1,028,677	1,954,202	18.0	-4.1%
2014	584,414	480,127	149,489	304,808	1,034,672	1,969,096	18.5	0.8%
2015	586,524	488,922	146,439	345,666	1,024,434	2,005,462	18.7	1.8%

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

Figure G-1 shows the waste generation from 2006 to 2015.

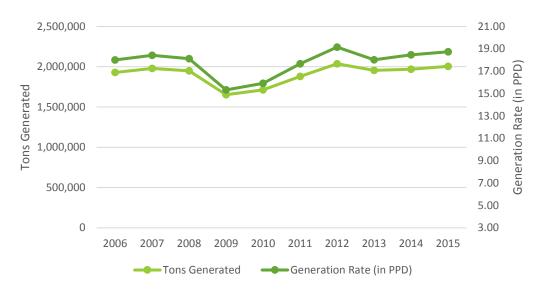


Figure G-1. District Total Generation: 2006-2015

1. Residential/Commercial Waste

The national waste generation rates based upon U.S. EPA documents are much lower than the District's generation rate or generation rates for the other Ohio urban solid waste management districts (SWMDs). For example, the national MSW generation rate¹ for 2012 was estimated to be 4.38 PPD while the District's MSW generation rate for 2012 was 5.96 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 the District generation rates, with the exception of 2008. See Figure G-2.

G-2

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

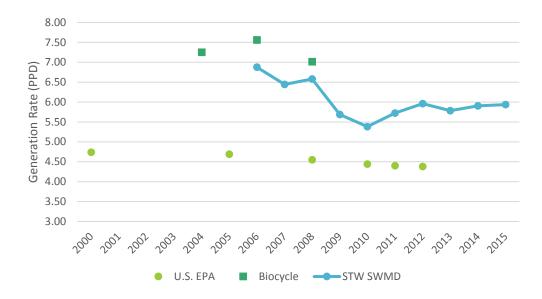


Figure G-2. MSW Generation Rates: National vs. District

The national MSW generation rates have been declining, as illustrated by Figure G-2. MSW generation rates for the District have declined since 2006, however, the District's generation rate has flattened, besides 2010 and 2011, over the last five years. 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. (See Figure G-3 below.)

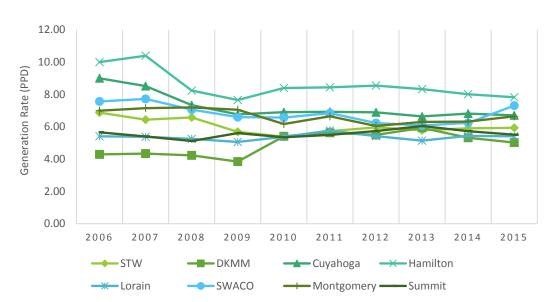


Figure G-3. MSW Generation Rates for Selected Ohio Urban SWMDs

2. Industrial Waste

Industrial waste generation has declined for the District since 2006, although the District has experienced considerable variability in the tons generated during this time period. As illustrated in Figure G-4, the amount of industrial recycling has been the larger contributing factor for the variability in total industrial generation.

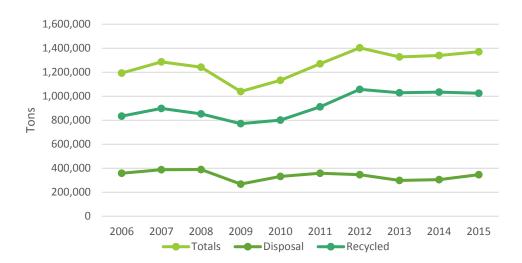


Figure G-4. District Industrial Waste Generation

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

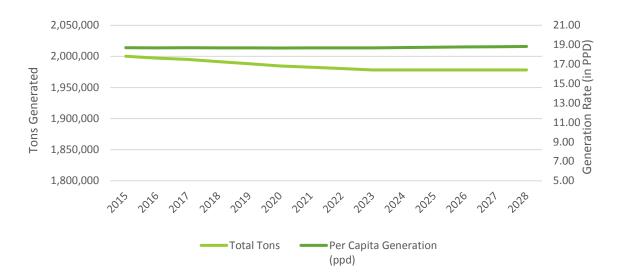
Generation projections for the District's disposal and recycling have been developed in Appendices D, E and F for disposal and recycling for the R/C and industrial sectors. These projections which are presented in detail in Appendices D, E, and F are summarized below in Table G-2. Consistent with historical trends for District, total generation is expected to decrease throughout the remainder of the planning period.

Table G-2. Generation Projections

	Year	Population	Residential/ Commercial		Indu	strial	Total	Per Capita Generation	Annual % Change in
			Disposal	Recycle	Disposal	Recycle	Tons	(ppd)	Total Tons
	2015	586,524	488,922	146,438	345,666	1,019,243	2,000,270	18.69	
	2016	585,759	487,030	146,724	344,248	1,019,243	1,997,245	18.68	-0.2%
	2017	584,994	485,145	147,987	342,835	1,019,243	1,995,210	18.69	-0.1%
	2018	584,229	483,266	147,763	341,427	1,019,243	1,991,701	18.68	-0.2%
×	2019	583,464	481,394	147,544	340,026	1,019,243	1,988,208	18.67	-0.2%
	2020	582,699	479,528	147,328	338,630	1,019,243	1,984,730	18.66	-0.2%
ing	2021	581,834	477,588	147,116	338,630	1,019,243	1,982,577	18.67	-0.1%
Planning ↓	2022	580,970	475,654	146,907	338,630	1,019,243	1,980,435	18.68	-0.1%
	2023	580,106	473,727	146,702	338,630	1,019,243	1,978,303	18.69	-0.1%
r of	2024	579,242	473,727	146,687	338,630	1,019,243	1,978,288	18.71	0.0%
eal Pel	2025	578,378	473,727	146,672	338,630	1,019,243	1,978,273	18.74	0.0%
st Y	2026	577,527	473,727	146,657	338,630	1,019,243	1,978,258	18.77	0.0%
First	2027	576,677	473,727	146,642	338,630	1,019,243	1,978,243	18.80	0.0%
	2028	575,827	473,727	146,627	338,630	1,019,243	1,978,228	18.82	0.0%

Figure G-5 is a graphical representation of total generation shown in Table G-2. Tons generated are expected to decrease during the planning period. The generation rate follows the trend of tons generated declining due to the continued decrease projected for District population.

Figure G-5. District Total Generation Projections



APPENDIX H STRATEGIC EVALUATION

APPENDIX H. Strategic Evaluation

This appendix is divided into fourteen (14) separate analyses or sections to address the recommendations and suggestions in Format v4.0. 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 challenges which are summarized at the end of each existing program analysis. For programs which have data available, quantitative evaluations have also been incorporated.

The following sections are included in Appendix H:

SECTION H-1
•RESIDENTIAL RECYCLING INFRASTRUCTURE ANALYSIS
SECTION H-2
COMMERCIAL SECTOR ANALYSIS
SECTION H-3
•INDUSTRIAL SECTOR ANALYSIS
SECTION H-4
•RESIDENTIAL/COMMERCIAL WASTE COMPOSITION ANALYSIS
SECTION H-5
• ECONOMIC INCENTIVE ANALYSIS
SECTION H-6
•RESTRICTED AND DIFFICULT TO MANAGE WASTE ANALYSIS
SECTION H-7
• DIVERSION ANALYSIS
CECTIONALIO
SECTION H-8
•SPECIAL PROGRAM NEEDS ANALYSIS
SECTION H-9
•FINANCIAL ANALYSIS
SECTION H-10
•REGIONAL ANALYSIS
SECTION H-11
POPULATION ANALYSIS
SECTION H-12
DATA COLLECTION ANALYSIS
SECTION H-13
•EDUCATION AND OUTREACH ANALYSIS
SECTION H-14
PROCESSING CAPACITY ANALYSIS

In accordance with the 2009 State Solid Waste Management Plan, a SWMD must prepare a solid waste management plan that ensures the SWMD makes progress toward achieving the following nine 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.

SECTION H-1. Residential Recycling Infrastructure Analysis

The Stark-Tuscarawas-Wayne Joint Solid Waste Management District has chosen to achieve Goal 1: The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

A. Drop-Off Recycling

The District services publicly-available drop-offs, drop-offs at schools, and drop-offs at government buildings 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

a. Locations of Drop-Off Sites

There was a total of 85 publicly-available drop-off sites in 2015 (44 in Stark County, 16 in Tuscarawas County, and 25 in Wayne County). The majority of these sites were District-operated or District-funded. A few sites in each county were operated by private companies, municipalities, or haulers as part of their contract with a political subdivision. The drop-offs serve a range of populations (377,197 in Stark County, 93,062 in Tuscarawas County, and 116,265 in Wayne County). Residents in both urban and rural areas have convenient access to the drop-off recycling sites.

b. Materials Accepted, Minimum Standards, Size of Container

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

Paper:

Cans/Containers:

- Newspapers
- Office Paper
- Mixed paper
- Magazines
- Cardboard
- Aluminum Beverage Cans
- Steel, Tin, Bimetal Food Cans
- Aseptic Containers (Milk, Juice, Broth, and Other Food/Beverage Containers)
- #1 #7 Plastic Bottles
- Glass Bottles and Jars

As stated above, each drop-off accepts a comprehensive list of materials, which exceeded the minimum four materials designated as highly amenable for the residential sector to recycle in the reference year and the minimum of 5 materials designated for this Plan Update. All of the District's publicly available sites meet the minimum standards to be eligible for a population access credit.

The majority of the District's drop-off containers have a capacity of 6 cubic yards with a few 8 cubic yard containers. Drop-off sites collect dual-stream materials, meaning sites have at least one container for commingled materials and at least one container for commingled fibers except in Tuscarawas County where all of the sites collect single-stream materials, or all recyclables commingled. Most sites have more than two containers, based on the availability of space and the volume of materials typically collected at each site. The District's collection crew prepares detailed reports identifying volumes collected at each site and any issues that occurred during each route, such as problems with over-flow or dumping.

The District's phone number is displayed on each of the District-operated drop-off recycling containers for residents to notify the District regarding any problems or issues. The District's logo is also displayed on each container to brand the program and make bins more recognizable. 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.

The District proactively improves drop-offs on an ongoing basis. Site improvements are made annually on an as-needed basis and include better decals, additional signage, cameras, fencing, and/or gates.

c. Stark County

The cities that have the highest population all have access to recycling, whether through non-subscription curbside, subscription curbside, and/or drop-off. The remaining jurisdictions, besides Hartville village, have only access to recycling by drop-off. Table H-1.1 presents the total publicly-available drop-offs located in each political subdivision in Stark County, whether the political subdivision has curbside recycling, and the population.

Table H-1.1. List of Political Subdivisions and Drop-Off Availability

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs
Cities				
Alliance city	22,016	Non-Subscription	FTU1	Urban Full-Time
Canal Fulton city	5,487	Non-Subscription	FTU13	Urban Full-Time
Canton city	71,885	Non-Subscription	FTU4, FTU5, FTU6 PTU1	3 Urban Full-Time 1 Urban Part-Time
One urban drop-off (5,000 credit) OR 2 rural drop-offs (2,500 credit)	X,XXX	N/A	ADD	1 Urban Full-Time Or 2 Rural Full-Time
Massillon city	32,252	Subscription	FTU16, FTU17, FTU18	3 Urban Full-Time
North Canton city	17,441	Non-Subscription	N/A	None
Villages			•	
Beach City village	1,011	Subscription	FTU33	Urban Full-Time
Brewster village	2,169	Subscription	FTU34	Urban Full-Time
East Canton village	1,600	Subscription	N/A	None
East Sparta village	804	Subscription	N/A	None
Hartville village	2,968	Non-Subscription	N/A	None
Hills and Dales village	220	Subscription	N/A	None
Limaville village	150	Subscription	N/A	None
Magnolia village	714	Subscription	FTR6	Rural Full-Time
Meyers Lake village	573	Subscription	N/A	None
Minerva village	1,944	Subscription	FTU22	Urban Full-Time
Navarre village	1,922	Subscription	FTU2, FTU3	2 Urban Full-Time
Waynesburg village	923	Subscription	N/A	None
Wilmot village	303	Subscription	FTU35	Urban Full-Time
Townships				
Bethlehem Twp.	3,415	Subscription	N/A	None
Canton Twp.	12,710	Subscription	FTU7	Urban Full-Time
Jackson Twp.	40,490	Subscription	FTU8	Urban Full-Time
Lake Twp.	27,218	Subscription	FTU9, FTU10, FTU11	3 Urban Full-Time
Lawrence Twp.	8,257	Subscription	FTU11	Urban Full-Time
Lexington Twp.	5,307	Subscription	FTU14	Urban Full-Time
Marlboro Twp.	4,371	Subscription	FTR1	Rural Full-Time

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs
Nimishillen Twp.	9,703	Subscription	FTU19, FTU20	2 Urban Full-Time
Osnaburg Twp.	4,036	Subscription	FTU21	Urban Full-Time
Paris Twp.	3,786	Subscription	FTU23, FTU24	2 Urban Full-Time
Perry Twp.	28,446	Subscription	FTU25, FTU26, FTU27	3 Urban Full-Time
Pike Twp.	3,137	Subscription	FTR2, FTR3, FTR4	3 Rural Full-Time
Plain Twp.	35,116	Subscription	FTU28, FTU29, FTU30, FTU31, FTU32	5 Urban Full-Time
Sandy Twp.	2,036	Subscription	FTR5	Rural Full-Time
Sugar Creek Twp.	3,040	Subscription	N/A	None
Tuscarawas Twp.	5,946	Subscription	FTU36	Urban Full-Time
Washington Twp.	4,643	Subscription	FTR7	Rural Full-Time

Source of Information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township," May 2016. https://development.ohio.gov/files/research/P5027.pdf

Table H-1.1 shows that during 2015, six villages and two townships in Stark County were without both a drop-off and curbside recycling. However, the six villages without a drop-off were located in townships that had at least one drop-off. Drop-offs in surrounding townships and cities in the Canton area are available to accommodate access for the two townships that did not have a drop-off or curbside recycling program.

d. Tuscarawas County

Table H-1.2 presents the total publicly-available drop-offs located in each political subdivision in Tuscarawas County, whether the political subdivision has curbside recycling, and the population.

Table H-1.2. List of Political Subdivisions and Drop-Off
Availability

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs
Cities				
Dover city	12,899	Non-Subscription	FTU37, FTU38	2 Urban Full-Time

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs		
New Philadelphia city	17,484	Non-Subscription	FTU41	2 Urban Full-Time		
Uhrichsville city	5,404	Non-Subscription	N/A	None		
Villages						
Baltic village	643	Non-Subscription	N/A	None		
Barnhill village	387	None	N/A	None		
Bolivar village	992	Non-Subscription	N/A	None		
Dennison village	2,640	Non-Subscription	N/A	None		
Gnadenhutten village	1,289	Non-Subscription	N/A	None		
Midvale village	749	None	N/A	None		
Mineral City village	723	None	N/A	None		
Newcomerstown village	3,794	None	N/A	None		
Parral village	220	None	N/A	None		
Port Washington village	570	None	N/A	None		
Roswell village	221	None	N/A	None		
Stone Creek village	179	None	N/A	None		
Strasburg village	2,679	Non-Subscription	N/A	None		
Sugarcreek village	2,234	Non-Subscription	FTR15	Rural Full-Time		
Tuscarawas village	1,056	None	N/A	None		
Zoar village	181	None	N/A	None		
Townships						
Auburn Twp.	1,067	None	N/A	None		
Bucks Twp.	1,132	None	N/A	None		
Clay Twp.	745	None	N/A	None		
Dover Twp.	4,405	None	FTR8	Rural Full-Time		
Fairfield Twp.	1,509	None	FTR9	Rural Full-Time		
Franklin Twp.	2,090	None	FTR10	Rural Full-Time		
Goshen Twp.	3,925	None	N/A	None		
Jefferson Twp.	792	None	FTR11	Rural Full-Time		
Lawrence Twp.	4,642	None	FTU39	Urban Full-Time		
Mill Twp.	1,973	None	FTU40	Urban Full-Time		
Oxford Twp.	1,140	None	FTR12	Urban Full-Time		
Perry Twp.	435	None	N/A	None		
Rush Twp.	877	None	N/A	None		
Salem Twp.	1124	None	N/A	None		
Sandy Twp.	2236	None	FTR14	Rural Full-Time		
Sugar Creek Twp.	1978	None	N/A	None		
Union Twp.	1268	None	N/A	None		
Warren Twp.	1182	None	N/A	None		
Warwick Twp.	1720	None	FTR16	Rural Full-Time		
Washington Twp.	820	None	FTR17	Rural Full-Time		

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs
Wayne Twp.	2159	None	FTR18	Rural Full-Time
York Twp.	1353	None	N/A	None

Source of Information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township," May 2016. https://development.ohio.gov/files/research/P5027.pdf

Table H-1.2 shows that during 2015, ten villages and eleven townships in Tuscarawas County were without both a drop-off and curbside recycling. However, all but three (Barnhill, Port Washington, and Roswell) of the villages were located in townships that had at least one drop-off site. Drop-offs in surrounding townships and cities like Dover and New Philadelphia are in the main populated area of the county to accommodate access.

e. Wayne County

Table H-1.3 presents the total publicly-available drop-offs located in each political subdivision in Wayne County, whether the political subdivision has curbside recycling, and the population.

Table H-1.3. List of Political Subdivisions and Drop-Off
Availability

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs		
Cities						
Orrville city	8491	Non-Subscription	FTU44	Urban Full-Time		
Rittman city	6466	Non-Subscription	N/A	None		
Wooster city	26749	Non-Subscription	FTU48, FTR49	5 Urban Full-Time		
Villages						
Apple Creek village	1184	None	FTU43	Urban Full-Time		
Burbank village	208	None	N/A	None		
Congress village	186	None	N/A	None		
Creston village	2089	None	FTR19	Rural Full-Time		
Dalton village	1850	None	FTU46	Urban Full-Time		
Doylestown village	3075	Non-Subscription	N/A	None		
Fredericksburg village	423	None	FTR28	Rural Full-Time		
Marshallville village	760	Non-Subscription	N/A	None		
Mount Eaton village	242	None	N/A	None		
Shreve village	1497	None	FTR21	Rural Full-Time		
Smithville village	1269	None	FTU45	Urban Full-Time		
West Salem village	1487	None	FTR23	Rural Full-Time		
Townships						
Baughman Twp.	2944	None	FTR18	Rural Full-Time		

Political Subdivision	Population	Has Curbside?	ID#	Drop-Offs
Canaan Twp.	2685	None	N/A	None
Chester Twp.	3102	None	FTR20	Rural Full-Time
Chippewa Twp.	6996	None	FTR42	Rural Full-Time
Clinton Twp.	1582	None	N/A	None
Congress Twp.	2831	None	FTR22	Urban Full-Time
East Union Twp.	5697	None	N/A	None
Franklin Twp.	3923	None	FTR24	Rural Full-Time
Green Twp.	3375	None	N/A	None
Kidron Twp.	944*	None	FTU47	Urban Full-Time
Milton Twp.	3053	None	FTR25	Urban Full-Time
Paint Twp.	3004	None	FTR26	Rural Full-Time
Plain Twp.	3124	None	FTR27	Rural Full-Time
Salt Creek Twp.	3942	None	N/A	None
Sugar Creek Twp.	4870	None	N/A	None
Wayne Twp.	4202	None	FTR29	2 Rural Full-Time
Wooster Twp.	4753	None	FTR31	Urban Full-Time

Source of Information: Ohio Development Services Agency, "2015 Population Estimates by County, City, Village, and Township," May 2016. https://development.ohio.gov/files/research/P5027.pdf

*Kidron's population was included from the 2010 census. United States Census Bureau, "Community Facts."

https://factfinder.census.gov/bkmk/cf/1.0/en/place/Kidron CDP,Ohio/POPULATION/DECENNIAL CNT

Table H-1.3 shows that during 2015 only three villages and six townships in Wayne County were without both a drop-off and curbside recycling. However, the three villages without a drop-off were located in townships that had at least one drop-off.

Primary access to recycling for a resident is via subscription curbside, non-subscription curbside, or drop-off program recycling. In Figure H-1.1, more than half the population (based on 2015 population estimate in the jurisdiction the where the program is located) does not have access to a curbside program.

No Access in Immediate
Jurisdiction, 71,217, 12%

Drop-Off Access, 71,217, 12%

Subscription Only, 10,725, 2%

Non-subscription Only, 167,245, 28%

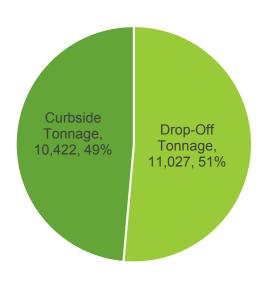
Non-subscription Only, 37,891, 6%

Subscription and Drop-Off access, 244,643, 40%

Figure H-1.1. Recycling Access by Primary Recycling Program(s) in the District

The following figure presents the total tons collected from curbside and drop-off programs by program type.





2. Comparing Drop-off programs

To compare drop-off programs in the District, averages of full-time urban and rural drop-off programs were used to show the differences between counties. To find the recycled material per capita, using the same service area credit system found in Appendix J, urban drop-offs have a population credit of 5,000 and rural drop-offs have a population credit of 2,500. This analysis does not remove multiple drop-offs per political subdivisions as the drop-offs with reported tonnage are used to calculate an average. Figure H-1.3a and Figure H-1.3b show the full-time urban drop-off programs and the averages pounds of recycled material per resident.

In Figure H-1.3a, the "error" bars represent the minimum and maximum drop-off program outliers in pounds of recycled material per resident based on Service Area. Outliers are necessary to identify the programs that need more attention and to learn from the ones that are performing beyond expectation. In addition, outliers may suggest programs that need attention to improve recycling quantities.

Figure H-1.3a. Full-Time Urban Drop-off Programs by County Average Pounds of Recycled Materials Per Resident Based on Service Area (5,000)

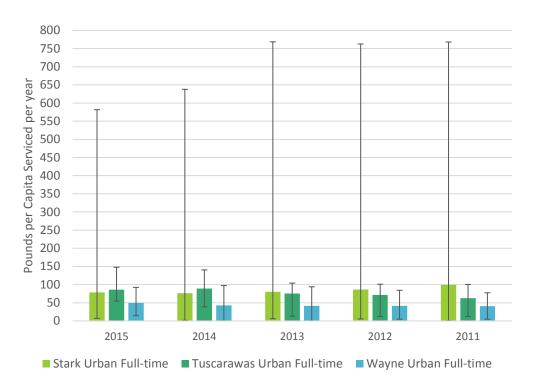


Figure H-1.3b. Full-Time Urban Drop-off Programs by County Average Pounds of Recycled Materials Per Resident Based on Service Area (5,000)

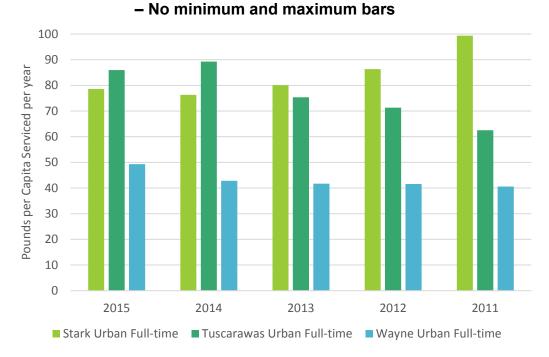


Figure H-1.3b, was included to view the averages without the outliers. The averages comparing a single county between 2013 and 2015 have been consistent. Wayne County has noticeably lower average pounds recycled per capita than the other two counties. Wayne County has the lowest population density compared to Stark and Tuscarawas which may lead to less recycling in the drop-off programs.

As shown in Figure H-1.4, the full-time rural drop-offs within a given county have roughly consistent tonnage between each year as the full-time urban drop-off programs.

Figure H-1.4. Full-Time Rural Drop-off Programs by County Average Pounds of Recycled Materials Per Resident

Based on Service Area (2,500)

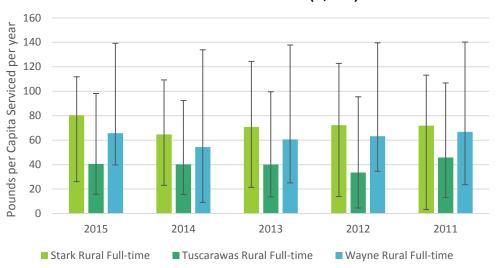
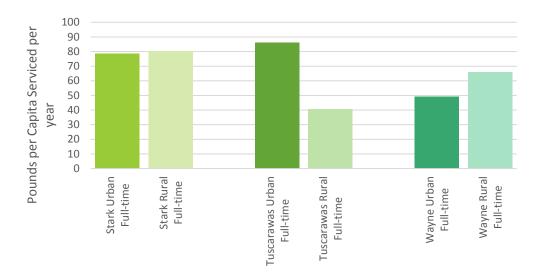


Figure H-1.5. Full-Time Urban Compared to Rural Drop-Off Programs by County Average Pounds of Recycled Materials Per Resident Based on Service Area (5,000) for year 2015



Comparing the per capita serviced between urban and rural drop-off program can be found in Figure H-1.5. The three counties in the District each have a unique trend. Stark County is approximately having the same per capita tonnage between urban and rural, Tuscarawas County has double the urban compared to rural, and Wayne County has higher rural than urban. It is important to keep this in mind when considering where new programs in the District will take place.

The District has one part-time drop-off which is in Stark County (see Table H-1.1). For the purposes of drop-off evaluation, we will only include full-time drop-off programs.

3. Accommodating Factors and Barriers

The drop-off programs have been strategically placed to accommodate maximum populations. All of the District's full-time drop-offs meet the minimum standards to be classified as full-time, full-service drop-offs. Most drop-offs in the District are open dawn to dusk or 24 hours, 7 days a week. Some drop-offs have specific operating hours (see Appendix B). The Canton City Recycling Center is the only part-time drop-off with limited hours, but this drop-off is not operated by the District; it is operated by the City. The Canton City Recycling Center is open to accept recyclables Mondays, Wednesdays, and Fridays from 10AM to 2PM except for legal holidays.

PORTAGE MEDINA S.tark SUMMIT ٠ RITTMAN DOYLESTOWN MAHONING MARSHALLVILLE ASHLAND COLUMBIANA 4 Ğ Ĝ 6 ß Wayne 4 7 Ĝ (} HOLMES DENNISON 4 COSHOCTON [J Drop-Off Recycling Locations Tusca<mark>rawas</mark> GUERNSEY

Figure H-1.6. Drop-off Locations in the District in 2015

Education and Awareness

The District provides information regarding the drop-offs on its website. The location of each drop-off is provided as well as the types of materials accepted. Section 13 of this Appendix provides an analysis of the education and outreach programs. See Appendix L for an in-depth discussion of the District's education and awareness programs.

Cost of Drop-off Recycling

The cost of the drop-off program is shown in Figure H-1.7. compared to the tons recycled by the drop-off programs. The total cost of the program has increased over time from 2011 to 2015. Operating (collection) expenses for the drop-off program typically increase annually but remain somewhat stable. More significant increases in expenditures during certain years reflect equipment repairs or replacement, site improvements, and the hiring of more drivers to handle increased volume.

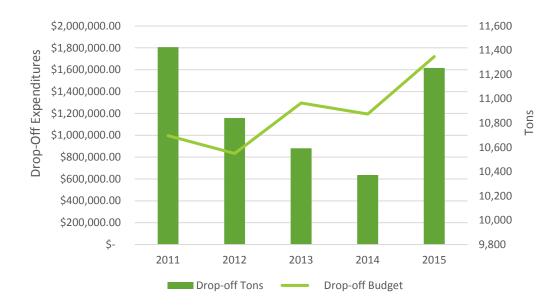


Figure H-1.7. Cost of the District's Drop-off Program: 2011 – 2015

4. Conclusions, Strengths, and Challenges

The drop-off program is important because it provides an opportunity for residents to recycle. Drop-off locations tend to have higher tonnages when located in areas visited frequently by the public, such as sites near grocery stores, community centers, churches, shopping centers, schools, parks, recreation centers, 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 townships, village halls or fire

stations. The Village of Sugarcreek's program is an outlier because they provide recycling pickup through their curbside program for businesses and include this tonnage in their grant reports--inflating their numbers compared to some of the communities that do not provide their service.

The District has excellent data on the drop-off program. The weights collected from each drop-off are recorded so the District can identify seasonal trends and which drop-offs are most heavily used versus which drop-offs are underutilized. After the reference year, the District upgraded the data collection method for its drivers who collect materials from drop-off recycling sites. Drivers previously entered and calculated weights for drop-off sites manually. The records, which were kept on paper, would need to be entered electronically by the District's administrative staff. In 2016, the drivers were given iPads to collect drop-off data. The upgrade has streamlined data collection and made the process of managing data more efficient.

One of the main challenges for this program related to the "evolving ton," whereby actual tonnage collected has decreased, but volume is increasing. Newspapers and magazines are losing popularity to digital communications, which is reflected in the recyclables stream. These materials are heavy and typically valuable commodities. Additionally, online shopping is gaining traction, resulting in an increase in cardboard. Cardboard shipping boxes are not flattened or broken down when residents recycle, which contributes to the issue of high-volume, low-density recycling. The District needed to hire additional staff to manage the increasing volume even though weights for actual recyclables have decreased.

The District still sees illegal dumping at sites, primarily those in more densely-populated areas. Dumping includes items that are clearly unacceptable such as tires, televisions, and furniture as well as items that residents believe are recyclable such as wood, plastic toys or furniture, and non-container glass (windows, mirrors, etc.).

Strengths of the program include:

- Excellent data on the drop-off program.
- All of the District's drop-off locations have been strategically chosen to maximize the accessibility of each site to the public.

Challenges of the program include:

• The "evolving ton," whereby actual tonnage collected has decreased, but volume is increasing resulting in increased expenses.

- Densely populated areas may need drop-offs for multi-family housing.
- No map for the drop-offs located in the District on website.
- District does not work closely with political subdivisions to educate their residents about drop-off program.
- Dumping at District sites continues.

B. Curbside Recycling Services

The District has twenty existing curbside recycling programs operating within the District. In reference year 2015, there were 19 non-subscription curbside programs and 31 subscription curbside programs.

Table H-1.4. Curbside Programs in the District

Curbside	ID#	Name of Curbside Service	Jurisdiction has Drop-Off?	Population
Stark	NSC1	City of Alliance	Yes	22,016
Stark	NSC2	City of Canal Fulton	Yes	5,487
Stark	NSC3	City of Canton	Yes	71,885
Stark	NSC4	City of North Canton	No	17,441
Stark	NSC5	Village of Hartville	Yes	2,968
Tuscarawas	NSC6	Village of Baltic	No	643
Tuscarawas	NSC7	Village of Bolivar	No	992
Tuscarawas	NSC8	Village of Dennison	No	2,640
Tuscarawas	NSC9	City of Dover	Yes	12,899
Tuscarawas	NSC10	Village of Gnadenhutten	No	1,289
Tuscarawas	NSC11	City of New Philadelphia	Yes	17,484
Tuscarawas	NSC12	Village of Strasburg	Yes	2,679
Tuscarawas	NSC13	Village of Sugarcreek	Yes	2,234
Tuscarawas	NSC14	City of Uhrichsville	No	5,404
Wayne	NSC15	Village of Doylestown	No	3,075
Wayne	NSC16	City of Orrville	Yes	8,497
Wayne	NSC17	City of Rittman	No	6,466
Wayne	NSC18	Village of Marshallville	No	760
Wayne	NSC19	City of Wooster	Yes	26,749
Stark	SC1	City of Massillon	Yes	32,252
Stark	SC2	Navarre village	Yes	1,922
Stark	SC3	Bethlehem township	Yes	3,415
Stark	SC4	Meyers Lake village	No	573
Stark	SC5	Canton township	Yes	12,710
Stark	SC6	Hills and Dales village	No	220
Stark	SC7	Jackson township	No	40,490
Stark	SC8	Lake township	Yes	27,218

Curbside	ID#	Name of Curbside Jurisdiction Service has Drop-Off?		Population
Stark	SC9	Lawrence township	Yes	8,257
Stark	SC10	Limaville village	No	150
Stark	SC11	Lexington township	Yes	5,307
Stark	SC12	Louisville city	Yes	9,126
Stark	SC13	Marlboro township	Yes	4,371
Stark	SC14	Nimishillen township	Yes	9,703
Stark	SC15	East Canton village	No	1,600
Stark	SC16	Osnaburg township	Yes	4,036
Stark	SC17	Minerva village	Yes	3,680
Stark	SC18	Paris township	Yes	3,786
Stark	SC19	Perry township	Yes	28,446
Stark	SC20	East Sparta village	No	804
Stark	SC21	Pike township	Yes	3,137
Stark	SC23	Plain township	Yes	35,116
Stark	SC24	Magnolia village	Yes	973
Stark	SC25	Waynesburg village	No	923
Stark	SC26	Sandy township	Yes	2,036
Stark	SC27	Beach City village	Yes	1,011
Stark	SC28	Brewster village	Yes	2,169
Stark	SC29	Wilmot village	Yes	303
Stark	SC30	Sugar Creek township	Yes	3,040
Stark	SC31	Tuscarawas township	Yes	5,946
Stark	SC32	Washington township	Yes	4,643

NSC = non-subscription curbside recycling, SC = subscription curbside recycling

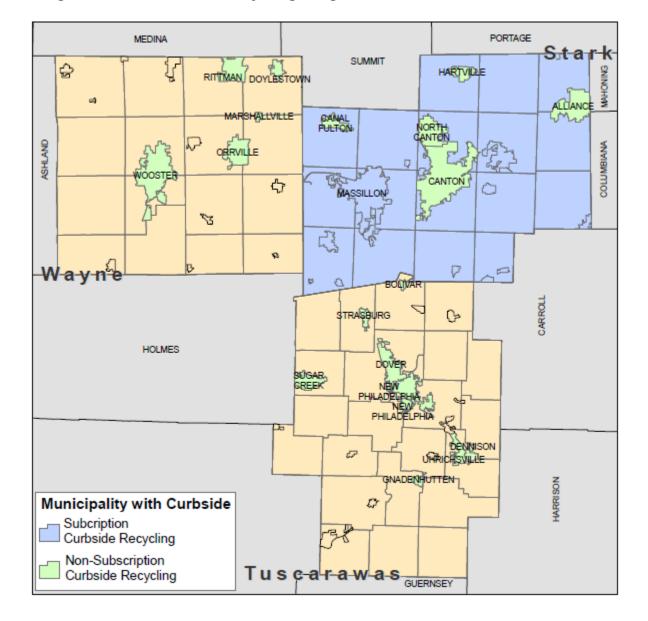


Figure H-1.8. Curbside Recycling Programs in the District in 2015

In 2015, several Tuscarawas County communities experienced changes or milestones regarding their curbside recycling programs. These included:

- Baltic Village completed its first full year of having biweekly pick-up using 65-gallon carts. Previously, residents used bags and had monthly collection. The village saw an 87% increase in tonnage from the previous year.
- Dennison Village completed its first full-year of curbside recycling.
- The City of Dover completed its first full-year of having 65-gallon carts. Residents previously used bags to collect recyclables. In 2015, there was an 81% increase in recycling compared to the previous year.

 The City of Uhrichsville completed its first full year of having curbside recycling.

1. Residential Curbside Recycling Programs

There has been an overall increase in the diversion rate in the District since 2011. Figure H-1.9 presents the tonnage collected from curbside recycling programs from 2011 to 2015. A decrease occurred in 2013 which was primarily caused by Stark County's decrease as they produce the highest amount of recycling compared to Tuscarawas and Wayne due to higher population.

12,000

10,000

8,000

4,000

2,000

2011

2012

2013

Stark

Tuscarawas

Wayne

Total

Figure H-1.9. Curbside Tonnage between 2012 and 2015 in the District

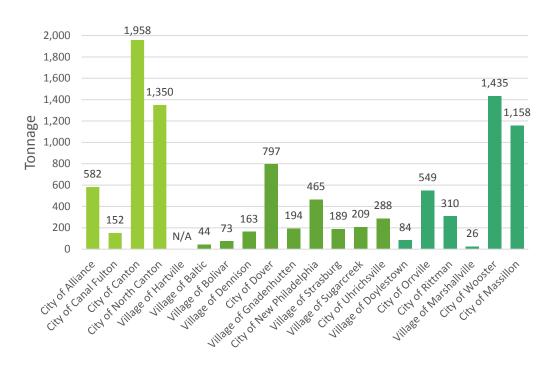
Cost of Curbside Recycling

The majority of the District's curbside recycling costs come from Recycling Makes \$ense grants and Program Start Up Grants. The Recycling Makes \$ense grants provide financial incentives to political subdivisions based on program performance. Thus, the budget for curbside recycling programs correlates with the tons collected, as shown in Figure H-1.10.

\$400,000.00 12,000 Curbside Budget in dollars \$350,000.00 10,000 \$300,000.00 8,000 \$250,000.00 **Fons** \$200,000.00 6,000 \$150,000.00 4,000 \$100,000.00 2,000 \$50,000.00 Ś-0 2011 2012 2013 2014 2015 Curbside Tons Curbside Budget

Figure H-1.10. Cost of the District's Curbside Program: 2011 – 2015

Figure H-1.11. Recovery Rates for Individual Curbside Programs: 2015



Tons Recovered and Performance

The District evaluated the existing curbside programs using the tonnage reported for 2015 and estimated the number of households served based upon the persons per household from the average Ohio household size from 2009-2013 based on U. S. Census Bureau data. Tonnage was not available for one program. Figure H-1.12 presents the results of the

analysis. The outlier for the curbside program is the Village of Gnadenhutten. This village's annual pounds per household was approximately double the average pounds per household for other political subdivisions in the District. The likely cause is that the Village of Gnadenhutten collects residential, school, and commercial recycling on a mixed route and is unable to separate tonnage by sector. The Village of Sugarcreek, which has the next highest pounds per household, also commingles their residential and commercial recycling.

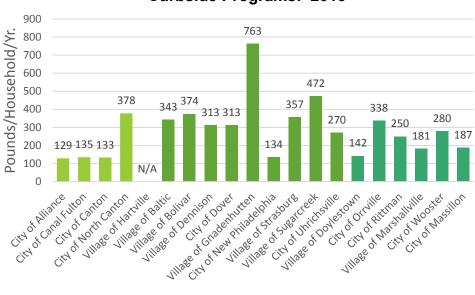


Figure H-1.12. Recovery Rates Per Household for Individual Curbside Programs: 2015

2. Conclusions, Strengths, and Challenges

Many curbside programs that have lower pounds per household, such as New Philadelphia, have drop-off programs to offset the lower tonnage. Having curbside and drop-off recycling in a community is ideal, as it provides convenient recycling opportunities to residents in single-family housing units as well as residents in multi-family housing units. The District has seen improvements in tons collected in communities that provide residents with at least 65-gallon recycling carts as compared to bags or open top bins.

Recovery rates vary significantly (129-472 pounds per household with outliers removed) by community. Opportunities exist to improve recovery and participation rates in existing programs

The District is currently exploring incentives and strategies to implement curbside recycling in political subdivisions that currently do not have curbside recycling.

Education and Awareness

The District provides information regarding curbside recycling on their website. See H-13 for a discussion of Education and Awareness programs within the District.

Strengths of the program include:

- Improvements in tons collected in communities that provide residents with at least 65-gallon recycling carts.
- Most of the cities and villages in the District have curbside recycling including all three of the largest cities in each county of the District.

Challenges of the program include:

- Recovery rates vary significantly by community.
- Lack of incentives and strategies to implement new curbside recycling in political subdivisions.
- Lack of support with political subdivisions when contracts are nearing renewal time to make contract adjustments that will maximize recycling collected.
- Lack of support with political subdivisions that operate their own programs to make upgrades that would maximize recycling collected (example, upgrading to 65-gallon carts).

C. Multi-Family Housing Units

In many areas of the District, residents in multi-family housing units that typically do not have access to curbside recycling have access to a drop-off recycling site. As discussed above, drop-offs are located in cities, villages, and townships throughout the District.

1. Analysis and Evaluation

Residents in multi-family housing units may represent up to 25%-30% of the population. Data from the 2010 Census provides the number of housing units categorized by owner-occupied, rented, and vacant. Many rental units are multi-family housing units, although some rental units are single-family homes. More specific data breaking down the total rental units by housing type is not available. Using the data for owner-occupied and rented housing units, the percent of housing units rented is depicted for each county in the District, and Cuyahoga County, Ohio in the following figure, for comparison. Each of the District's counties is lower than Cuyahoga County's, but the percentage of population living in multi-family housing units appears consistent throughout the District.

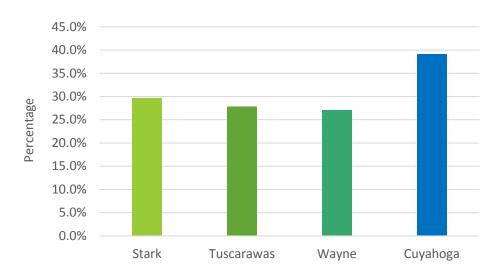


Figure H-1.13. Percent of Rented Housing Units in the District vs. Cuyahoga County: 2010 Census Data

2. Conclusions, Strengths, and Challenges

The District could target an additional 25% of the District population by focusing on increasing participation in recycling programs among residents in multi-family housing units. This segment of the population is typically underserved in Ohio and has unique challenges. For example, renters are more transient than home owners, requiring ongoing education and outreach efforts. Renters have less space to store recyclables and are typically not able to make decisions about their waste and recycling services. Property managers generally make decisions about waste services for rental properties.

Strengths of the program include:

Drop-off programs available for Multi-Family Housing

Challenges of the program include:

- Drop-off locations are not always within a convenient radius to Multi-Family Housing units.
- District currently does not work with Multi-Family Housing buildings for education on location of drop-off programs.
- Curbside recycling is typically not available to Multi-Family housing complexes.

D. Special Events

The District participates in several special events each year for collecting household hazardous wastes, scrap tires, and electronics.

1. Analysis and Evaluation

More information regarding these events are provided in Section 8 in this Appendix. The District's Outreach Coordinator participates in community events such as the Tuscarawas Valley Farmers Market, the Wayne County Fair, and the Kent State Stark Earth Day.

2. Conclusions, Strengths, and Challenges

Special events are an effective way to reach high volumes of residents to distribute information and be present for answering questions and receiving feedback. Special events can be resource intensive in terms of dedicating staff for each event.

Strengths of the program include:

• Excellent participation at the Newcomerstown Fair, the Wayne County Fair, and the Minerva October Fest.

Challenges of the program include:

- Increasing presence at large events
- Not at all county fairs.

SECTION H.2 Commercial/Institutional Sector Analysis

The District does not have data to determine the amount of commercial waste which is disposed since landfills only characterize waste disposed in terms of residential plus commercial waste.

However, the District estimated commercial disposal using two separate sources of information. The Solid Waste Authority of Central Ohio (SWACO) included estimates of their district's commercial generation, disposal, and recycling in the current Plan Update.

Percentages from the SWACO plan update are included in Table H-2.1 below. For example, SWACO estimated that 59.3 percent of total residential/commercial generation was comprised of waste from commercial sources. Likewise, SWACO estimated that 59 percent of the residential/commercial waste disposed consisted of commercial waste.

Category	Percent Estimates		STW Tonnage Estimates	
	SWACO	U.S. EPA	SWACO	U.S. EPA
Generation	59.3%	54.0%	374,700	341,428
Disposal	59.0%	49.0%	288,464	239,572
Recycling	60.3%		86,513	

Table H-2.1. Estimates of District Commercial Waste

Table H-2.1 also includes commercial percentages for generation and disposal based upon a study published by U.S. EPA.¹ This study estimated slightly lower contributions from the commercial sector for both generation and disposal. (The study did not estimate recycling percentages.) Applying the SWACO and U.S. EPA percentages results in commercial generation ranging from 341,000 to 374,700 tons for the District. Disposal ranges from 239,000 tons to 290,000 tons.

Although the estimates for commercial sector provided above are admittedly very rough estimates, the District believes that this analysis shows the magnitude of the materials continuing to be disposed. The tons recycled in the commercial sector were determined by first summing the recycling amounts which were clearly (or thought to be primarily) generated in the residential sector, such as yard waste, curbside recyclables, scrap tires, and drop-off recyclables. This sum was then subtracted from the total residential/commercial recycling to obtain an estimate of approximately 86,500 tons for commercial sector recycling, or 40 percent of total R/C recycling. (This percent estimate is smaller than the percentage of commercial recycling from the SWACO Plan Update. However, a lower commercial sector recycling percentage for the STW Solid Waste

H-27

¹ "MSW Residential/Commercial Percentage Allocation – Data Availability", U.S. Environmental Protection Agency, Office of Resource Conservation and Recovery, July 2013.

District is probably appropriate given the spread out smaller urban areas compared to SWACO.)

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

The District includes several large commercial businesses and institutions which could potentially be the focus of greater recycling within the District. Table H-2.2 lists the larger companies and institutions, with the number of employees.² There are a variety of businesses in the District. The top employers tend to be health care centers and grocery businesses.

Table H-2.2. Largest Commercial/Institutional Employers

County	Company Name	Employee Size	Type of Business/Organization
Stark	Atlas Technologies	3,800	Packing & Crating Service
Stark	Aultman Hospital	3,500	Hospitals
Wayne	E & H Family Group	2,500	Management Services
Stark	Test America Laboratories Inc	2,400	Laboratories-Testing
Stark	Mercy Medical Center	2,076	Hospitals
Stark	Fisher Foods Inc	1,424	Grocers-Retail
Stark	Elms Country Club	1,200	Golf Courses
Stark	Giant Eagle	1,150	Grocers-Retail
Tuscarawas	Union Hospital	1,007	Hospitals
Stark	Affinity Medical Center	1,001	Hospitals
Stark	Canton City Offices	1,000	Government Offices-US
Wayne	Wooster Community Hospital	1,000	Hospitals

A. School Recycling Program

The District collected mixed paper and office paper from schools located throughout the tri-county area. Some of the school programs also accepted plastics #1-#7, glass, aluminum, and steel. In addition to District-operated recycling services, privately-operated companies also provided recycling services to schools, which include the Royal Oaks Recycling (formerly Abitibi Paper Retriever), River Valley Paper Recycling program and Sanmandy. In 2015, a total of 442 tons was collected from schools by the District and privately-operated recycling programs.

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² The sources of this information include the ReferenceUSA online database.

In addition to providing infrastructure for recycling, the District has a full-time Outreach Coordinator who performed numerous presentations for schools on topics including recycling, waste reduction, household hazardous waste, and conservation. The largest audience for the presentations were for elementary students (68%) followed by middle school (9%), high school (9%), and preschool students (1%). In addition, the Outreach Coordinator can provide waste audits to schools upon request. The waste audit would include an inventory of how many recycling and trash receptacles there are, how much recycling is included in a typical trash can and how much contamination is included in a typical recycling can. The District is performing a waste audit at the OARDC in 2017. If a school is looking to start a program, the District would also find out if all involved faculty and staff are on board including custodial staff and would evaluate if there was enough space for an outdoor container and for the recycling truck to access the container.

1. Analysis and Evaluation

The District provides the infrastructure to collect recycling at schools, which may not be possible financially for schools without the District's assistance. The District also provides education to schools about recycling and waste audits upon request.

The District believes there are only a handful of schools without a recycling program. In Stark County, the District provides pickup to about half of the schools (around 50) and the rest are split between Royal Oaks Recycling and River Valley Paper Company; in Tuscarawas County, the District contacts with an individual and Kimble Recycling to pick up the recyclables at around 25 schools and all of the schools in the Indian Valley School District are serviced by the Village of Gnadenhutten's curbside recycling program; in Wayne County, the District contracts with Sanmandy to pick up paper at about 30 schools, and the remaining schools are serviced by either Republic Waste Services, Royal Oaks Recycling or River Valley Paper Company.

2. Conclusions, Strengths/Effectiveness and Challenges

One of the greatest challenges for this program includes privately-operated drop-offs that cherry-pick high value commodities, such as paper, and provide the hosts of the recycling bins with a financial incentive. For example, the District provided dual stream recycling drop-offs for schools, but some schools have chosen to replace the District's fiber collection bin with a bin operated by a private company to generate revenue. Collecting higher value materials used to partially subsidize the District's collection of materials with very little value. This trend is causing the District to manage a lower-value mix of recyclables.

Strengths of the program include:

- Works with schools to provide recycling infrastructure which allows them to participate at no-cost when they would otherwise pay. They might not participate if this was not provided.
- Full-time Outreach Coordinator who performed numerous presentations for schools.

Challenges of the program include:

- Privately-operated drop-offs focus on high value commodities only.
- Waste audit program is underutilized.

B. Government Building Recycling

The District operates the Government Building Recycling program in each of the three counties. In addition to District-operated recycling services, a privately-operated company also provided recycling services government buildings and libraries (i.e., the Paper Retriever program). A total of 238 tons was collected from District-operated and privately-operated recycling programs for government buildings and libraries. The District Outreach Coordinator can provide waste audits to government buildings upon request. The waste audit would include an inventory of how many recycling and trash receptacles there are, how much recycling is included in a typical trash can and how much contamination is included in a typical recycling can. If a government building is looking to start a program, the District would also find out if all involved staff are on board including custodial staff and would evaluate if there was enough space for an outdoor container and for the recycling truck to access the container.

Government Building	Tons
Stark County government buildings	71.29
Stark County libraries	5.26
Tuscarawas County government buildings	5.33
Wayne County government buildings	27.36
Stark County Paper Retriever bins at government buildings	115.82
Stark County Paper Retriever bins at libraries	8.44
Wayne County Paper Retriever bins at government buildings	4.47
Total	237.97

1. Analysis and Evaluation

The District provides the infrastructure to collect recycling at government buildings, which may not be possible financially without the District's assistance. The District also provides waste audits upon request.

2. Conclusions, Strengths, and Challenges

Strengths of the program include:

 Recycling program for government building allows them to participate at no-cost when they would otherwise pay. They might not participate if this was not provided.

Challenges of the program include:

- Privately-operated drop-offs focus on high value commodities.
- Waste audits program is underutilized.

C. Technical Assistance Program

The District provided resources for the commercial and industrial sector on its website.

1. Analysis and Evaluation

The District's website included information about grant opportunities, Waste Wise, managing special materials such as food or construction waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals. Printed copies of the Waste Audit Manual and Office Recycling Guide were available upon request. In addition, waste audits performed by District staff were available upon request. Audits could be requested via email, telephone, or by responding the Annual Recycling Survey. The District provides resources to the commercial sector, but they are underutilized.

2. Conclusions, Strengths, and Challenges

The Technical Assistant Program is underutilized. The audits are not in high request by the commercial and industrial sector.

Strengths of the program include:

Offers waste audits for the commercial sector.

Challenges of the program include:

Program is underutilized.

SECTION H.3. Industrial Sector Analysis

In 2015, District industries recycled approximately 1,019,000 tons of waste, while disposing 345,600 tons. Although the District's tons of disposal and recycling have fluctuated during the last five years, the percent industrial recycling in 2011 was 60%. Since 2012, the industrial sector has remained above 66 percent, and in 2013, reached 71 percent. The tons of industrial waste disposed and recycled, including the types of materials recycling, are discussed in more detail in Section 7, Diversion Analysis.

The District is home to many large manufacturers which are listed in Table H-3.1. Metal-related manufacturing and food processing represent the largest industrial employers in terms of numbers of employees.

A. Existing Programs

The District has many resources available on their website for companies in the industrial sector to use.

Table H-3.1. Largest Industrial Employers in the District

County	Company Name	Employee Size	Type of Business/Organization
Stark	Timken Co.	14,000	Bearings Manufacturers
Wayne	LuK USA	5,500	Clutch Manufacturers
Wayne	J M Smucker Co.	6,910	Preserves, Jams & Jellies (Mfrs)
Stark	Timken Steel Corp.	2,500	Bearings-Manufacturers
Stark	Republic Steel	2,500	Steel Processing (Mfrs)
Stark	Alfred Nickles Bakery	2,000	Bakery
Stark	Shearer's Foods	1,850	Food Products
Stark	PCC Airfoils	1,000	Aircraft Equipment Parts & Supls-Mfrs
Stark	Fresh Mark Inc.	999	Meat Products (Mfrs)
Stark	Sugardale Foods Inc.	800	Meat Packers (Mfrs)
Stark	Workshops	754	Wood Products NEC (Mfrs)
Stark	Republic Steel	600	Steel Processing (Mfrs)
Wayne	Wooster Brush Co.	585	Brush-Manufacturers
Tuscarawas	Gradall Industries Inc.	500	Construction Machinery & Equip (Mfrs)
Stark	Belden Holding & Acquisition	500	Brick-Clay Common & Face-Manufacturers
Stark	Case Farms Canton Division	500	Poultry Processing Plants (Mfrs)

County	Company Name	Employee Size	Type of Business/Organization
Stark	Fresh Mark Inc.	500	Meat Products (Mfrs)

1. Analysis and Evaluation

The District provides grant opportunities, information about Waste Wise, information regarding management of special materials such as food waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals. Printed copies of the Waste Audit Manual and Office Recycling Guide were available upon request.

In addition, waste audits performed by District staff are available upon request. Audits can be requested via email, telephone, or by responding the Annual Recycling Survey. There were no requests for audits in 2015 from the industrial sector in the District. The District does not have a significant amount of time required to reach out to industries to offer assistance thus audits and assistance are performed on request.

2. Conclusions, Strengths, and Challenges

The industrial sector is successful with regard to recycling. However, recycling in this sector could increase with education of available opportunities that the District provides with their programs.

Strengths of the program include:

Waste audits available to industrial sector.

Challenges of the program include:

 Lack of education on recycling haulers and Ohio EPA's Materials Marketplace.

SECTION H.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 percentages of the residential/commercial (R/C) waste stream before any recycling takes place (see Figure H-4.1).

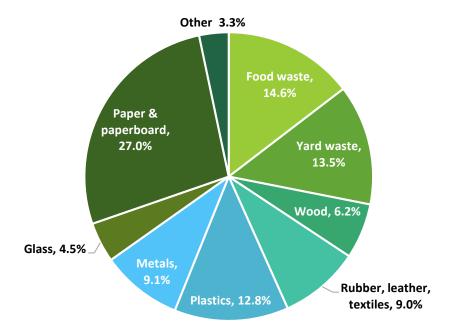


Figure H-4.1. U.S. Residential/Commercial Waste Composition: 2014

Applying the percentages in Figure H-4.1 to the total R/C generation for the District results in the tonnages by material type shown in Figure H-4.2.

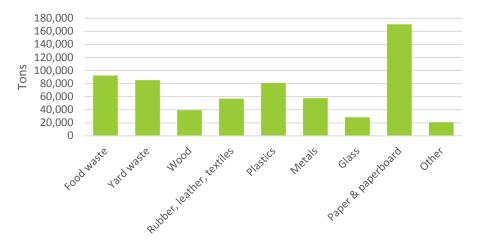


Figure H-4.2. Estimated R/C District Generation by Material Type: 2015

According to this analysis, the District generates nearly twice as much paper and paperboard as the next highest category of material (food waste). On a per capita basis,

generation ranges from 71 pounds per year for "Other" to almost 600 pounds per person for paper and paperboard (Figure H-4.3).

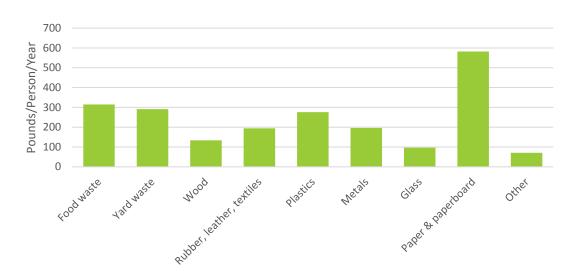


Figure H-4.3. Per Capita R/C District Generation by Material Type: 2015

The District's closest recovery to the national averages is metals which is 9.0% of the total recycling, compared to the average national recycling rate of 9.1%. Based on national generation composition, the District recycles 2.5 times the available metals in the waste stream compared to the national average. Yard waste and paper & paperboard³ have the highest recycling rates at 51 percent and 27 percent, respectively, for available material in the waste stream. (See Figure H-4.4 below.)

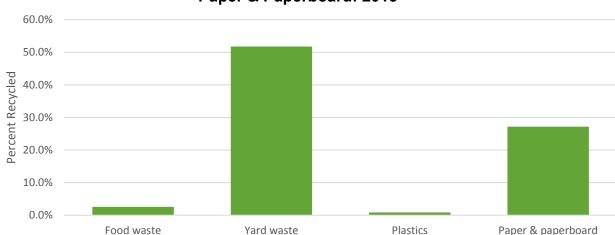


Figure H-4.4. District Recycling Rates for Food Waste, Yard Waste, Plastics and Paper & Paperboard: 2015

³ This category includes cardboard.

A. Yard Waste Programs

There were twenty-nine yard waste composting facilities registered with Ohio EPA in the District during 2015. These facilities are listed in Appendix B, Table B-5.

The District provided financial assistance for twelve community yard waste drop-off sites throughout the tri-county area in 2015 and a thirteenth added in 2016. The District contracted with Earth-N-Wood (Stark County) and Bull Country Compost (Tuscarawas County). In Wayne County, the District contracted with Paradise Composting to allow residents to bring materials directly to their two sites for processing at no cost. The District relied on the various communities that host the drop-off sites to maintain them and to assist in the proper loading of yard waste materials. The following table summarizes the yard waste programs operated by the District:

Table H-4.1. Community Yard Waste Collection Programs

Location	Operated	County
Village of Brewster	Earth-N-Wood	Stark
Canton Township	Earth-N-Wood	Stark
Jackson Township	Earth-N-Wood	Stark
Lake Township	Earth-N-Wood	Stark
Lawrence Township	Earth-N-Wood	Stark
Nimishillen Township	Earth-N-Wood	Stark
Perry Township	Earth-N-Wood	Stark
Plain Township (2 sites)	Earth-N-Wood	Stark
Tuscarawas Township	Earth-N-Wood	Stark
Village of Dennison	Bull Country Compost	Tuscarawas
City of Dover*	Bull Country Compost	Tuscarawas
Lawrence Township	Bull Country Compost	Tuscarawas

^{*}Opened in May 2016

The District was under a no-cost contract with the private company Paradise Lawn Care to accept materials for free from residents at their two sites in Wayne County. From 2017 forward, Paradise Lawn Case accepted organics through a fee paid directly by residents. This is the only site in the District that accepts both yard waste and food waste.

The District provided public education, technical assistance, advertising and promotion to increase yard waste diversion for the municipal yard waste programs listed above. The District provided grants to political subdivisions to offset the costs of building and/or operating a yard waste drop-off site. Each county has multiple yard waste drop-offs available for residents.

In 2015, the compost facilities reported approximately 45,901 tons of yard waste that was composted (see Table B-5b, "Total Number of Composting/Yard Waste

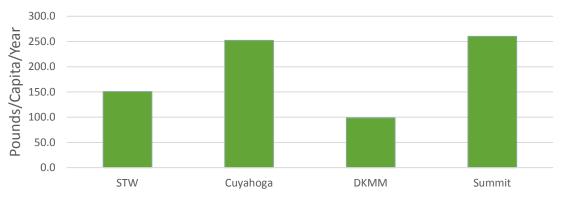
Management Activities by Type and Total Quantity Managed"). Each private and public-sector compost operation is responsible for their program or facility. The private sector operations provide service to the entire District. The public-sector facilities were typically limited in service area to their respective communities, but are technically open to all District residents. The following table summarizes the program details:

Yard Waste	Management	Program	Summary

Description	Details
Entity Responsible for	District Political Subdivisions and Private Sector
Maintaining Program	Compost Facilities
Service Area for Program	District
Materials Reduced/Recycled	Yard waste, brush, leaves, grass, wood
2015 Recycled Tonnage	45,901
2015 Annual Program Costs	District Program - \$440,620
	Others - unknown
	Various Political Subdivisions, Private Sector
Program Operator/Contractor	Compost Facilities, Earth-N-Wood, Bull Country
	Compost, District

The following figure represents recovery rates for the District compared to Cuyahoga (a large district in Northeast Ohio area), DKMM (Delaware-Knox-Marion-Morrow, a nearby multi-county district), and Summit-Akron (adjacent district).

Figure H-4.5. Recovery Rates of Residential/Commercial Yard Waste for Selected Ohio SWMDs: 2015



1. Analysis and Evaluation

The District spends a significant amount of money on the yard waste dropoff program (\$327,000 in 2015). The program is free to residents and communities that participate.

In 2015, the District provided detailed information to residents about local yard waste composting opportunities in the Recycling and Reuse Guide and by posting information on its website. In the 2015 edition of the Recycling and Reuse Guide, the District included an article discussing contamination at yard waste sites and which materials are acceptable. The District provided Program Start-Up Grants to political subdivisions for yard waste drop-offs (as well as other recycling programs). Some political subdivisions have reported receiving approximately 50% less contamination since receiving the grants. Funding was used to purchase signage, fences, and cameras. Improving the drop-off sites has been very effective at improving the quality of materials collected at the sites.

The District continues to evaluate its education and awareness programs including printed materials and the District's website to determine the effectiveness of these services with regards to decreasing contamination at the yard waste drop-off sites.

This effort may include the following:

- ✓ Surveying initiatives to determine participation trends and measuring contamination to determine if contamination decreases after promotional initiatives;
- ✓ Evaluate other Districts in the State to determine their successes in decreasing contamination;
- ✓ Increased signage; and

Based on the results of the evaluation, the District may adjust, change, enhance, or create new education and awareness activities or initiatives to decrease contamination at the yard waste drop-off sites throughout the planning period. The District educational program will be designed to increase participation as well as awareness and outreach.

2. Conclusions, Strengths, and Challenges

Yard waste programs are a great component for aiding the education of waste reduction. Grants can be used to get programs started for communities in the tri-county area. Yard waste host sites rely on the District for the cost of the hauling of the material, but load the material using their own staff and equipment. The value of yard waste material is market driven and can greatly fluctuate from year to year, impacting the rates the District

is charged. The sites are not intended for use by commercial companies but they still use the site which increases overall cost to the District.

The District's top priority is streamlining the yard waste collection program and identifying modifications it could make to align the program expenses with the District's projected revenue.

Strengths of the program include:

- Aids education of waste reduction.
- Significant opportunity for yard waste recycling exists from both the District's program as well from the private sector.
- Grants have been provided to start yard waste programs in the tri-county area.

Challenges of the program include:

- Need to keep the yard waste program at or below \$300,000 per year (plus any Host Community Cleanup, Program Startup, or Composting Infrastructure Enhancement Grants. In 2015, the District spent over \$300,000.
- Lack of partnerships with private sector.
- District does not use a yard waste material grinder to consolidate volumes drop-off at the sites.
- Yard waste host sites rely on the District for the cost of the hauling of the material, but load the material using their own staff and equipment.
- The value of yard waste material is market driven and can greatly fluctuate from year to year, impacting the rates the District is charged.
- The sites are not intended for use by commercial companies, but they still use the site which increases overall cost to the District.

B. Food Waste Programs

The District's goal is to be able to promote and enhance existing food waste recycling within the District. The District may evaluate what options are available to manage food waste and other organic waste such as fats, oils and greases (FOG) from the restaurant industry. The District can assist if there are any of the compost facilities in the District that are interested in applying for a Class II license in order to begin processing food waste and FOG. To increase food recovery, it will be essential to work with and support innovative private sector businesses that can offer organic waste processing (including food waste) to District residents, businesses, political subdivisions and other entities. That may include assistance through District Recycling and Composting Infrastructure Enhancement Grants.

Figure H-4.6 shows STW and other districts food waste per capita. The District acknowledges food waste diversion has room to grow and expand.

20.0
20.0
15.0
10.0
5.0
STW Cuyahoga DKMM Summit

Figure H-4.6. Recovery Rates of Residential/Commercial Food Waste for Selected Ohio SWMDs: 2015

1. Analysis and Evaluation

There is an existing registered Class II composting facility located in Wayne County. This facility has recently expanded their operation to accommodate additional food waste from District grocery stores, the Wayne County Fair, and non-profits that generate food waste from events like pancake breakfasts. The District also directs food generators to this facility. The District promoted the Ohio EPA Market Development Grant to this facility in 2013.

2. Conclusions, Strengths, and Challenges

The District may work to promote existing activities through newsletters, the District's website, and waste audits to increase the volume of food waste that is diverted from the landfill. The District would like to be able to determine the long-term options for food waste and FOG management in the District.

Strengths of the program include:

• Promotes food waste activities through newsletters, the District's website, and waste audits.

Challenges of the program include:

- Lack of long-term plan for food waste
- Lack of interest within District for accepting food waste.

C. Fiber Programs

The Districts works with many in the tri-county area to promote fiber diversion programs. Fiber includes cardboard, mixed paper, office paper, and newspaper (about a quarter of the diversion stream). Fiber is the most commonly recycled waste and can easily be added to a program with space and funding.

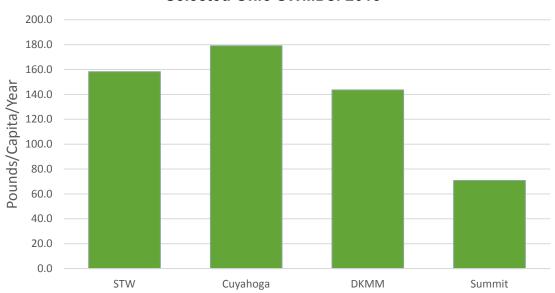


Figure H-4.7. Recovery Rates of Residential/Commercial Fiber Waste for Selected Ohio SWMDs: 2015

1. Analysis and Evaluation

Programs with the schools and governments buildings are used to increase the fiber recycling in the public-sector. The amount of fiber material recycled in the District is comparable to surrounding and multi-county districts. In addition, private sector companies like Royal Oaks Recycling and Sanmandy ensure diversion rates are high because there is currently value for the commodity.

2. Conclusions, Strengths, and Challenges

Increasing the fiber collections may require increased education but mainly accessibility. The commercial sectors produce the largest percentage by tonnage of the waste stream for fiber.

Strengths of the program include:

- Fiber material collected is comparable to nearby Solid Waste Districts.
- The higher value of the commodity contributes to District revenue.

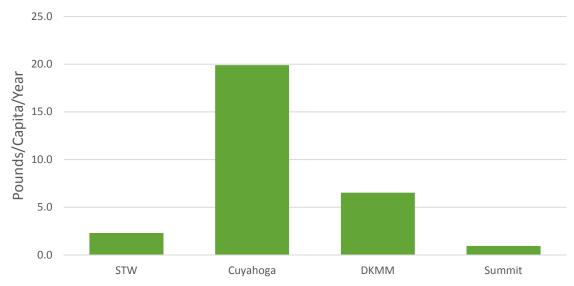
Challenges of the program include:

 Private sector companies may disappear if market for commodity ever decreases, and District may be asked to absorb the volume collected and associated expenses.

D. Plastics Programs

Most areas in the District accept plastic #1-#7. The amount of plastics by weight recycled is about one eighth in the diversion stream.

Figure H-4.8. Recovery Rates of Residential/Commercial Plastics Waste for Selected Ohio SWMDs: 2015



1. Analysis and Evaluation

The District does not have a specific program that addresses plastic waste, but it is part of the District's overall drop-off and curbside recycling program. Plastic waste diversion is a part of school recycling programs and education.

2. Conclusions, Strengths, and Challenges

Curbside and drop-off programs help increase recycling participation. The commercial sector increases their plastic recycling when recycling is accessible and at a low cost.

Strengths of the program include:

Most areas in the District accept plastic #1-#7.

Challenges of the program include:

- Recycling plastics in the commercial sector is not readily accessible.
- Lack of a specific program to address plastic waste.

SECTION H.5. Economic Incentive Analysis

The District currently offers eight grant programs which directly or indirectly provide economic incentives for greater recycling or waste reduction.

A. Existing Volume-Based Programs

The District currently has seven Pay-As-You-Throw (PAYT) programs, but the majority of the programs are lower-volume bag programs wherein residents do not have unlimited trash capacity but instead pay per bag of trash. At least one program has a cart PAYT program structure with tiered rates for higher volume of trash. Some other District programs have a trash limitation but do not offer a reduced rate for less trash.

1. Analysis and Evaluation

The District has 19 non-subscription and 1 subscription curbside programs. Around a third of these curbside programs have a pay by volume-based element.

2. Conclusions, Strengths, and Challenges

More research will be needed to determine how many of the District's residents opt to participate in the lower-volume programs and study their effectiveness. In the single community with a typical tiered rate structure per volume, the pounds per resident calculation was much lower than anticipated, but looking at data from only the twenty communities that participate might not paint the whole picture and other variables may contribute the a lower PPR.

District communities without PAYT programs have indicated that the ability to put out unlimited trash is important to their residents. Also, the District would need to approach private sector hauling companies to determine their willingness to provide PAYT options in their contracts.

Strengths of the program include:

Some District communities utilize a volume-based program.

Challenges of the program include:

- Lack of PAYT programs in the District
- Reliant on community interest and many residents value the ability to put out unlimited trash regardless of the rate.

B. Grants

The District operates multiple grant programs and provides assistance to communities interested in applying for non-District grants such as grants offered by Ohio EPA.

1. Analysis and Evaluation

a. The Community Development Grant (Ohio EPA) Promotion and Assistance - OEPA ID 8240

The goals of Ohio EPA's Community Development Grants are to support and expand community recycling and litter prevention efforts. Grants provide funding for equipment to support recycling collection and materials processing. The following entities are eligible to apply: municipal corporations, counties, townships, villages, state colleges or universities, solid waste management districts and authorities, park districts, health districts, statewide recycling and litter prevention trade associations, non-profit organizations and state agencies. The grant requires 50 percent matching funds to be available and spent on the approved project.

The District assists entities with grant applications upon request. In 2015, the District's assistance was not requested.

Strengths of the program include:

 This program provides financial assistance to maintain or expand recycling and litter prevention activities.

Challenges of the program include:

• Participation in the grant opportunity is limited due to either lack of interest or lack of awareness about the program.

b. Recycling Market Grant (Ohio EPA) Promotion and Assistance - OEPA ID 8238

The District continued to promote the Market Development Grant within the tri-county area and provide assistance on grant applications upon request.

Market Development Grants are offered to Ohio businesses and non-profit organizations that propose to create equipment infrastructure for successful markets of recyclable materials and related products. Applicants must be sponsored by an eligible governmental agency, such as the District, who will serve as the grant applicant and a pass-through agency for documenting and receiving funds. The applicant must include a commitment to provide 100 percent matching funds.

Strengths of the program include:

- Increase recycled content in products.
- Supports recycling efforts by creating a market/end-use for recycled materials.

Challenges of the program include:

 Participation in the grant opportunity is limited due to either lack of interest or lack of awareness about the program.

c. Recycling and Composting Infrastructure Enhancement Grant (for processors) - OEPA ID 8243

The intent of the Recycling and Composting Infrastructure Enhancement Grants is to build upon existing recycling and composting infrastructure within the District which will ensure the necessary processing capacity as the District's programs expand to include new material or higher volume of material.

The competitive grant is available to entities that help the District meet State Plan goals #1 through #5. The District allocates \$150,000 per year for this grant.

In 2015, the District awarded a total of \$150,000 to three companies:

- S. Slesnick Company was awarded \$89,000 to install a new Conveyor and purchase a Bobcat & Forklift—this helped them process a greater volume of paper/cardboard materials produced not only by the District's drop-off recycling program but by other entities who contract with the company for their paper recycling needs.
- Bull Country Compost was awarded \$16,000 to purchase four new 30-Yard Bins—this was needed as the District began contracting with the company to pick up at the Tuscarawas County drop-off sites. It allows for bins to be changed out faster, resulting in greater efficiency at the dropoff sites.
- Earth N Wood Products Inc. was awarded \$45,000 to extend their Concrete Sorting Pad and purchase three 40-Yard Bins—the District contracted with Earth N Wood in 2015, and

they typically accept more than 20,000 tons of yard waste material from the District program alone, so similar to Bull Country Compost, the sorting pad and additional bins allowed for material to be transferred and bins to be changed out faster, resulting in greater efficiency at the drop-off sites.

The District reserves the right to adjust the individual grant amounts. Grant funding will target facilities with the following set of criteria:

- Identified recycling capacity gaps;
- Ability to target new tonnage;
- Ability to target new materials; and
- Operational need.

Any entity who is awarded a Recycling and Composting Infrastructure Enhancement grant must participate in the District's annual recycling survey for the Annual District Report (ADR). Any entity who receives a grant will be required to provide waste reduction reporting to the District for as long as the facility remains operational. A goal is to have all facilities in the District comply with the Districts reporting requirements.

Starting in 2016, Recycling and Composting Infrastructure Grant recipients are obligated to report and submit their response to the District's annual commercial/industrial recycling survey through the web-based Re-TRAC reporting system for a period of five (5) years beginning in the year for which the application was submitted. Waste audit recipients are not currently required to report annually to the District.

Strengths of the program include:

- Assists entities with increasing diversion capacity at their facilities.
- Builds positive relationship with grant received to increase survey response.

Challenges of the program include:

- Competitiveness of the grant application.
- The District's budgetary needs.
- The degree or extent of the applicant's ability to enhance existing recycling and composting infrastructure within the District.

d. Recycling Drop-Off Clean-Up/Host Community Grants - OEPA ID 8245

The District offers Recycling Drop-Off Clean-Up/Host Community Group grants to organizations to assist with the maintenance, cleaning, and operation of many District recycling drop-offs.

The District historically offered these grants to non-profits, schools, and political subdivisions for the purpose of assisting residents with bringing in recyclables and litter clean-ups or removing unacceptable materials from the drop-offs. The District has determined that political subdivisions are more prepared with equipment and resources to remove contamination and provide litter clean-ups, which accomplishes the purpose with greater efficiency.

The purpose of the grant is to assist in the maintenance and operation of recycling yard waste and tire drop-off sites. The District may offer grants to designated non-profit organizations or businesses for the purpose of hosting a tire drop-off only. Recycling Drop-Off Clean-Up/Host Community grant recipients will be expected to keep recycling, yard waste and/or tire drop-offs clean, free from debris and be available to all District residents.

The District will only offer the Recycling Drop-Off Clean-Up/Host Community Grant to political subdivisions and/or the host site that maintains a District recycling, tire or yard waste drop-off. Recipients can earn up to \$2,500 annually (\$625 a quarter) when a minimum of 15 hours of service are provided per month (45 hours/quarter) at a site.

The District continued to utilize Host Community Grants to assist with the clean-up and operation of recycling drop-off sites. Grantees may also help the District determine if a change in service frequency or container placement is necessary. The District awarded forty (40) Host Community grants totaling \$92,400 in 2015.

Strengths of the program include:

- Host Community grants provide assistance to the District in maintaining drop-off facilities as well as provide valuable information regarding collection frequency and status of dropoff location.
- Establishes a working relationship with local municipalities.

Challenges of the program include:

 Expenses associated with hosting a site can include more than just hours worked maintaining the site (a site may contract with a company to fix potholes, distribute gravel, etc. but these expenses are not reimbursable through this grant program).

e. Recycling Makes \$ense Grant Program - OEPA ID 8241

The District began this grant program in 2007. This program is only offered to municipal (cities, villages and township) programs that are not operated by the District directly with District equipment and staff. The only exception is the Jackson Township Recycling Station, which is not a municipality but operates separately from the District. Municipal programs are defined as a program that is under contract with a private contractor to provide the service or the program is operated by the municipality directly.

The goals and operational process of the Recycling Makes \$ense Program are as follows:

- To substantially increase residential recycling rates.
- To create a results-driven, incentive-based grant program which will encourage all recycling stakeholders to improve and enhance programs to achieve greater waste reduction rates.
- To foster greater cooperation across the District and encourage stakeholders to share successful ideas and programs and to spur greater innovation and efficiency in existing programs.
- To create an equitable system for funding recycling programs.
- To create a sustainable recycling infrastructure throughout the District. The District does not have enough funding to fully subsidize recycling programs throughout the District. A combination of user fees (for curbside programs), greater program efficiencies, revenues from materials (through cooperative selling arrangements) and cooperative funding with units of local government must be used to ensure a truly sustainable recycling system.

In 2015, the Recycling Makes \$ense Grant program's funding structure was as follows:

 For each ton of documented residential waste recycled through a residential curbside program or drop-off recycling program, the minimum payment was \$25 per ton. Payments were made quarterly within 30 days of receipt of recycling documentation in a format approved by the District. Payments were made to units of local government.

- An additional \$5 per ton was paid for recyclables collected by drop-off programs that met the access requirements for Goal #1. An additional \$10 per ton was paid for recyclables collected by non-subscription curbside recycling programs that met the access requirements for Goal #1, provided that these non-subscription curbside recycling programs were operated to offer service at a minimum routine schedule of one collection per week for all District residents eligible to participate in the program.
- Non-subscription curbside and drop-off programs that provided for the collection of a minimum of seven materials on the District's approved materials list were paid an additional \$5 per ton (for a total of \$40 and \$35 per ton for residential curbside and drop-off recycling programs, respectively). Note: If a program collected seven items, but one or more of the items collected were not on the previously referenced list, the program operators were permitted to petition the District for compensation at the \$40 or \$35 level, depending on whether the program was a non-subscription curbside or drop-off recycling program.

The District awarded a total of 20 Recycling Makes \$ense Grants in 2015. The District paid \$471,816 to the following communities: Alliance, Baltic, Bolivar (curbside), Canal Fulton, Canton (curbside), Dennison, Dover, Doylestown, Gnadenhutten, Jackson Recycling Station, Marshallville, Massillon, New Philadelphia, North Canton, Orrville, Rittman, Strasburg, Sugarcreek, Uhrichsville, and Wooster (curbside).

Funds received through the Recycling Makes \$ense Grant program were only to be spent supporting the recipient's recycling programs as identified in the fundable expenses exhibit that was contained in the grant agreements. Thus, earned money could be used to offset the costs of providing the programs, to provide education regarding the programs, to pay for costs of processing collected materials, to purchase equipment necessary to provide the programs, etc.

The performance standards were calculated and paid on a quarterly basis based on the performance of the previous calendar year. This grant program provided an incentive for grant recipients to boost their totals by holding special events or conducting special education programs in order to increase their recycling tonnage.

Strengths of the program include:

- Assists communities with establishing recycling programs.
- Establish a working relationship with local communities.
- · Assists the District with meeting the recycling access goals.

Challenges of the program include:

- Some programs operate well above the grant per ton limits.
- No incentive for programs that upgrade to larger wheeled carts despite the observed increase in recycling rates they produce.
- No incentive for limited or pay-as-you-throw trash programs despite the observed increase in recycling rates they produce.
- Pounds per resident calculation used to determine rate can be disproportionately high for communities whose contracts include pickup of commercial businesses/schools' recyclables.
- Pounds per resident calculation used to determine rate can be disproportionately low for communities whose contracts do not include pickup of multiple family dwellings.

f. Program Start-Up Grants (for political subdivisions) - OEPA ID 9144

The Program Startup Grant program was created to help cities, villages and townships initiate new recycling and yard waste programs as well as enhance existing recycling and yard waste programs. Funding may be used for equipment, containers, fencing, cameras and maintenance as well as other costs associated with the operation of the recycling or yard waste program. Funding is provided to programs that support the District's efforts to meet state recycling goals.

The following criteria was used to evaluate potential grant recipients:

- The highest priority will be given to pay-as-you-throw programs with weekly recycling or yard waste curbside collection;
- Preference will be given to curbside recycling or yard waste programs over drop-off programs; and
- Preference will be given to new programs versus modification or expansion of existing programs.

The District allocates \$150,000 per year in even years and \$250,000 per year in the odd years for this program. The District reserves the right to adjust grant amounts based on District budgetary needs.

The District awarded thirteen (13) Program Start-Up Grants to communities in 2015 totaling \$262,822. Funding was used to start recycling drop-offs and/or yard waste drop-offs, as well as purchase equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.

Strengths of the program include:

- Assists with costly start-up costs associated with implementing a new program.
- Program helps expand recycling infrastructure throughout the District.
- Grants provide communities with means to significantly improve recycling volumes.

Challenges of the program include:

None identified.

g. HHW Education Grant - OEPA ID 9738

The HHW Education Grant has been discontinued and is moving the funds to support the expansion of HHW collection.

The District provided HHW Education Grants to public entities that helped the District promote proper disposal options for HHW as well as non-hazardous alternatives through presentations, at county fairs, and by participating in other public events.

The District awarded HHW Education Grants to three recipients throughout the District in 2015, which included Stark Parks, the Tuscarawas Soil and Water Conservation District, and the Wayne Soil and Water Conservation District. These organizations reached and educated more than 30,000 residents in 2015.

The District wishes to change direction and expand the Household Hazardous Waste Collection Program to more collection events and/or drop-off sites for the individual political subdivisions within the District.

Strengths of the program include:

- Education of residents.
- Promotes proper disposal of HHW.

Challenges of the program include:

Few HHW educations grant awarded.

2. Conclusions, Strengths, and Challenges

The economics incentives in the District were mainly based on grants given to communities within the District. These grants help fund programs that work to recycle special materials, reduce waste in community, and provide incentive to increase recycling.

Strengths of the program include:

• Grants provide economic incentive and financial support to increase recycling and support the community.

Challenges of the program include:

- Competitive nature of the grants means not all projects can be funded.
- Budget alignment with District's goals.

SECTION H.6. Restricted and Difficult to Manage Waste Analysis

Many solid waste materials that are not usually 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, and household batteries. The District or local communities have programs designed to address each of these materials.

A. Scrap Tires Program - Program ID 8226

The Scrap Tires Program meets State Plan Goals #2 and #5. The District has permanent tire collection sites in each of the three counties.

1. Analysis and Evaluation

Programs such as the tire pass program help local municipalities to properly manage illegally-dumped tires. Figure H-6.1 shows the tires collected in the District from 2011 to 2015. In 2012, there was an above average collection of tonnage but in 2013 there was a below average tires collected. The average is still just above 400 tons per year.

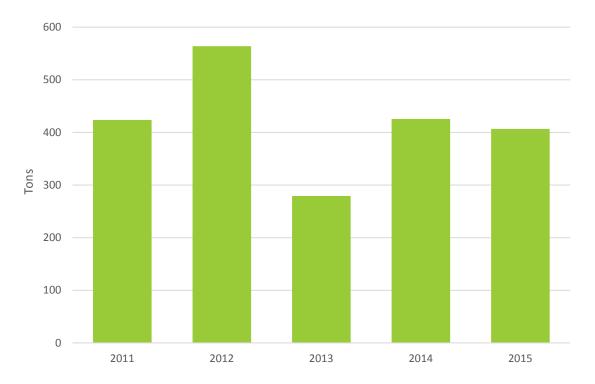


Figure H-6.1. District Scrap Tire Collections: 2011 - 2015

Based on the reference year, the cost per tire for 2015 was \$1.39 and this is seen in Table H-6.1 below:

Name of Scrap Tire Name of Scrap County Address **Drop-off Tire Drop-off** 742 Schroyer Ave. SW City of Canton City of Canton Canton, OH Stark Recycling Center Recycling Center (330) 430-7869 5717 Wales Ave. NW Jackson Jackson Township North Canton, OH Township Stark Recycling Station 44720 Recycling Station (330) 833-7365 354 Florence Avenue Gale's Recycle It Tuscarawas Dover. Ohio 44622 Gale's Recycle It (330) 343-1555 1034 Nold Ave. Goodwill Goodwill Industries Wayne Wooster, OH 44691 Industries (330) 264-1300 Scrap Tire Program 406 Tons **Total Tons** Scrap Tire Program

Table H-6.1. District Scrap Tire Sites and Costs

2. Conclusions, strengths/effectiveness and challenges

Scrap tire reported tons have been consistent, averaging around 400.

Strengths of the program include:

Total Costs

 A significant amount of scrap tires are collected and recycled in the District.

\$56,531 = \$1.39/tire

 Residents have multiple locations to recycle scrap tires at the regional tire drop-off sites.

Challenges of the program include:

- Some communities that host scrap tire drop-off sites are overwhelmed by the quantity of tires collected.
- Illegal dumping of scrap tires by commercial tire dealers.

B. Household Hazardous Waste (HHW) and Pharmaceuticals Program - Program ID 8269 & 9145

The HHW Program meets State Plan Goals #2 and #5. In 2015, the District provided HHW information on its website and in the Recycling and Reuse Guide (Guide), which was mailed to residents and available on the website. The Guide included information for reducing the amount of HHW generated, alternatives to

using chemical pesticides and cleaners, and locations that accept HHW materials year-round.

After the reference year, the District made a significant change to the HHW program. A collection program was implemented in Fall of 2016 wherein it partnered with the City of Canton Health Department to open a year-round appointment-based HHW collection site. The appointments allow the District to control program costs because expenses can be monitored, and appointments could be limited if budgeted amount is reached.

The District also partnered with Buehler's Fresh Foods to host a pilot HHW collection event during their typical general recycling collection event at the New Philadelphia location on October 8, 2016. In 2017, the general recycling collection events at Buehler's locations in Dover, New Philadelphia, Orrville, and Wooster were expanded to allow residents to drop off HHW as well.

In 2016, the District sent the Recycling Newsletter to residents and posted the document on its website. The Recycling Newsletter provided information to residents about how and where to dispose of HHW.

The District will continue assisting residents with the management of HHW materials through the District website and other marketing and educational outreach efforts as available.

The District will also continue to assist and promote local pharmaceutical collection sites and events to reduce the amount of these materials disposed of in the landfills as resources are available.

Multiple prescription drug collection boxes were located in each District county in 2015. The District supported local pharmaceutical collections by providing funding to offset the operational costs, as well as funding to advertise and promote the events.

The District's goal is to reduce the amount of HHW materials that are placed in the landfills. In addition, the District wishes to reduce the amount of usable materials that are being disposed and also educate the public regarding which items are hazardous, which are not and how the creation of HHW can be reduced by using non-toxic alternatives.

The District reserves the right to adjust the HHW management program funding amount each year based upon District budgetary needs.

1. Analysis and Evaluation

The Guide was developed in 2015 and includes alternatives to hazardous products such as the use of latex paint instead of solvent based paint. The Guide also includes locations throughout the District that accept common materials such as lead acid batteries, household batteries, used oil, used anti-freeze and computer and electronics for recycling on a year-round basis. The concept of the Guide was expanded to include other recyclable materials as well as education and awareness information. The Guide is available on the District's website and will be mailed to all households within the District every other year throughout this *Plan Update*.

There are currently temporary collection events that are not offered year-round. The District wants to evaluate the option for additional year-round permanent HHW facilities central to the three-county area to supplement temporary collection events. The collection of HHW may increase with the additional opportunities. Additional opportunities may include sites open year-round on an appointment basis and/or a facility in a central area of the three counties.

2. Conclusions, Strengths, and Challenges

The District's goal is to reduce the amount of HHW materials that are placed in the landfills. In addition, the District wishes to reduce the amount of materials that are disposed and educate the public regarding which items are hazardous and which items are not. The District believes that the long-term cost to manage HHW will be greatly reduced as the efforts above are implemented and become effective.

Strengths of the program include:

- Ability to manage cost of the program based on District's budgetary needs.
- The collection opportunities are available year-round for District residents.
- All residents in the District have the opportunity to participate in the program.
- Provides an opportunity for the District to educate residents on HHW management issues and other District initiatives.

Challenges of the program include:

- Some residents may not utilize the options listed in the Guide.
- The Guide is only mailed every few years and is updated on the website regularly.

- Proximity of the current permanent collection site and/or availability of convenient collection temporary events may limit residential participation.
- Collection program is dependent upon availability of household hazardous waste disposal companies and disposal rates remaining cost efficient.

C. Electronics, Appliances, Batteries, and Scrap Metals Waste Programs - Program ID 8228, 8229, 8230

The collection programs for electronics, appliances, batteries, and scrap metals meet State Plan Goals #2 and #5.

1. Analysis and Evaluation

There are several private-sector companies that accept these materials throughout the District, and these locations are promoted in District publications and on the District website. These items are also accepted at collection events throughout the year which are supported by the District. In addition, the Canton City Recycling Center, operated by the Canton City Health Department, and the Jackson Township Recycling Center accept these items.

2. Conclusions, Strengths, and Challenges

The District works with other organizations to collect these materials and also promotes private-sector companies that accept them. The District itself does not operate collection.

Strengths of the program include:

- There are many opportunities for District residents to recycle these items.
- District does not fully fund collection but rather offers support to those that do. Limited collection allows District to stay within budgetary amounts.

Challenges of the program include:

- Availability of convenient collection events or proximity to centers that accept these materials may limit residential participation.
- Private sector companies that accept materials may not always collect these items.

SECTION H.7. Diversion Analysis

The table below shows the amounts which were disposed and diverted from disposal through recycling from 2011 to 2015. Overall, diversion in the residential/commercial (R/C) sector has remained moderately consistent since 2011, with the exception of 2012 when it was much higher. Recycling in the industrial sector has been relatively consistent as well, with the largest amount reported recycled in 2012.

Table H-7.1. Disposal and Recycling in the District: 2011 – 2015

Year	Pop.	Residential/ Commercial		Industrial		Total	Per Capita Gen.	Annual % Change in
		Disposal	Recycled	Disposal	Recycled		(ppd)	Total Tons
2011	582,688	490,745	181,338	358,609	911,668	1,942,360	18.3	-
2012	582,688	473,266	242,821	345,930	1,057,161	2,119,177	19.9	9.1%
2013	594,070	472,815	154,381	298,329	1,028,677	1,954,202	18.0	-7.8%
2014	584,414	480,127	149,489	304,808	1,034,672	1,969,096	18.5	0.8%
2015	586,524	488,922	143,352	345,666	1,024,434	2,002,375	18.7	1.7%

A. Residential/Commercial Sector

The District meets Goal #1 for recycling access in the R/C sector.

1. Analysis and Evaluation

The District's R/C recycling (or diversion) rate during the past five years has fluctuated between 22 and 33 percent. (See Table H-7.2.) The per capita diversion rate as measured in terms of pounds per person per day (PPD) decreased slightly from 2011 to 2015.

Table H-7.2. R/C Diversion Rates: 2011 - 2015

	Diversion Rate			
Year	Percent (%)	Per Capita		
2011	26.98%	1.71		
2012	33.91%	2.28		
2013	24.61%	1.42		
2014	23.74%	1.40		
2015	22.67%	1.35		

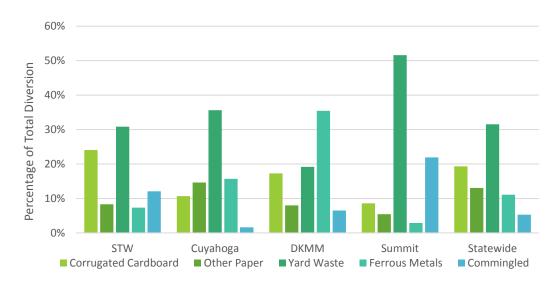
Compared to other SWMDs in Ohio, the diversion rate for the STW Solid Waste District is a little lower for percentage recycled and per capita recycled. (See Table H-7.3.) The Summit-Akron SWMD has only a slightly higher per capita recycling rate and percentage recycling rate. From 2011 through 2015, the statewide R/C percentage recycling rate hovered around 28 percent, while the per capita recycling rate increased slightly to 1.74 PPD, so STW is slightly below the statewide averages. Cuyahoga SWMD has a very high Diversion rate due to the percentage of urban communities with curbside recycling with a great population density.

Table H-7.3. R/C Diversion Rates for Other Ohio SWMDs: 2015

SWMD	Res/Com Diversion Rate			
Name	Percent (%)	Per Capita		
STW	22.67%	1.35		
Cuyahoga	45.85%	1.94		
DKMM	26.32%	1.42		
Summit	25.49%	1.40		

The highest diversion rates for types of materials are shown in Figure H-7.1. In comparing solid waste districts, yard waste is the highest percentage of the diversion tonnage. Yard waste comprises a very significant percentage of total diversion for all of these solid waste districts, especially in the District and Summit-Akron SWMD. For STW, the majority of materials recycled was corrugated cardboard (24 percent), followed by commingled materials which were both higher than the statewide average.

Figure H-7.1. Types of R/C Materials Recycled in Other SWMDs: 2015



2. Conclusions, Strengths, and Challenges

The District follows a similar trend in portion of recycled materials as compared to other districts. Commingled material is one of the highest portions which could be a variety of the other materials. There is room to improve recycling quantities in the residential and commercial sectors in STW.

Strengths of the program include:

• District's diversion rates are in line with other Districts' rates and statewide averages.

Challenges of the program include:

- The Diversion rate per capita has steadily decreased over the past 5 years.
- Increasing diversion will require more participation from the commercial sector.

B. Industrial Sector

The District has consistently had an industrial recycling rate above the industrial recycling goal established in the *State Solid Waste Management Plan*.

1. Analysis and Evaluation

The industrial recycling rates in the District for 2011 through 2015 are shown in Table H-7.4.

Table H-7.4. Industrial Recycling Rates for STW: 2011 – 2015

	Diversion Rate			
Year	Percent (%)	Per Capita		
2011	71.77%	8.57		
2012	75.35%	9.94		
2013	77.52%	9.49		
2014	77.24%	9.70		
2015	74.77%	9.66		

Compared to the current Plan which projected 879,092 tons of industrial recycling for 2015, the actual amount diverted in the reference year is 16% higher (approximately 1,024,000 tons). The current Plan also projected an industrial

recycling rate of 71.78% for 2015, which is lower compared to the actual estimated recycling rate of 74.77%.

Ferrous metals represent the material type recycled in the greatest amount from industrial sources. (See Figure H-7.2.) Years 2011 through 2014 show similar relationships concerning the types of materials recycled from the industrial sector. Industries also recycle substantial amounts of cardboard.

Cardboard, 23%

Ferrous Metals, 70%

Figure H-7.2. Industrial Material Types Recycled in STW: 2015

The District's industrial recycling rate for 2015 was similar to other SWMDs as shown in Table H-7.5. The District is very close in industrial diversion to the Cuyahoga SWMD.

 SWMD Name
 Industrial Diversion Rate

 Percent (%)

 STW
 74.77%

 Cuyahoga
 75.61%

 DKMM
 88.28%

 Summit
 45.85%

Table H-7.5. Industrial Diversion Rate Comparison

2. Conclusions, Strengths, and Challenges

In the industrial sector, the District has a high diversion rate compared to boarding districts. The District is meeting Goal #1 criteria for an industrial sector diversion rate of at least 66%.

Strengths of the program include:

• Higher diversion rate than currently projected industrial recycling.

Challenges of the program include:

 Rate may be higher but not all industrial sector companies respond to District's annual survey (see section H-12).

SECTION H.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.

A. Health Department Grants - OEPA ID 8247

The District has provided funding under allowable use #3 (Boards of Health, Solid Waste Enforcement) to each of the three counties within the District. The allocations to health departments are described in the District's current plan as follows:

"... The District continued to provide funding to the three County Health Departments and the City of Canton's Health Department (Stark County) in 2011. The Health Departments were responsible for the enforcement of Ohio's solid waste laws at solid waste facilities including landfills, transfer facilities and yard waste composting facilities. Health Departments are also responsible for investigating open dump/scrap tire dump problems." [page IV-32]

The actual funding provided to health departments has been equal to or slightly lower than projected in the current plan, except for 2015 when actual funding was higher. The solid waste inspections are included in this funding. (See Figure H-8.1.)

The District signs a contract each year with health departments receiving funding, and reports from health departments are required 4 times per year. The District reviews the reports to help determine performance and compliance with the contract provisions. Continued funding of health departments is considered to be contingent upon the availability of adequate revenue in the District.

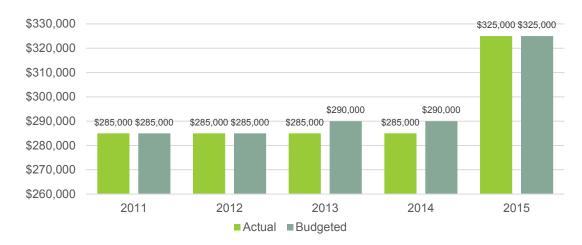


Figure H-8.1. Actual vs. Budgeted Health Department Funding

1. Analysis and Evaluation

Each Health Department is required to submit quarterly reports through Re-TRAC which identifies activities that contributes to District goals. Information related to facility inspections (such as the number of facilities inspected for each type of inspection as well as the number of inspections performed) is submitted.

The District awarded four (4) Health Department Grants totaling \$325,000 in 2015. The District awarded the Stark County Health Department \$170,000, Tuscarawas County Health Department \$85,000, Wayne County Health Department \$35,000 and the Canton City Health Department \$35,000.

Table H-8.1. List of Facilities and Inspection Frequencies Reported by Health Department Grantees

Type of Facilities	Frequency Requirement
Solid Waste Disposal Facilities	Quarterly*
Scrap Tire Monofills	Quarterly
Solid Waste Transfer Facilities	Quarterly
Tire Storage & Transfer Facilities	Quarterly
Solid Waste Facilities in Closure	Quarterly
Solid Waste Facility Post-Closure	Quarterly
Methane Gas Monitoring System	Quarterly
Large Infectious Waste Generators	1/two years**
Small Infectious Waste Generators	1/two years**
Infectious Waste Treatment Facility	Quarterly*
Residual Waste Disposal Facilities	Quarterly
Composting Facilities	Quarterly
C & D Debris Facilities	Quarterly
C & D Debris Transfer Facilities	Quarterly
Clean Hard Fill Sites	Quarterly
Exempt Facilities	Quarterly
Waste Hauling Trucks	1/year
Recycling Centers	Quarterly
Active Sanitary Landfill	Quarterly

The following figures present the reported inspection to the District by requirement of Health grant program. The OEPA recommended frequency of inspection per year. A 100% frequency meets OEPA the recommended number of inspections.

Active Sanitary Landfill 925% **Recycling Centers** 100% Waste Hauling Trucks 104% **Exempt Facilites** 100% Clean Hard Fill Sites 100% C & D Debris Transfer Facilites No Facilities C & D Debris Facilites 883% **Composting Facilites** 280% Residual Waste Disposal Facilites No Facilities Infectious Waste Treatment Facility No Facilities Small Infectious Waste Generators 25% Lge Infectious Waste Generators 114% Methane Gas Monitoring System **100%** Solid Waste Facility Post-Closure 775% Solid Waste Facilities in Closure No Facilities Tire Storage & Transfer Facilities 725% Solid Waste Transfer Facilities No Facilities Scrap Tire Monofills 209% Solid Waste Disposal Facilites No Facilities

Figure H-8.2. Stark County reported 2015 Inspections: Percentage of Required Frequency Recommended by the OEPA.

Figure H-8.3. Canon City Reported 2015 Inspections: Percentage of Required Frequency Recommended by the OEPA

200%

400%

600%

800%

1000%

0%

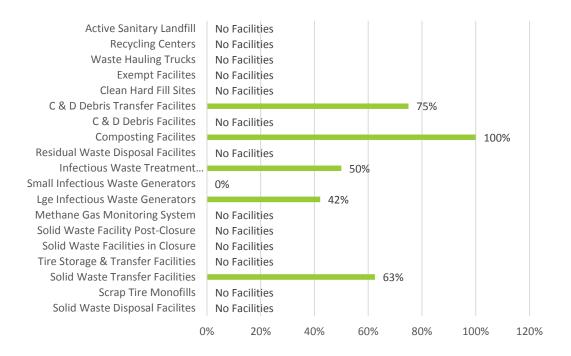


Figure H-8.4. Tuscarawas County Reported 2015 Inspections: Percentage of Required Frequency Recommended by the OEPA

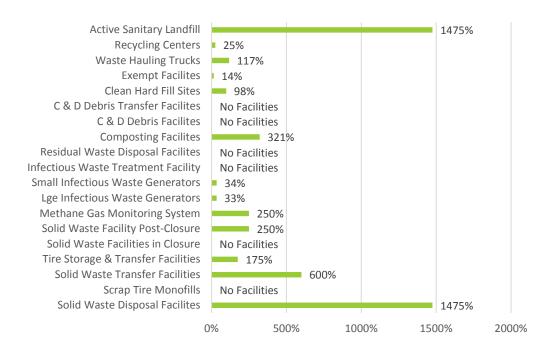
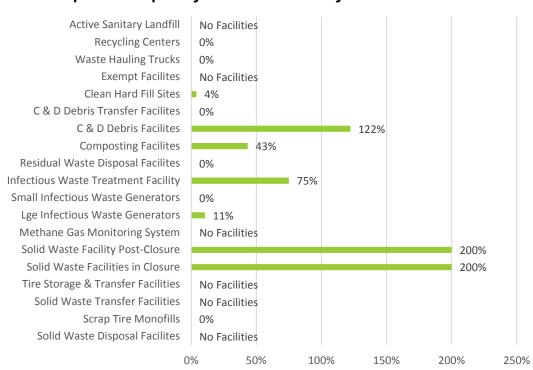


Figure H-8.5. Wayne County Reported 2015 Inspections: Percentage of Required Frequency Recommended by the OEPA



2. Conclusions, Strengths, and Challenges

The District awards Health Department Grants to the county Health Departments and the largest city in the District. Since the departments are required to submit reports to the District, the activities performed using the grants can be tracked.

Strengths of the program include:

 Health departments which receive a grant are required to submit reports.

Challenges of the program include:

- Some inspections under the Health Department grant program greatly exceed required inspection rates. Over inspection may use more funds.
- Does not have a scope of services for the Health Department that need to be approved by the District.
- District does not receive any formal reports on activities completed other than the number of performed inspections.

B. Well Monitoring – OEPA ID 8247

The District provided Health Departments funding for the inspection of monitoring wells around solid waste landfills within the District in 2015. In 2015, no grant funding for well monitoring was requested.

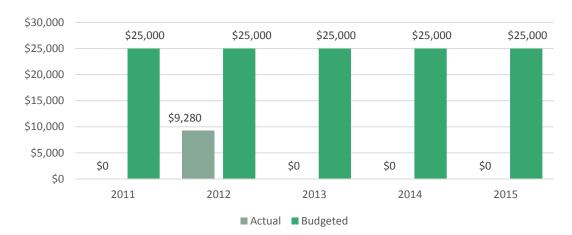


Figure H-8.6. Actual vs. Budgeted Well Monitoring Funding

1. Analysis and Evaluation

The program continues with Health Departments that receive funding being required to offer residential well testing to all households within 1,500 feet of a municipal solid waste landfill during each annual grant cycle as identified in the grant agreements. Well testing may remain as a line item without funding. This would allow District to use if needed but it is likely not needed.

2. Conclusions, strengths/effectiveness and challenges

This program was designed to assist residents with determining if their drinking water supply has been adversely affected by the operation of a neighboring solid waste landfill. Funding may only be needed if the landfill is going post-closure or an issue arose.

If this program continues, it should be advertised to the public and allow a number of tests per year by appointment.

Strengths of the program include:

 Offers residential well testing to households within 1,500 feet of a municipal solid waste landfill.

Challenges of the program include:

None identified.

C. Open Dump, Litter Law Enforcement - OEPA ID 8247

The Sheriff Departments are responsible for the enforcement of Ohio's solid waste laws at solid waste facilities including landfills, transfer facilities and yard waste composting facilities. Health Departments are also responsible for investigating open dump/scrap tire dump problems.

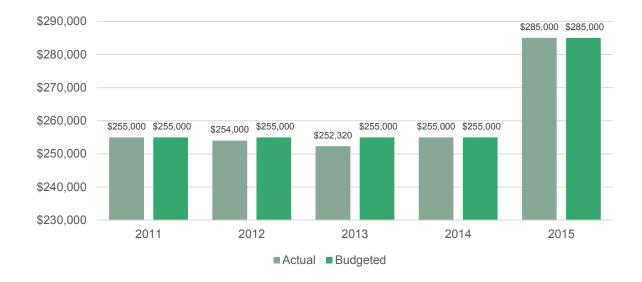


Figure H-8.7. Actual vs. Budgeted Litter Law Enforcement Funding

1. Analysis and Evaluation

The District awarded three (3) Sheriff Department Grants totaling \$285,000 in 2015. The District awarded \$95,000 each to the following: Stark County Sheriff Department, Tuscarawas County Sheriff Department, and Wayne County Sheriff Department. Duties performed by the Sheriff Departments varied by county but included patrolling near landfills, litter enforcement, and litter collection with a crew.

2. Conclusions, Strengths, and Challenges

The District demonstrates that the funds set aside for sheriff departments are distributed according to the current plan for investigating open dump/scrap tire dump problems.

Strengths of the program include:

Grants are used to investigate open dump/scrap tire dumps.

Challenges of the program include:

None identified.

E. Sheriff Department Grants - OEPA ID 8246

The District recognizes the importance of supporting Sheriff Departments for enforcing litter and solid waste laws. The District will continue to fund the Sheriff Departments to a level that does not jeopardize funding for the District's main

recycling and education programs during the planning period. More details on the funding amounts are covered in Appendix O of this Plan Update.

Each Sheriff Department is required to submit quarterly reports through Re-TRAC which identify activities that contributes to District goals. Information regarding citations (such as littering, dumping, overweight trucks or speeding as they relate to litter), litter complaints and subsequent clean-ups, and collection details (such as the number of days or hours spent collecting, the number of miles covered, the number of pounds collected, etc.) is submitted.

The District continued to support the Sheriff in each county in 2015. The grant rules include specific requirements regarding programmatic efforts and manpower allocation to solid waste related enforcement as well as collection crews in some areas.

The District awarded three Sheriff Department Grants totaling \$285,000 in 2015. The District awarded \$95,000 each to the following: Stark County Sheriff Department, Tuscarawas County Sheriff Department, and Wayne County Sheriff Department. Duties performed by the Sheriff Departments varied by county but included patrolling near landfills, litter enforcement, and litter collection with a crew.

Strengths of the program include:

- Assists county sheriff departments with solid waste enforcement and landfill patrols.
- Significant litter collection and enforcement.

Challenges of the program include:

• The District must adjust funding in such a way as to ensure adequate funding for core waste reduction and education programs.

SECTION H.9. Financial Analysis

The financial analysis has been divided into three parts: Revenues, Expenses, and District Fund Balances.

1. Analysis and Evaluation

A. Revenues

From 2011 through 2015, the source of the majority of District revenue has come from the disposal fee. The District has a tiered disposal fee system \$1.00/\$2.00/\$1.00 (in-district/out-of-district/out-of-state) per ton. Figure H-9.1 shown below illustrates the increase of total District funding since 2011, with the exception of year 2015 when revenue dropped due to lack of recycling revenue. In terms of dollars, the contract revenue has fluctuated between \$4,150,000 and \$3,200,000 during the five-year period depicted in the figure.

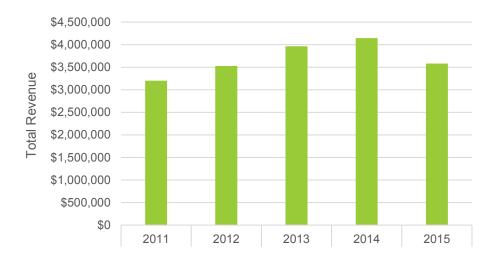


Figure H-9.1. Revenue for the District: 2011 - 2015

On a per person basis, the District collected an average of \$6.30 per capita during 2011 through 2015, ranging from \$5.49 to \$7.09 per capita. Compared to selected other SWMDs in Ohio, the District collects more money per person. (See Figure H-9.2.) In addition, the District's revenue per person is lower than the statewide average of \$6.80 per capita.

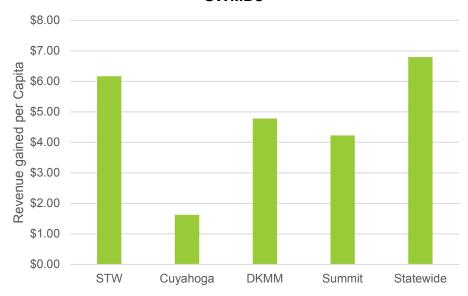


Figure H-9.2. Comparison of 2015 Revenues Collected Among SWMDs

The District's current Plan projected that approximately \$3,316,579 would be collected in revenues during 2015. The actual amount collected, \$3,582,515, is somewhat more than projected. The higher actual revenues are the result of higher landfilled tonnage subject to the disposal fee compared to projected landfilled amount.

In summary, the District's major revenue streams appear to be very stable and should continue to provide sufficient money for operations.

B. Expenditures

The major categories of expenditures for the District since 2011 have been administrative costs, the drop-off recycling program, Health Departments Grants, and the costs for the yard waste program. (See Figure H-9.3 below.) Total District expenditures are higher in 2015 compared to five years earlier. The increase in costs in 2015 can be primarily attributed to an increase in the cost of the yard waste program. However, the drop-off program expenses increased from 2014 through 2015 as well.

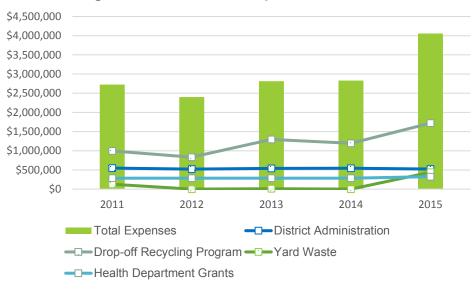


Figure H-9.3. District Expenditures: 2011 – 2015

The drop-off program comprised approximately 42 percent of total expenditures during 2015, with 13 percent of costs directed towards administration. (See Figure H-9.4.) The combined percentage of the four categories having the highest percent expenditures are approximately 58 percent of the total.

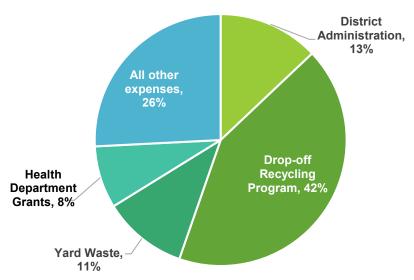


Figure H-9.4. Types of Expenditures in 2015

Compared to total expenditure projections in the current plan for 2015 (\$3,617,339), the actual expenditures were considerably higher. Actual costs for yard waste and drop-off programs were also higher than projected in the current Plan.

District expenditures per person have fluctuated in recent years, but overall, the 2015 estimate is higher than the amount calculated for 2011. The average expenditure per capita from 2011 through 2015 is \$5.07 per person. Compared to other Ohio SWMDs and the statewide average for 2015, the District spent more money, or \$6.99 per person. (See Figure H-9.4.)

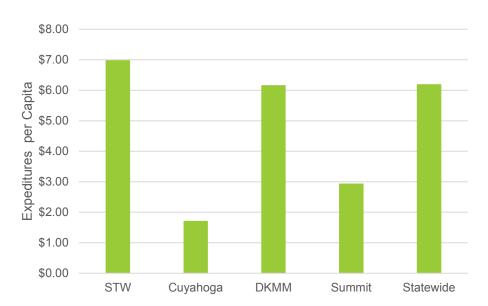


Figure H-9.4. Expenditures Per Capita

C. Balances

For 2015, the District's expenditures were higher than revenues, and the District's account balance dropped accordingly. (See Figure H-9.5.) The deficits during 2015 were primarily due to increased cost for the yard waste program. Between 2011 and 2014, expenditures lessened, District revenues exceeded expenses, and year-end balances began to increase.

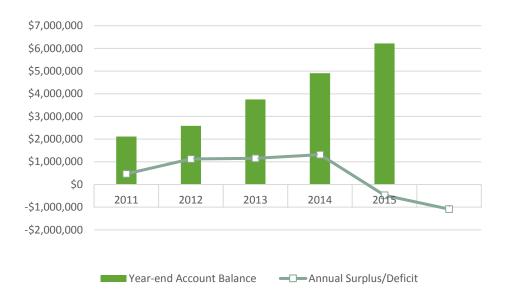


Figure H-9.5. District Annual Surplus/Deficit and Year-End Balances

The current Plan projected a carry-over or year-end balance for 2015 of approximately \$4,242,458, which is much higher than the actual balance. The actual balance has grown substantially since 2011, primarily due to lower expenses than anticipated.

2. Conclusions, Strengths, and Challenges

The District's financial position is currently stable with growing fund balances. The District will need to address the challenges articulated in other analyses in this appendix that require financial contribution especially with regard to the material recovery facility infrastructure.

Strengths of the program include:

District has stable financial position.

Challenges of the program include:

None identified.

SECTION H.10. Regional Analysis

The regional analysis is to consider regional opportunities for collaboration and partnerships, and to consider how the District's decisions may affect other stakeholders in the region. This analysis may result in the creation of a systematic plan to communicate, collaborate and/or partner with the stakeholders identified through this process.

The District considers recycling collection by default as regional. For example, the District has a large drop-off program which effects most if not all municipalities for recycling access. Also, some yard waste and food waste is composted at facilities inside and outside of the District, but still within the region.

1. Analysis and Evaluation

A. Identify Regional Stakeholders

Regional stakeholders for the District include surrounding solid waste districts, private and public haulers and landfills, and municipalities in the District. The District has a large drop-off program which effects residing and surrounding municipalities.

B. Regional Partnerships & Communication and Collaboration

The District has used its resources in the region for communication and collaboration regarding solid waste management. The following section encapsulates the District's efforts to work with other interested parties for the management of solid waste and/or the sharing of expertise. These are categorized below to describe efforts within the District:

- The District has worked with many compost facilities to allow residents to drop-off yard waste for free.
- The District works with many institutions and businesses to set up and maintain drop-offs.

C. Regional Impact

The District is dependent on facilities located outside the District for recycling processing. All of the recyclables are taken to in-District facilities; however, some of the recyclables are then transferred to out-of-District facilities. All of the landfills are privately owned and operated. As a result, the activities and decisions of these private facilities and neighboring solid waste districts can affect the availability and capacity of these facilities for the tri-county waste generators. The District acknowledges the fact that its

waste imports and recycling exports generates both opportunities and impacts for other solid waste districts.

The following general strategies of the District have been in place with the above set of situations:

- The District promotes competition to maintain good services and fair prices for solid waste services.
- The District does not designate where solid waste must be accepted in surrounding solid waste districts.
- The District is not considering developing a licensed solid waste management facility that could affect solid waste flow and competition in the region.
- The two solid waste transfer stations that are located within the District are expected to continue operation throughout the planning period.

The District has not identified any needed changes to this style and all existing strategies and approaches regarding engagement with regional stakeholders and solid waste management will continue in the next planning period where appropriate.

2. Conclusions, Strengths, and Challenges

The District's resource position allows the District to sustain the current services for the region. The District will continue to work within the region regarding solid waste issues, disposal impacts, and recycling impacts as the largest contributor to the region.

Strengths of the program include:

- Strong drop-off program positively impacts residing and surrounding municipalities.
- Efforts to provide low-cost to free compost opportunities for residents in the three counties.
- Brings recyclables to neighboring MRFs for greater waste reduction and consistent stream of materials to be recovered for the region.

Challenges of the program include:

None identified.

SECTION H.11. Population Analysis

As discussed in Appendix C, population projections for this *Plan Update* were developed using documents published by the Ohio Development Services Agency. (See Appendix C and Chapter 2 for further discussion on population analysis.)

SECTION H.12. Data Collection Analysis

Waste is generated by three sectors: residential, commercial and industrial. Waste that is source reduced, recycled, composted, incinerated, or disposed is measured to establish a baseline, determine waste generation, and measure recycling rates. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills; therefore, an accurate measurement of diversion from landfills is needed. The data collection process from beginning to end for each sector is described below.

District staff devote time to overseeing and participating in a comprehensive data collection effort, as well as working with consultants.

A. Residential Sector

District staff collect and tabulate residential recycling totals from the following programs:

- Recycling and Yard Waste Drop-Off Programs
- District Tire Programs
- Curbside Recycling Programs
- Other District Programs, such as Special Collections Events, the HHW Collection Program, and the Prescription Drug Collection Program

Most data is obtained from the District's program contractor, the District's collection crew's records, or from grantees reporting totals through Re-TRAC. The District customized grantee forms which are completed on Re-TRAC; information from grantees is not obtained through the District's general survey forms which are used to collect data for the Annual District Report.

The District also surveys Recycling Guide participants (businesses and organizations that accepted recyclables from residents and signed up to be in the District's Recycling and Reuse Guide). Customized surveys were created for this group of businesses that listed specific materials each business was known to accept from the public. Surveys asked for the total quantity recycled and asked for survey participants to identify where materials were sent to be managed after they were collected so the District could avoid double counting.

1. Residential Sector Data Gaps

The District is confident that the residential sector recycling data collected represents a nearly complete picture of the residential sector recycling activities that take place throughout the District. By operating the drop-off program internally, and requiring that curbside and yard waste recycling tonnage is reported as part of grant requirements, the District obtains nearly complete data from the most significant residential sector recycling

programs. There is only one political subdivision in the District that has nonsubscription curbside recycling that does not participate in the Recycling Makes \$ense Grant and subsequently does not provide curbside totals to the District, but since the reference year, this political subdivision has applied for the grant and will now be providing these totals.

2. Conclusions, Strengths, Challenges

Out of the three sectors of waste generators, the District is most confident with the residential sector recycling data. The District will continue its current efforts.

Strengths of the program include:

 Confident in residential sector data as all potential totals are presently accounted for.

Challenges of the program include:

 If a program is ever shifted to the private sector, those companies would not be required to report totals (example: yard waste management).

B. Commercial and Industrial Sector

District staff collect and tabulate recycling totals from the following programs:

- District School, Government, Church, and Library Recycling Programs
- Privately-Operated Church, Library, School, and Government Recycling Programs

Data is obtained from the District's program contractors, the District collection crew's records, or directly from the two privately-operated companies that provide services to churches, libraries, schools, and government buildings. The District has a contact person at each company that provides the data annually.

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 (ADR) to be submitted to Ohio EPA.

The District's survey mailing list is improved each year using a variety of resources. Existing mailing lists are updated rather than creating new mailing lists each year because improvements are made on an ongoing basis. For example, when envelopes are returned as undeliverable, alternative company addresses are obtained.

Some of the resources used to ensure the mailing list contains the most up-to-date listings and key waste generators include the following:

- The ReferenceUSA database: Delivers lists of entities based on SIC or NAICS codes for a geographic area. 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 the District.
- Ohio Development Services Agency documents on Ohio Major Employers
- Maps of industrial parks located in the District that label current tenants
- Chamber of Commerce membership directories

The following figure presents each group surveyed and the method used to perform the survey:

Brokers

•Surveyed using cover letter and survey sent via U.S. Postal Service. Surveys can be returned by fax or email.

Recycling Guide Participants (businesses and organizations that accept recyclables from residents and signed up to be in the District's Recycling and Reuse Guide)

•Surveyed using cover letter and survey sent via U.S. Postal Service. Surveys can be returned by fax or email.

Industries

•Surveyed using cover letter sent via U.S. Postal Service directing recipient to complete survey on Re-TRAC. Recipients may also request a paper survey to complete.

Commercial/Institutional

•Surveyed using cover letter sent via U.S. Postal Service directing recipient to complete survey on Re-TRAC. Recipients may also request a paper survey to complete.

Past Survey Recipients

•Surveyed using cover letter sent via e-mail directing recipient to complete survey on Re-TRAC.

In 2015, the District surveyed 80 brokers, 33 Recycling Guide Participants, 427 manufacturing industries, 2,587 commercial/institutional entities, and 176 past survey recipients.

Follow-up phone calls were made and e-mails were sent as needed. 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 needed to be verified (i.e., a very large quantity or an amount which was significantly different from a survey returned from the same respondent in a previous year). Follow-up calls are also made to non-respondents. The number of follow-up attempts vary based on whether the recipient has provided data previously and the size of the business/organization. Key industries, businesses, and brokers that have reported recycling significant quantities in previous years are typically contacted weekly after the survey deadline has passed until a response is received or until the ADR deadline (June 1).

In addition to its surveying activities, the District collaborates with the Ohio Council of Retail Merchants, the Ohio Chamber of Commerce, the Ohio Manufacturers' Association, and the Ohio Environmental Protection Agency (Ohio EPA) each year in a statewide recycling survey. The survey targets commercial and industrial sector establishments. The District has received limited responses from this survey platform thus far.

The District utilizes data collected by Ohio EPA, including the Material Recovery Facility and Commercial Recycling Data Report, the Compost Facility Report, and Scrap Tire Report.

The District is able to use survey responses for a three-year period on each Annual District Report (the survey calendar year and previous two years). Recycling Guide Participants and data collected from commercial entities by Ohio EPA were not categorized as such; responses or tonnages were recorded in the appropriate category (commercial, industrial, or broker). The following presents the total responses from each survey group used to complete the 2015 ADR:

Commercial: 128 responsesIndustrial: 77 responsesBrokers: 31 responses

• Composters (from Ohio EPA report): 40 responses

• District program data: 51 programs

Issues with double counting data can arise when data from generators is blended with broker/processor data. If the District uses data from both sources to calculate the total volume of a material recycled, responses are thoroughly checked to evaluate whether they will be counted. Each generator response that is counted must specify a processor used. If a processor is not specified and the generator cannot be reached during follow-up phone calls, the data will be eliminated. Only

generator responses that specify a broker/processor that is not included in the District's calculations will be counted.

1. Commercial and Industrial Sector Data Gaps

The District diligently works to improve data collection efforts each year by thoughtfully compiling a list of known recycling activities. The District focuses on surveying commercial and industrial generators and brokers/processors (including scrap yards and MRFs). Obtaining data from brokers and processors tends to provide a more complete data set than relying strictly on generator data due to limited response rates among generators. However, generator data is valuable as well to the District. Generators are able to identify new brokers and processors that are being used to manage materials generated in the tri-county area. Individual generator data is also important to have because it gives the District a better idea about which businesses recycle and which businesses do not recycle. It can also indicate average volumes and materials generated by different types establishments.

Although extensive effort is invested in contacting and following up with generators, brokers, processors, and recyclers, gaps in recycling data remain an issue. The most common cause for the data gaps is lack of response from businesses to the District's multiple surveying attempts. Most businesses do not give a reason for declining to participate in the survey. A small portion of businesses have expressed that they do not have time to participate in the survey. Some companies explain that tonnage information is either not tracked, or is tracked in a way that is not usable to the District. For example, some entities track the totals tons recycled but are not able to break down tonnage by which county the materials originated.

A plan to close the gaps in recycling data can be developed. To address known high-volume generators or recyclers of materials generated within the District's jurisdiction that do not respond to survey requests via e-mail, mail, or phone calls, a site visit may be necessary to develop a relationship between the District and the survey recipient. During site visits, staff can introduce recyclers to the goals and purpose of the District. The District can provide the business or recycler with information about programs and opportunities that may benefit their establishment. The District can use the visit to identify a contact person at the establishment, explain the purpose of the District's annual survey, and the importance of their participation data reporting. The District may also provide incentives for participating in the annual survey, such as a free listing in the Recycling and Reuse Guide, the Recycling Newsletter, or the District's website. Site visits can be used as a strategy to discuss opportunities for data collection improvements with

companies that track tonnage in a manner that is currently not usable to the District.

Discrepancies between Ohio EPA's published data and data reported from other District survey methods has been identified on occasion. The Ohio EPA published data is cross-referenced with data reported through surveys and by the District's program contractors when possible. When issues are identified, they are addressed with Ohio EPA and resolved.

Examples of issues with Ohio EPA data that have been identified are generally not specific to the District:

- Haulers have provided detailed records showing the date, tonnage, type of waste, tipping fees paid, facility where organic materials were collected, and the registered composting facility where materials were delivered. In Ohio EPA's Compost report, no tonnage or a lower quantity of tonnage was reported for the SWMD in question.
- Compost facilities have submitted copies of reports that were submitted to Ohio EPA showing tons. In the Ohio EPA Compost report, only one-third of the tonnage was reported because it was entered as cubic yards.
- Compost facilities have responded to District surveys and quantities reported by the same facilities differ from values in Ohio EPA's Compost report. Issues are typically caused by facilities including wood waste data on SWMD surveys, which is not required on facility reports to Ohio EPA, or the compost facilities use a different volume to weight ratio than Ohio EPA.

Other issues associated with using Ohio EPA data are caused by a limited amount of information available about the data. While the data provided by Ohio EPA is valuable to the District and Ohio EPA's efforts to obtain and compile the data are appreciated, sometimes the tonnage information is not enough to provide the District with a thorough understanding of the material flow throughout Stark, Tuscarawas, and Wayne Counties. For example, food waste hauler data is reported as one value. Neither the haulers nor the destination of the materials are reported.

The District has concerns about double counting when using Ohio EPA's data for commercial establishments. The District obtains data from brokers and processors; some of which are known to have national contracts with the commercial businesses included in Ohio EPA's Material Recovery Facility and Commercial Recycling Data Report. The District takes precautions to avoid double counting; however, it would be most advantageous to the District if more information about the tonnage reported for commercial businesses was available, such as the recycling facility

where materials are managed or the full-service recycler that collected and processed materials collected.

The District makes an effort to understand how materials are obtained and managed by entities that submit recycling information. While there are exceptions, the following figure outlines the flow of recyclable materials:



By collecting data from all stages of the material flow diagram from surveying, the District must diligently review data for any materials that might be reported by more than one entity. For example, the District investigates whether metals reported by Goodwill are sent to a scrap yard that also reports metals to the District. Furthermore, the District follows up with businesses that report to inquire whether they have purchased or sold materials to another reporting entity.

As a dynamic organization, the District regularly evaluates whether the data received from surveying efforts is adequate for the District's planning purposes. As the District's needs change, it may be beneficial to expand or modify the current surveying strategy.

2. Conclusions, Strengths, Challenges

The District focuses on surveying generators and brokers/processors of recyclable materials. The District receives responses from the key brokers and processors, but limited responses from generators may result in data gaps.

The most challenging aspect of surveying the commercial and industrial sector is low response rates. Significant time and resources are invested in obtaining responses. The District suspects many surveys in the past were disposed as "junk mail" and never delivered to the appropriate person, such as the facility manager, at each establishment. To combat this, the District started using the following envelope design in 2017:

Stark-Tuscarawas-Wayne Joint Solid Waste Management District
c/o GT Environmental, Inc.
635 Park Meadow Road, Suite 112
Westerville, Ohio 43081

WE NEED YOUR INPUT
to improve recycling
in Stark, Tuscarawas
and Wayne counties

Strengths of the program include:

- Developed unique envelope to address survey response issues.
- Mailing list of those to be surveyed is consistently reviewed and updated.
- High-volume generators are followed up with multiple times.
- Data is gathered from multiple sources and responses can be received multiple ways (email, fax, etc.) which makes it more convenient for respondents.

Challenges of the program include:

- Receiving responses that do not provide the hauler/processor/broker used to manage a material; without performing a follow-up phone call, the information is unable to be used due to double counting.
- Some tonnage reported by industrial establishments requires follow-ups to determine whether it is creditable. For example, if large quantities are reported, there is a possibility that materials were brought into the District from another county or state as a raw material and recycled in the manufacturing process.
- Varying but sometimes significant amount of time required to solicit survey responses.
- Staffing changes at surveyed establishments; losing a contact person.
- Lack of knowledge from survey respondents when follow-up questions are made; for example, businesses that accept paper for shredding may not know or share where shredded materials are managed, so if the District has data from a paper mill, it cannot use data from the shredding company because

- of the risk of double counting. This may lead to understated recycling rates.
- Errors in reported values; responses from previous years are compared to current reported values (when possible) to identify significant increases or decreases in tonnage or the materials reported.
- Companies are not required to report.

SECTION H.13. Education and Outreach Analysis

The education and outreach programs allow the District to reach its audiences by means of presentations, newsletters, and an informative website. Further information on the Outreach and Marketing Plan is in Appendix L.

A. Education and Awareness Program

This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performed 314 presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation. Out of the Outreach Coordinator's total engagements, elementary school presentations represented 68%; middle school classes represented 9%; high school classes represented 9%; 6% took place at public events such as county fairs; 5% were performed for adult/civic groups; 3% were performed for boy scout troops, and 1% of the presentations were given to preschool classes.

Strengths of the program include:

- The Outreach Coordinator's presentations reach a great number of students and residents of the District.
- Advertisements help reach residents in their homes, expanding potential outreach.

Challenges of the program include:

- The District has not focused on advertisements for promoting their educational material available.
- Educational workshops available for composting.

B. Recycling and Reuse Guide/Newsletter

The District annually distributes either a Recycling Newsletter or the Recycling and Reuse Guide for each county to keep the residents updated. The publications contained the Recycling Report Card, educational articles about recycling, frequently asked questions, information on District recycling programs and drop-off locations, local recycling statistics, and a list of businesses/organizations that accept special materials for recycling such as appliances and propane tanks.

The annual comprehensive Recycling and Reuse Guides were mailed to 269,347 households in Stark, Tuscarawas, and Wayne Counties during the last quarter of 2015. In 2016, the Recycling Newsletter was mailed to 268,873 households. Publications were also made available to residents and businesses on the District's website.

Strengths of the program include:

 The publications help the District share information with its residents and businesses.

Challenges of the program include:

- Mailing to households is expensive.
- Does not compare years or show percentage difference of improvement per community.

C. Recycling Report Card

The Recycling Report Card is given by county and presented the recycling tonnage within each political subdivision that has a drop-off and curbside program. The 2015 Annual Waste Reduction Report Card was featured in the Recycling Newsletter or Recycling and Reuse Guide and posted on the website. Recycling and organics diversion continued to increase.

Strengths of the program include:

• Sharing the recycling tonnage helps residents realize their individual impact on the community's diversion totals.

Challenges of the program include:

None identified.

D. Website

The District regularly updated its website in 2015. Recycling programs, guides, brochures, statistics, grants, and government meetings were available through the website at www.timetorecycle.org. During 2015, the District worked with a contractor to redesign, expand, and improve the website. This activity is ongoing. The new website is expected to launch and replace the current site by 2020.

Strengths of the program include:

 The website is a great resource for residential, commercial, industrial and institutional sectors find information on waste diversion activities and programs.

Challenges of the program include:

• The current website cannot be updated by District staff but rather information to be changed is submitted to a third party, resulting in a delay.

• Current site is not mobile friendly.

SECTION H.14. Processing Capacity Analysis

This section outlines the current evaluation for processing facilities within the District to meet the need for implementing initiatives to recover more material through existing or new services.

1. Analysis and Evaluation

Several facilities operate within the District to process recyclables. These facilities include:

- Alliance Recycling Center, Alliance, OH
- Kimble Recycling and Transfer Facility, Canton, OH
- Sanmandy Enterprises, Creston, OH
- S. Slesnick Co. Paper and Plastic Recycling, Canton, OH
- Slesnick Iron & Metal, Canton, OH

Other notable material recovery facilities located outside the District that process recyclables generated in the tri-county area include:

- Kimble Recycling Facility, Twinsburg Township, OH (Summit County)
- Waste Management Akron MRF, Akron, OH (Summit County)
- Republic Services Akron Recyclery, Akron, OH (Summit County)

The material recovery facility (MRF) that accepts the greatest volume of residential/commercial sector District-generated recyclables is the Kimble Recycling Facility. This facility manages the majority of recyclables collected from curbside and drop-off programs. The Kimble Recycling Facility can process 27-28 dry tons of recyclables (or 24-26 tons of moisture-laden recyclables) per hour. The facility is not running at maximum processing capacity, meaning if needed, it could process more recyclables by extending the hours and/or days the facility operates.

During the reference year of 2015, the District concluded that adequate processing capacity existed in all three counties, or was accessible in each county.

2. Conclusions, Strengths, Challenges

During the reference year of 2015, the District concluded that adequate processing capacity existed in all three counties, or was accessible in each county.

Strengths of the program include:

• Adequate processing capacity existed in all three counties.

Challenges of the program include:

• None identified.

APPENDIX I CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

APPENDIX I Conclusions, Priorities, and Program Descriptions

1. Making decisions about the Stark-Tuscarawas-Wayne Joint Solid Waste Management District's (District) 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 the least 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 lowest priority.
- 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 District reserves the right to implement but does not guarantee implementation
 - ✓ Ranking of 4 Implement
 - ✓ Ranking of 5 Implement
- The District then prioritized the results from the above steps.
- The list of prioritized possible actions was then presented to the Policy Committee with discussion from District personnel and the District's consultant.
- 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 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

Section in App. H	Program Category	Suggested Action or Program Name	District Ranking
, , , , , , , , , , , , , , , , , ,		Additional drops-offs suggested to be added to higher populations. Densely populated areas may need drop-offs for multifamily housing.	1
	Drop-Offs	Create a map for the drop-offs located in the District and post it on the website.	5
		Work with political subdivisions to educate their residents about drop-off program.	4
		Target political subdivisions for implementing curbside recycling programs if population is greater than 20,000.	5
		Work with political subdivisions to implement curbside recycling in other areas that are prime candidates based on factors other than population (such as housing density).	4
11.4		Promote the grant funding available vs an incentive for political subdivisions to implement curbside recycling.	5
H-1	Curbside	Work with political subdivisions when contracts are nearing renewal time to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling container size, and/or requiring the hauler to provide ongoing education, such as a quarterly direct mailer to residents.	5
		Target at least two communities each year to work on improving recovery rates.	5
		Survey communities that have curbside recycling to determine if Multi-Family housing complexes could be added to program.	2
	5	Multi-Family Education needed to increase recycling rates.	2
	Residential Education	Special Events: Increase District's presence at large events	4
		Participate at all county fairs	1
	School Recycling Program	Develop and operate a School Waste Audit program	3
		Promote Government Building Recycling	3
H-2	Government Building	Inventory all government buildings to determine waste generation potential	1
	Recycling	Develop and operate a Government Building Waste Audit program	3
	Technical Assistance	Develop enhanced promotion of program and business engagement	1
	7.0010101100	Survey businesses on best way District can assist	1

Section in App. H	Program Category	Suggested Action or Program Name	District Ranking
	outogo. y	Develop business engagement initiatives such as round tables or other options	1
		Industrial Hauler Contact list on website.	1
H-3	Industrial	Send out services offered by district with the annual District survey.	1
		Host a webinar or forum for industries about participating in Ohio EPA's Materials Marketplace	3
		Reduce yard waste program to fit within a \$300,000 per year budget	5
		Increase partnerships with private sector to increase yard waste drop-off locations that do not increase cost to District	5
		Evaluate the use of a yard waste grinder to reduce volumes to improve transportation efficiencies	5
		Develop detailed yard waste site host agreements	1
	Yard waste	Improve existing yard waste sites such as implementing cameras, fencing and gates to reduce contamination (if sites are continued)	4
		Conduct a campaign to reduce commercial use of yard waste drop-off sites	4
H-4		Conduct an education campaign for residential users of yard waste sites to reduce contamination	5
		Target communities with curbside recycling to add yard waste collection, provide technical assistance	1
		Modify drop-off site programs to save money and improve program	5
		Develop a long-range plan for food waste management	1
	Food Waste	Survey compost facilities on desire to upgrade to Class II status to accept food waste	1
		Survey communities on desire to recycle food waste	1
	Fiber and Plastic	Evaluate feasibility of expanding commercial collection of recyclables that target fiber and plastics.	1
	PAYT	Conduct a PAYT Pilot Program with a host community	3
	Community Development Grants	Conduct a targeted promotional campaign for potential grant applicants	2
H-5	Market Development Grants	Conduct a targeted promotional campaign for potential grant applicants	2
	Recycle and Compost Infrastructure Grants	Conduct a feasibility analysis to determine the effectiveness of the grant	1
	Host Community Grants	Conduct a feasibility analysis to determine the effectiveness of the grant	1

Section in App. H	Program Category	Suggested Action or Program Name	District Ranking
		Develop grant ton limits based on a scale to give incentive for higher performance	5
	Recycle	Develop automated cart incentive option to grant	5
	Makes \$ense Grant	Develop PAYT incentive option to grant	5
	Giant	Allow for multiple calculation options for incentive payouts based on community infrastructure (school pick-ups)	2
	Program Start-Up Grants	None	N/A
	Sheriff Grants	Revise grant program to be based on direct requirements of District for education and waste reduction	2
		HHW collection increase presence in District	4
		Conduct education campaign to inform residents on alternate local options for HHW materials	4
	HHW	Update and send HHW guide or newsletter out annually	5
		Expand HHW collection in District	4
		Evaluate the option for a year-round permanent HHW facility central to the three-county area to supplement weekend collections	5
H-6	Tires	Conduct a campaign to reduce commercial use of tire drop-off sites	1
		Expand tire sites and/or capacity at existing high performing sites	1
	Appliances, batteries, Metals	Increase promotion	4
H-8	Health Departments	Develop performance based contracts for each health department with specific scopes of work that the District needs conducted to meets its needs	2
П-0	Well Monitoring	Reallocate some funds to another program since the \$25,000 currently budgeted for Well testing is typically not requested.	5
H-12	Commercial/ Industrial Sector Surveying	Perform Site Visit with Key Non-Respondents	1

Section in App. H	Program Category	Suggested Action or Program Name	District Ranking			
		Work with key respondents to better verify what is countable and not countable	1			
	Hire an intern for one summer to develop a better mail list with key contacts to improve return rates/participation and data quality					
		Develop a tool kit on data collection and survey completion that can be shared with survey respondents				
		Develop education workshops for composting	3			
	Education	Have a sheet in Newsletter that can be ripped out to hang in a home with useful facts, tips, following year dates, website, and contact information	4			
H-13		Recycling Report Card addition to compare years or show percentage difference of improvement per community	2			
		Website ability to track the visitor statistics.	5			
		Educational material for Do-It-Yourself classroom or at home activities project kits to learn about proper waste diversion and disposal.	3			
H-14	Processing Capacity	None	N/A			

B. Program Descriptions

This section outlines the programs available to residents, communities, businesses, and institutions during the reference year (2015) as well as changes that will be made during the planning period.

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)
8253	Commercial and Industrial Technical Assistance	Existing	Ongoing	Goal 3, 4
8249	Commercial and Industrial Waste Audits	Existing	Ongoing	Goal 3, 4
8235	School Recycling Program	Existing	Ongoing	Goal 2
8233	Government Building Recycling	Existing	Ongoing	Goal 2
No ID	Campaign to reduce commercial use of residential yard waste drop-off sites	2019	Ongoing	Goal 3, 4

Commercial and Industrial Technical Assistance

The District provides resources for the commercial and industrial sector on its website which included information about grant opportunities, Waste Wise, managing special materials such as food or construction waste, low-cost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals

Commercial and Industrial Waste Audits

The District completes waste audits for commercial businesses, industries, agricultural operations, and non-profit organizations upon request for no cost. Audits evaluate the waste streams of each business/industry, the current disposal practices and costs, and current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting.

School Recycling Program

The existing program will continue, and the District will evaluate whether or not the program can be expanded to accommodate additional schools. The District collected mixed paper and office paper from schools located throughout the three-county area. Some of the school programs also accepted plastics #1-#7, glass, aluminum, and steel. The District also collected data from local businesses that provided recycling services to schools, which include the Paper Retriever program and Sanmandy.

Government Building Recycling

The District continues to operate the Government Building Recycling program in each of the three counties. The District collected from Stark County government buildings, Stark County libraries, Tuscarawas County government buildings, and from Wayne County government buildings. The District also collected data from local businesses that provided recycling services to government buildings within the District. In Stark County, Royal Oaks Recycling collected from bins at government buildings and from bins at libraries; in Wayne County, Royal Oaks Recycling collected from bins at government buildings.

Campaign to reduce commercial use of residential yard waste drop-off sites

The District may create a new program with the goal to reduce commercial use of residential yard waste drop-off sites. This program is important to preserve the residential yard waste program intended use.

2. Industrial Sector Reduction and Recycling Programs

Table I-3. Summary of Programs for Industrial Sector

ID	Name	Start Date	End Date	Goal(s)
8255	Waste Audit Manual	Existing	Ongoing	Goal 3, 4

Waste Audit Manual

The District will continue to advertise free waste auditing services on its website. Waste audits evaluate the waste streams of each business/industry, current disposal practices and costs, current recycling practices and costs, and provide recommendations for recycling, source reduction, reuse and composting. The audits will be offered at the expense of the District and will be used to help businesses/industries realize the costs savings associated with the specific recommendations. The waste audits may also include a marketing component to help the business/industries identify outlets for marketing recyclable materials or reusing the materials.

3. Residential Waste Streams

Table I-4. Summary of Programs for Residential Waste Streams

ID	Name	Start Date	End Date	Goal(s)
8106	Curbside Expansion Efforts	Existing	Ongoing	Goal 1, 2
8264	Curbside Program Re-Start Procedure	Existing	Ongoing	Goal 1, 2
8107	PAYT Promotion Efforts	Existing	Ongoing	Goal 1,2
No ID	Drop-Off Map	2019	Ongoing	Goal 2, 3
No ID	Drop-off Program Promotion	2019	Ongoing	Goal 2, 3
No ID	Implement Curbside Recycling for Targeted Areas	2019	Ongoing	Goal 1, 2
No ID	Community Assistance Program	2021	Ongoing	Goal 1, 2

Curbside Expansion Efforts

District will work to expand non-subscription curbside programs. The District provides assistance to communities that are interested in implementing or expanding a non-subscription curbside recycling program.

In 2017, GT Environmental, Inc. (GT) was hired by the Stark-Tuscarawas-Wayne Joint Solid Waste Management District to complete a comprehensive study of solid waste collection operations within the City of Canton, Ohio and City of New Philadelphia, Ohio.

The cities wanted to improve its current manual curbside trash and recycling program for the residents. Canton also had a commercial component for trash collection for multifamily, apartment and businesses. The cities are using this study to discuss improving their programs.

Curbside Program Re-Start Procedure

In the event of a cancellation, the District works to re-establish the curbside collection program if possible. When that is not possible, the District evaluates the community for a recycling drop-off site.

PAYT Promotion Efforts

The District will continue to work with targeted political subdivisions that offer curbside recycling but do not have PAYT to promote establishment of PAYT programs.

Drop-off Map

A new initiative by the District is to create and maintain a map for the drop-offs located in the District. This map would be posted on the District's website to aid District Residents and businesses of their nearest drop-off program. The implementation of this initiative will be contingent on the availability of local and regional companies to produce the maps and be able to make cost effective changes as programs change.

Drop-Off Program Promotion

A new initiative by the District is to work with political subdivisions to educate their residents about drop-off programs. This may include suggestions on communications with residents via community web sites or links to the District website, sharing of District publications on the drop-off program, special meetings and presentations and other activities as needed.

Drop-off promotion priority based on working with communities who do one of the following:

- Make a request for promotion assistance directly or via the District's mini-grant program;
- Regularly communicate to the District because they are grant recipients;
- Seem to be low performing for their population density;
- Would be prime candidates because of an apparent lack of promotion (for example, a tire drop-off site could be communicated to residents of a community that is observed to have an increased mosquito control concern)

The District reserves the right to revisit the operation of the program at any time during the planning period if deemed feasible by the Board. Also, the District reserves the right to add, remove, move, or modify drop-off sites as deemed necessary by the Board of Directors (Board).

Implement Curbside Recycling for Targeted Areas

A new initiative by the District is to target political subdivisions for implementing curbside recycling programs based on factors such as: population greater than 20,000 and housing

density. The District will develop a list of communities that meet the above criteria and other criteria as determined and work with them to promote curbside recycling programs including contracting and consortiums.

Community Assistance Program

A new initiative by the District is to target at least two communities each year to work on improving recovery rates. Outreach can be focused on curbside, drop-offs, yard waste or a combination.

Assistance priority based on working with communities who do one of the following:

- Make a request for promotion assistance directly or via the District's mini-grant program;
- Regularly communicate to the District because they are grant recipients;
- Seem to be low performing for their population density;
- Would be prime candidates because of an apparent lack of promotion (for example, a tire drop-off site could be communicated to residents of a community that is observed to have an increased mosquito control concern)

4. Special Waste Streams

Table I-5. Summary of Programs for Special Waste Streams

ID	Name	Start Date	End Date	Goal(s)
8271	Computer/Electronics Recycling End Use Audit	Existing	Ongoing	Goal 5
8228	Electronics Collection Program	Existing	Ongoing	Goal 2, 5
8269	HHW Management Outreach Program	Existing	Ongoing	Goal 2, 5
9145	Pharmaceutical Collection Sites	Existing	Ongoing	Goal 2, 5
8229	Lead-Acid Battery Program	Existing	Ongoing	Goal 2, 5
8230	Appliance Collection Program	Existing	Ongoing	Goal 2
8261	Audit Committee	Existing	Ongoing	None
8262	Data Collection and Database of Recycling Processors	Existing	Ongoing	Goal 8
8263	Disaster Debris Management	Existing	Ongoing	None
8224	Food Waste Management Program	Existing	Ongoing	Goal 2
8226	Scrap Tire Program - Permanent sites and outreach efforts	Existing	Ongoing	Goal 5
8222	Yard Waste Drop-Off Collection Sites	Existing	Ongoing	Goal 1, 2
9146	Yard Waste Management Education and Outreach	Existing	Ongoing	Goal 2
No ID	Yard Waste Partnership Program	2020	Ongoing	Goal 1, 5
No ID	Yard Waste Grinder Evaluation	2019	2020	Goal 5
No ID	Yard Waste Program Enhancement Initiative	2019	2020	Goal 1, 5

ID	Name	Start Date	End Date	Goal(s)
No ID	Permanent HHW Collection	2016	Ongoing	Goal 2, 5
No ID	Expansion of HHW collection	2019	2024	Goal 1, 5

Computer/Electronics Recycling End Use Audit

The Responsible Recycling (R2) Leader program was designed to advance the safe, responsible and sustainable repair and recycling of used electronics. The District met with Goodwill Industries to identify how electronics are managed after collection. Goodwill, which is R2 certified, meets the latest standards in terms of environmental health and safety regarding e-waste recycling. The District will consistently monitor this and other locations it promotes as accepting these items to ensure they are managed properly after collection.

Electronics Collection Program

The District utilized the Recycling and Reuse Guide to promote in-district processors that accept electronics on a year-round basis. The guide was mailed to residents and available on the website. The District also promoted electronics collections held within local communities.

HHW Management Outreach Program

This program has a focus on education, with potential for collection events if feasible. The District provides HHW information on its website and in various publications (Recycling Guide, Newsletter), which are mailed to residents annually. The publications include information for reducing the amount of HHW generated, alternatives to using chemical pesticides and cleaners, and locations that accept HHW materials year-round.

Pharmaceutical Collection Sites

Multiple prescription drug collection boxes were located in each District county. The District supported local pharmaceutical collections by providing funding to offset the operational costs, as well as funding to advertise and promote the events.

Lead-Acid Battery Program

The District continues to promote existing in-district processors by adding local businesses to the website and to the Recycling and Reuse Guide upon their request or identification. Businesses listed in the newsletter were required to complete and sign a District information form. The newsletter identified businesses that accept batteries, as well as other materials, which provide additional opportunities for residents to recycle special materials on a year-round basis.

Appliance Collection Program

This program was created to promote use of in-district processors and scrap yards. The District promotes in-district processors that accept residential appliances on a year-round basis through the Recycling and Reuse Guide and on the District website.

Audit Committee

The District Audit Committee meets to review the financial affairs of the District. The Audit Committee consists of three members of the Board of Directors, two Policy Committee members, the Executive Director, the Finance Director, and the District's legal counsel. **Data Collection and Database of Recycling Processors**

The District continues to annually survey commercial and industrial waste generators using Re-TRAC. Letters are mailed to brokers, industries, commercial and institutional entities, and businesses and organizations that accept special materials for recycling such as electronics, textiles, and appliances. The letters direct survey recipients to a web address where the survey could be completed online.

Disaster Debris Management

The District developed a policy for managing disaster debris events in 2010. District funds the grinding and hauling of yard waste from a storm debris cleanup.

Food Waste Management Program

The District directs food waste generators to an existing registered Class II composting facility located in Wayne County. This facility expanded their operation to accommodate additional food waste from District grocery stores, the Wayne County Fair, and non-profits that generate food waste from events like pancake breakfasts.

Scrap Tire Program

The District operates permanent scrap tire collection sites and the tire pass program for local municipalities to properly manage illegally dumped tires collected.

Yard Waste Drop-Off Collection Sites

The District will continue to operate the yard waste collection program with a budgetary limit of \$300,000 per year. The District reserves the right to spend less or more as determined by the Board of Directors. The District may provide grants to political subdivisions to offset the costs of operating a yard waste drop-off site. Grants would be competitive and funding level would be based on site location (proximity to higher population), historic volume of material collected, market value of material, etc.

Yard Waste Management Education and Outreach

The District will continue to provide detailed information to residents about local yard waste composting opportunities in the Recycling and Reuse Guide and by posting information on its website.

Yard Waste Partnership Program

A new initiative by the District is to explore partnerships with private sector companies to increase yard waste drop-off locations that do not result in an increased cost to District. For example, as the District has always had several community drop-off sites, it has not promoted the private sector companies other than in Wayne County. The District could explore which companies are willing to accept materials from residents directly (free or for a cost) and begin listing these options on the website and in its recycling programs if space allows.

Yard Waste Grinder Evaluation

A new initiative by the District is to evaluate the use of a yard waste grinder to reduce volumes to improve transportation efficiencies.

Yard Waste Program Enhancement Initiative

A new initiative by the District is to improve existing yard waste sites such as implementing cameras, fencing and gates to reduce contamination and restrict overall volume. The District provided Program Start-Up Grants to political subdivisions for yard waste dropoffs (as well as other recycling programs). Funding was used to purchase signage, fences, and cameras. Improving the drop-off sites has been very effective at improving the quality of materials collected at the sites. The District could fund some site improvements through the Program Startup Grant Program.

The District may modify yard waste drop-off sites to save money and improve the program.

Permanent HHW Collection

The permanent HHW collection program conducted at the Canton City Recycling Center may continue to operate year-round on an appointment basis.

Moving forward, the District believes that providing an outlet for HHW is the most effective use of District funds and best serves the District's residents. The District may offer support to appointment-based household hazardous waste collection site(s) and will continue monitoring program expenses. The District reserves the right to limit appointments in order to manage program cost. The collection will be conducted in compliance with the Ohio EPA recommendations and limited to household hazardous waste. The District may also continue to offer support to local organizations, companies, or communities interested in hosting a household hazardous waste collection event for District residents.

The District will monitor program costs and would explore restricting the amount of waste a resident can drop off at collection events both to reduce costs and because the collection site is better equipped to identify if a large quantity of waste may be commercially generated. The intention of the HHW collection program is to provide an outlet for materials that do not have another outlet through the private sector, but if another outlet for a specific material is identified that may provide a cost savings to the District, it may be explored.

Expansion of HHW collection

The District will evaluate the option for additional year-round permanent HHW facilities central to the three-county area to supplement temporary collection events.

5. Outreach, Education, Awareness

Table I-6. Summary of Outreach, Education, and Awareness Programs

ID	Name	Start Date	End Date	Goal(s)
8248	Education and Awareness Program	Existing	Ongoing	Goal 3, 4
8251	Recycling and Reuse Guide or Newsletter	Existing	Ongoing	Goal 3, 4
8257	Waste Reduction Report Card	Existing	Ongoing	Goal 3, 4
8256	Web Site	Existing	Ongoing	Goal 3, 4
No ID	Special Events Initiative	2019	Ongoing	Goal 3, 4
No ID	Campaign to Educate on Residential Yard Waste	2019	2020	Goal 3, 4
No ID	Campaign to Educate on Residential HHW Materials	2019	2021	Goal 3, 4

Education and Awareness Program

This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performs presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation.

Recycling and Reuse Guide or Newsletter

The annual comprehensive Recycling and Reuse Guide or Newsletter will be sent to the households in Stark, Tuscarawas, and Wayne Counties during the last quarter of the year. Newsletters will also be made available to residents and businesses on the District's website. The publications contain the Recycling Report Card, educational articles about recycling, frequently asked questions, information on District recycling programs and drop-off locations, local recycling statistics, and a list of businesses/organizations that accept special materials for recycling such as appliances and electronics. The District

may add a sheet in Guide or Newsletter that could be ripped out to hang in a home with useful facts, tips, following year dates, website, and contact information.

Waste Reduction Report Card

The Recycling and Reuse Guide contains the Waste Reduction Report Card and shows the tonnages by community for drop-offs and curbside recycling. These report cards are on the website but are within the uploaded copies of the recycling publications which are mailed to households in Stark, Tuscarawas, and Wayne Counties.

Website

The District regularly updated its website in 2015. Recycling programs, guides, brochures, statistics, grants, and government meetings were available through the website at www.timetorecycle.org. During 2015, the District worked with a contractor to redesign, expand, and improve the website. This activity is ongoing. The new website is expected to launch and replace the current site by 2020. The District may investigate adding the ability to track the visitor statistics.

Special Events Initiative

A new initiative by the District is to increase visibility in the tri-county area. The District will focus on increasing the District's presence at large events such as fairs and festivals.

The District's Outreach Coordinator may partner with other organizations with similar missions such as Soil and Water Conservation Districts to achieve greater outreach at these events.

Campaign to Educate on Residential Yard Waste

A new initiative by the District is to focus on the education for residential users of yard waste sites to reduce contamination which has been a problem with the program for several years.

Campaign to Educate on Residential HHW Materials

A new initiative by the District is to inform residents about collection opportunities for HHW as well as non-toxic alternatives to HHW materials.

6. Economic Incentives

Table I-7. Summary of Economic Incentive Programs

ID	Name	Start Date	End Date	Goal(s)
8240	Community Development Grant (Ohio EPA) Promotion and Assistance	Existing	Ongoing	Goal 2, 3, 4

ID	Name	Start Date	End Date	Goal(s)
8243	Recycling and Composting Infrastructure Enhancement Grant (for processors)	Existing	Ongoing	Goal 1, 2
8245	Recycling Drop-Off Clean-Up/Host Community Grants	Existing	Ongoing	Goal 1, 2
8241	Recycling Makes \$ense Grant Program	Existing	Ongoing	Goal 2
8238	Market Development Grant (Ohio EPA) Promotion and Assistance	Existing	Ongoing	Goal 7
9144	Program Start-Up Grants (for political subdivisions)	Existing	Ongoing	Goal1, 2
8246	Sheriff Department Grants	Existing	Ongoing	None
No ID	Political Subdivisions Contract Renewal Assistance	2019	Ongoing	Goal 6
No ID	Pay-As-You-Throw Grants	2019	Ongoing	Goal 6

Community Development Grant (Ohio EPA) Promotion and Assistance

The District will promote the use of the Ohio EPA's Community Development Grant through its education and awareness program. This will include a dedicated portion of the District's website for recycling grant promotional activities.

Recycling and Composting Infrastructure Enhancement Grant (for processors)

The grant is available to entities that help the District meet State Plan goals #1 through #5.

Recycling Drop-Off Clean-Up/Host Community Grants

The District continued to utilize Host Communities to assist with the clean-up and operation of recycling drop-off sites. Host Communities also help the District determine if a change in service frequency or container placement is necessary.

Recipients can earn up to \$2,500 annually (\$625 a quarter) for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping.

The District removes previous requirement that recipients of the Host Community Cleanup Grant have to report hours worked and work a minimum of 15 hours per month to receive the funding for the purpose of cleaning up or maintaining targeted sites such as high-volume sites or sites with significant dumping.

Recycling Makes \$ense Grant Program

This program is only offered to municipal (cities, villages and township) programs that are not operated by the District directly with District equipment and staff. The only exception is the Jackson Township Recycling Station, which is not a municipality but operates

separately from the District. Municipal programs are defined as a program that is under contract with a private contractor to provide the service or the program is operated by the municipality directly.

Due to the increasing appropriations for other District programs (Household Hazardous Waste Management, Yard Waste Management, etc.), the District would like to reduce the expenses of the Recycling Makes \$ense Grant Program by restructuring the funding levels to encourage program expansions and enhancements that will achieve greater waste reduction rates while still incentivizing a community's implementation or continuation of a curbside recycling program. Funding tiers will be communicated to grantees in the Recycling Makes Sense Grant Agreement and may be evaluated and adjusted each grant cycle. For example, the District has observed greater recycling and waste reduction rates through programs with larger wheeled carts and/or limited trash or PAYT, yet these program enhancements do not result in increased funding levels through the current rate structure. The District will continue monitoring and analyzing industry trends in these types of programs and may restructure the funding levels based upon what program enhancements are observed to have a greater impact on recycling and waste reduction rates. Communities that participate in the Recycling Makes \$ense Grant Program are eligible to participate in other District grant programs (Program Startup Grant, Mini-Grant, etc.) for projects that would improve their program.

Market Development Grant (Ohio EPA) Promotion and Assistance

The District continues to promote the Ohio EPA's Market Development Grant within the tri-county area. This will include a dedicated portion of the District's website for recycling grant promotional activities.

Program Start-Up Grants (for political subdivisions)

The District awards funding to be used to start or improve curbside programs, recycling drop-offs and/or yard waste drop-offs, as well as purchase equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.

Sheriff Department Grants

These grants are awarded to Sheriff Departments in the District. Duties performed by the Sheriff Departments vary by county but included patrolling near landfills, litter enforcement, and litter collection with a crew.

Political Subdivisions Contract Renewal Assistance

The District will continue to work with political subdivisions when contracts are nearing renewal time to encourage them to make contract adjustments that will maximize recycling collected, such as adding a Pay-As-You-Throw element, increasing recycling

container size, and/or requiring the hauler to provide ongoing education, such as a quarterly direct mailer to residents.

Pay-As-You-Throw Grants

This grant option is a part of the Program Start-Up Grant program and is not considered a standalone program. Grant request under the Program Start-Up Grant may include funding for automated carts, PAYT program start-up, and ton limits based on a scale to give incentive for higher performance

7. Special Program Needs

Table I-8. Summary of Special Program Needs

ID	Name	Start Date	End Date	Goal(s)
8247	Health Dept. Grants to include solid waste inspection, enforcement, and well monitoring	Existing	Ongoing	None

Health Department Grants

These grants are awarded to Health Departments in the District. The grants include funding for solid waste inspection, enforcement, and well monitoring. Enforcement is defined as investigating open burning or open dumping cases. All litter complaints/enforcement is usually directed to the District's litter deputy via the Sheriff Department Grants.

Only approved health departments on the Ohio EPA Director's List of Approved Health Departments are eligible.

Well Monitoring

The District will not allocate fund for well testing in the budget. In previous budgets, \$25,000 of funds were budgeted and is typically not requested. If well testing is requested, the District will move funds to accommodate on a case by case basis.

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 section demonstrates the District's progress towards achievement of Goal 1 in the reference year and the programs that will ensure achievement of Goal 1 throughout the planning period.

The curbside and drop-off recycling programs conducted by the District, members of the District and/or haulers servicing District communities accepts a comprehensive mix of materials. The minimum materials accepted include:

- Carboard
- Mixed Paper
- Aluminum Beverage Cans
- Steel/Bi-Metal Food Cans
- Newspaper

A. Residential Sector Opportunity to Recycle

The following table presents the curbside recycling opportunities in the reference year and year 1, 5, and 10 of the planning period, as well as the population credit received for each program.

Table J-1a1. Opportunity to Recycle: Curbside Programs

		Stark	20	15	2019 (Year 1)		2023 (`	Year 5)	2028 (Year 10)	
County	ID#	Name of Community	Рор.	Credit	Рор.	Credit	Рор.	Credit	Pop.	Credit
Stark	NSC1	City of Alliance	22,055	22,055	21,893	21,893	21,768	21,768	21,559	21,559
Stark	NSC2	City of Canal Fulton	5,487	5,487	5,447	5,447	5,416	5,416	5,364	5,364
Stark	NSC3	City of Canton	71,885	71,885	71,356	71,356	70,949	70,949	70,267	70,267
Stark	NSC4	City of North Canton	17,441	17,441	17,313	17,313	17,214	17,214	17,049	17,049
Stark	NSC5	Village of Hartville	2,968	2,968	2,946	2,946	2,929	2,929	2,901	2,901
Tuscarawas	NSC6	Village of Baltic	789	789	788	788	786	786	194	194
Tuscarawas	NSC7	Village of Bolivar	992	992	990	990	989	989	986	986
Tuscarawas	NSC8	Village of Dennison	2,640	2,640	2,635	2,635	2,631	2,631	2,625	2,625
Tuscarawas	NSC9	City of Dover	12,899	12,899	12,876	12,876	12,856	12,856	12,826	12,826
Tuscarawas	NSC10	Village of Gnadenhutten	1,289	1,289	1,287	1,287	1,285	1,285	1,282	1,282
Tuscarawas	NSC11	City of New Philadelphia	17,484	17,484	17,452	17,452	17,426	17,426	17,384	17,384
Tuscarawas	NSC12	Village of Strasburg	2,679	2,679	2,674	2,674	2,670	2,670	2,664	2,664
Tuscarawas	NSC13	Village of Sugarcreek	1,978	1,978	1,974	1,974	1,971	1,971	1,967	1,967
Tuscarawas	NSC14	City of Uhrichsville	5,404	5,404	5,394	5,394	5,386	5,386	5,373	5,373
Wayne	NSC15	Village of Doylestown	3,075	3,075	3,072	3,072	3,066	3,066	3,814	3,814

		Stark	20	15	2019 (Year 1)	2023 (Year 5)	2028 (Y	'ear 10)
County	ID#	Name of Community	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Wayne	NSC16	City of Orrville	8,491	8,491	8,483	8,483	8,467	8,467	8,430	8,430
Wayne	NSC17	City of Rittman	6,580	6,580	6,574	6,574	6,561	6,561	6,533	6,533
Wayne	NSC18	Village of Marshallville	760	760	759	759	758	758	755	755
Wayne	NSC19	City of Wooster	26,749	26,749	26,723	26,723	26,673	26,673	26,558	26,558
Stark	SC1	City of Massillon	32,252	8,063	32,014	8,063	31,832	7,958	31,526	7,882
Stark	SC2	Navarre village*	1,922	-	1,908	-	1,897	-	1,879	-
Stark	SC3	Bethlehem township*	3,415	-	3,390	-	3,371	-	3,338	-
Stark	SC4	Meyers Lake village	573	143	569	143	566	141	560	140
Stark	SC5	Canton township	12,710	3,178	12,616	3,178	12,545	3,136	12,424	3,106
Stark	SC6	Hills and Dales village	220	55	218	55	217	54	215	54
Stark	SC7	Jackson township	40,490	10,123	40,192	10,123	39,963	9,991	39,579	9,895
Stark	SC8	Lake township	27,218	6,805	27,018	6,805	26,864	6,716	26,606	6,651
Stark	SC9	Lawrence township	8,257	2,064	8,196	2,064	8,150	2,037	8,071	2,018
Stark	SC10	Limaville village	150	38	149	38	148	37	147	37
Stark	SC11	Lexington township	5,307	1,327	5,268	1,327	5,238	1,309	5,188	1,297
Stark	SC12	Louisville city*	9,126	2,282	9,059	-	9,007	-	8,921	-
Stark	SC13	Marlboro township	4,371	1,093	4,339	1,093	4,314	1,079	4,273	1,068
Stark	SC14	Nimishillen township	9,703	2,426	9,632	2,426	9,577	2,394	9,485	2,371
Stark	SC15	East Canton village	1,600	400	1,588	400	1,579	395	1,564	391
Stark	SC16	Osnaburg township	4,036	1,009	4,006	1,009	3,983	996	3,945	986
Stark	SC17	Minerva village*	3,678	-	3,651	-	3,630	-	3,595	-
Stark	SC18	Paris township*	3,786	-	3,758	-	3,737	-	3,701	-
Stark	SC19	Perry township	28,446	7,112	28,236	7,112	28,076	7,019	27,806	6,951
Stark	SC20	East Sparta village	804	201	798	201	794	198	786	196
Stark	SC21	Pike township	3,137	784	3,114	784	3,096	774	3,066	767
Stark	SC23	Plain township	35,116	8,779	34,857	8,779	34,659	8,665	34,326	8,581
Stark	SC24	Magnolia village	973	243	966	243	960	240	951	238
Stark	SC25	Waynesburg village	923	231	916	231	911	228	902	226
Stark	SC26	Sandy township	2,036	509	2,021	509	2,009	502	1,990	498
Stark	SC27	Beach City village*	1,011	-	1,004	-	998	-	988	-
Stark	SC28	Brewster village*	2,169	-	2,153	-	2,141	-	2,120	-
Stark	SC29	Wilmot village*	303	-	301	-	299	-	296	-
Stark	SC30	Sugar Creek township*	3,040	-	3,018	-	3,000	-	2,972	-
Stark	SC31	Tuscarawas township	5,946	1,487	5,902	1,487	5,869	1,467	5,812	1,453
Stark	SC32	Washington township	4,643	1,161	4,609	1,161	4,583	1,146	4,539	1,135

The following table summarizes the percentage of the population with access to curbside recycling programs in each District county. In the reference year, 46% of District residents had access to curbside programs. Out of the District's three counties, Tuscarawas County had the greatest percentage of residents with access to curbside recycling, at 50%; Wayne County had the least percentage of residents with access to curbside recycling, at 39%.

Table J-1a2. Summary Table for Opportunity to Recycle: Curbside Recycling Programs

	Population		County		
Year	Data	Stark	Tuscarawas	Wayne	Total
	Total County	377,197	93,062	116,265	586,524
2015	Credit	179,345	46,154	45,655	271,154
	% Access	48%	50%	39%	46%
0040	Total County	374,419	92,893	116,152	583,464
2019 (Year 1)	Credit	176,181	46,070	45,610	267,862
(Teal T)	% Access	47%	50%	39%	46%
0000	Total County	371,568	92,700	115,837	580,106
2023 (Year 5)	Credit	174,759	46,000	45,524	266,283
(10010)	% Access	47%	50%	39%	46%
0000	Total County	368,709	92,532	115,436	576,677
2028 (Year 10)	Credit	173,080	45,300	46,091	264,470
(100110)	% Access	47%	48.96%	39.93%	45.86%

The following table presents the Recycling Drop-Off sites in the reference year and year 1, 5, and 10 of the planning period, as well as the population credit received for each location. Many locations show a credit of zero because the community where the drop-off is located has curbside recycling. Municipalities are not permitted to have population credits exceeding 100%.

Table J-1b1. Opportunity to Recycle: Drop-off Programs

		Stark	20	15	2019 (\	rear 1)	2023 (Y	(ear 5)	2028 (Y	'ear 10)
County	ID#	Name of Drop-Off Site	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Stark	FTU1	Alliance Recycling Center	22,055	0	21,893	0	21,726	0	21,559	0
Stark	FTU2	Bethlehem Township (Navarre Village - St. Clement Church)	5,287	5,000	5,248	5,000	5,208	5,000	5,168	5,000
Stark	FTU3	Bethlehem Township (Navarre Village - Village Hall)	5,287	5,000	5,248	5,000	5,208	5,000	5,168	5,000
Stark	FTU4	Canton City (Fishers Foods)	71,885	0	71,356	0	70,812	0	70,267	0
Stark	FTU5	Canton City (Kimble Recycling)	71,885	0	71,356	0	70,812	0	70,267	0
Stark	FTU6	Canton City (Timken Dueber Avenue)	71,885	0	71,356	0	70,812	0	70,267	0
Stark	FTU7	Canton Township	13,130	5,000	13,033	5,000	12,934	5,000	12,835	5,000
Stark	FTU8	Jackson Township (Recycling Station)	40,490	5,000	40,192	5,000	39,886	5,000	39,579	5,000
Stark	FTU9	Lake Township (Hartville Flea Market)	27,218	5,000	27,018	5,000	26,812	5,000	26,606	5,000
Stark	FTU10	Lake Township (Midway Street)	27,218	5,000	27,018	5,000	26,812	5,000	26,606	5,000
Stark	FTU11	Lake Township (Quail Hollow (closed in 2016))	27218	5000	27017.5	0	26812	0	26606	0
Stark	FTU12	Lawrence Township	13,744	5,000	13,643	5,000	13,539	5,000	13,435	5,000
Stark	FTU13	Lawrence Township (Canal Fulton City)	5,487	0	5,447	0	5,405	0	5,364	0
Stark	FTU14	Lexington Township	5,457	5,000	5,417	5,000	5,376	5,000	5,334	5,000
Stark	FTU15	Louisville City	9,126	5,000	9,059	5,000	8,990	5,000	8,921	5,000
Stark	FTU16	Massillon City (City Garage)	32,252	5,000	32,014	5,000	31,771	5,000	31,526	5,000
Stark	FTU17	Massillon City (Fisher Foods)	32,252	5,000	32,014	5,000	31,771	5,000	31,526	5,000
Stark	FTU18	Massillon City (Recreation Center)	32,252	5,000	32,014	5,000	31,771	5,000	31,526	5,000
Stark	FTU19	Petitti Garden)	9,703	5,000	9,632	5,000	9,558	5,000	9,485	5,000
Stark	FTU20	Nimishillen Township (Township Hall)	9,703	5,000	9,632	5,000	9,558	5,000	9,485	5,000
Stark	FTU21	Osnaburg Township (Fire Station)	5,636	5,000	5,594	5,000	5,552	5,000	5,509	5,000
Stark	FTU22	Paris Township (Minerva Village)	5,730	5,000	5,688	5,000	5,644	5,000	5,601	5,000
Stark	FTU23	Paris Township (Robertsville)	5,730	5,000	5,688	5,000	5,644	5,000	5,601	5,000
Stark	FTU24	Paris Township (Township Hall)	5,730	0	5,688	0	5,644	0	5,601	0
Stark	FTU25	Perry Township (Administration Building)	28,496	5,000	28,286	5,000	28,071	5,000	27,855	5,000
Stark	FTU26	Perry Township (Southway Street)	28,496	5,000	28,286	5,000	28,071	5,000	27,855	5,000
Stark	FTU27	Perry Township (Township Garage)	28,496	5,000	28,286	5,000	28,071	5,000	27,855	5,000
Stark	FTU28	Plain Township (Diamond Park)	35,269	5,000	35,009	5,000	34,743	5,000	34,475	5,000
Stark	FTU29	Plain Township (Glenwood Intermediate School)	35,269	5,000	35,009	5,000	34,743	5,000	34,475	5,000
Stark	FTU30	Plain Township (Oakwood Middle School)	35,269	5,000	35,009	5,000	34,743	5,000	34,475	5,000
Stark	FTU31	Plain Township (Saint Michael Church)	35,269	5,000	35,009	5,000	34,743	5,000	34,475	5,000
Stark	FTU32	Plain Township (Taft Elementary)	35,269	5,000	35,009	5,000	34,743	5,000	34,475	5,000

		Stark	20	15	2019 (rear 1)	2023 (Y	(ear 5)	2028 (Y	'ear 10)
County	ID#	Name of Drop-Off Site	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Stark	FTU33	Sugar Creek Township (Beach City Village)	6,523	5,000	6,475	5,000	6,426	5,000	6,376	5,000
Stark	FTU34	Sugar Creek Township (Brewster Village)	6,523	5,000	6,475	5,000	6,426	5,000	6,376	5,000
Stark	FTU35	Sugar Creek Township (Wilmot Village)	6,523	0	6,475	0	6,426	0	6,376	0
Stark	FTU36	Tuscarawas Township (Township Office)	5,946	5,000	5,902	5,000	5,857	5,000	5,812	5,000
Stark	FTU50	One urban drop-off (5,000 credit) OR 2 rural drop-offs (2,500 credit)	x,xxx	0*	x,xxx	5,000	x,xxx	5,000	x,xxx	5,000
Stark	PTU1	Canton City Recycling Center	71,885	0	71,356	0	70,812	0	70,267	0
Stark	FTR1	Marlboro Township	4,371	2,500	4,339	2,500	4,306	2,500	4,273	2,500
Stark	FTR2	Pike Township (Countywide RDF)	3,941	2,500	3,912	2,500	3,882	2,500	3,852	2,500
Stark	FTR3	Pike Township (Fire Station)	3,941	2,500	3,912	2,500	3,882	2,500	3,852	2,500
Stark	FTR4	Pike Township (Township Office)	3,941	0	3,912	0	3,882	0	3,852	0
Stark	FTR5	Sandy Township (Administrative Building)	3,673	2,500	3,646	2,500	3,618	2,500	3,590	2,500
Stark	FTR6	Sandy Township (Village of Magnolia)	3,673	2,500	3,646	2,500	3,618	2,500	3,590	2,500
Stark	FTR7	Washington Township	4,643	2,500	4,609	2,500	4,574	2,500	4,539	2,500
Tuscarawas	FTU37	Dover City (Gale's Recycle It)	12,899	0	12,804	0	12,849	0	12,826	0
Tuscarawas	FTU38	Dover City (Parkside Buehlers)	12,899	0	12,804	0	12,849	0	12,826	0
Tuscarawas	FTU39	Lawrence Township (Bolivar Giant Eagle)	5,815	5,000	5,772	5,000	5,792	5,000	5,782	5,000
Tuscarawas	FTU40	Mill Township	9,869	5,000	9,796	5,000	9,831	5,000	9,813	5,000
Tuscarawas	FTU41	New Philadelphia City (Buehlers)	17,484	0	17,355	0	17,416	0	17,384	0
Tuscarawas	FTR8	Dover Township (Kimble)	4,625	2,500	4,591	2,500	4,607	2,500	4,599	2,500
Tuscarawas	FTR9	Fairfield Township	1,509	2,500	1,498	2,500	1,503	2,500	1,500	2,500
Tuscarawas	FTR10	Franklin Township (Strasburg Village)	4,769	2,500	4,734	2,500	4,750	2,500	4,742	2,500
		Jefferson Township	971	2,500	964	2,500	967	2,500	965	2,500
Tuscarawas		Oxford Township	4,934	2,500	4,898	2,500	4,915	2,500	4,906	2,500
Tuscarawas	FTR13	Perry Township (West Chester Community)	435	2,500	432	2,500	433	2,500	433	2,500
Tuscarawas		Sandy Township	2,959	2,500	2,937	2,500	2,948	2,500	2,942	2,500
Tuscarawas	FTR15	Sugar Creek Township (Sugar Creek Village - Bakers' IGA)	4,212	2,500	4,181	2,500	4,196	2,500	4,188	2,500
Tuscarawas	FTR16	Warwick Township	2,776	2,500	2,756	2,500	2,765	2,500	2,760	2,500
Tuscarawas	FTR17	Washington Township	820	2,500	814	2,500	817	2,500	815	2,500
Tuscarawas	FTR18	Wayne Township	2,159	2,500	2,143	2,500	2,151	2,500	2,147	2,500
Wayne	FTU42	Chippewa Township	10,269	5,000	10,193	5,000	10,231	5,000	10,196	5,000
Wayne	FTU43	East Union Township (Apple Creek Village)	6,881	5,000	6,830	5,000	6,856	5,000	6,832	5,000
Wayne	FTU44	Green Township (Orrville City - Buehler's Fresh Foods)	12,064	0	11,975	0	12,020	0	11,978	0
Wayne	FTU45	Green Township (Smithville Village)	12,064	5,000	11,975	5,000	12,020	5,000	11,978	5,000

		Stark	20	15	2019 (rear 1)	2023 (\	(ear 5)	2028 (Y	'ear 10)
County	ID#	Name of Drop-Off Site	Pop.	Credit	Pop.	Credit	Pop.	Credit	Pop.	Credit
Wayne	FTU46	Sugar Creek Township (Dalton Village)	6,720	5,000	6,671	5,000	6,695	5,000	6,672	5,000
Wayne	FTU47	Sugar Creek Township (Kidron)	6,720	5,000	6,671	5,000	6,695	5,000	6,672	5,000
Wayne	FTU48	Wooster City (Buehlers)	26,749	0	26,552	0	26,651	0	26,558	0
Wayne	FTU49	Wooster City (Wooster College)	26,749	0	26,552	0	26,651	0	26,558	0
Wayne	FTR18	Baughman Township	4,577	2,500	4,543	2,500	4,560	2,500	4,544	2,500
Wayne	FTR19	Canaan Township (Creston Village)	4,917	2,500	4,881	2,500	4,899	2,500	4,882	2,500
Wayne	FTR20	Chester Township	3,102	2,500	3,079	2,500	3,091	2,500	3,080	2,500
Wayne	FTR21	Clinton Township (Shreve Village)	3,079	2,500	3,056	2,500	3,068	2,500	3,057	2,500
Wayne	FTR22	Congress Township	4,569	2,500	4,535	2,500	4,552	2,500	4,536	2,500
Wayne	FTR23	Congress Township (West Salem Village)	4,569	2,500	4,535	2,500	4,552	2,500	4,536	2,500
Wayne	FTR24	Franklin Township	3,923	2,500	3,894	2,500	3,909	2,500	3,895	2,500
Wayne	FTR25	Milton Township	3,053	2,500	3,031	2,500	3,042	2,500	3,031	2,500
Wayne	FTR26	Paint Township	3,246	2,500	3,222	2,500	3,234	2,500	3,223	2,500
Wayne	FTR27	Plain Township	3,124	2,500	3,101	2,500	3,113	2,500	3,102	2,500
Wayne	FTR28	Salt Creek Township (Fredericksburg Village)	3,942	2,500	3,913	2,500	3,928	2,500	3,914	2,500
Wayne	FTR29	Wayne Township (Township Garage)	4,202	2,500	4,171	2,500	4,187	2,500	4,172	2,500
Wayne	FIRSU	Wooster Township (Valley College Grange)	4,753	2,500	4,718	2,500	4,736	2,500	4,719	2,500

^{*}An additional one urban drop-off (5,000 credit) OR 2 rural drop-offs (2,500 credit) will be added in 2019 to accommodate the need for additional access.

Sources of Information: Ohio Development Services Agency, 2015 Population Estimates by County, City, Village, and Township, May 2016.

All of the District's drop-off 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.

Credit for the one urban drop-off (5,000 credit) or 2 rural drop-offs (2,500 credit) is given after 2019 since the District plans to add additional drop-off(s) in Stark County. This drop-off(s) will allow the District to meet Goal 1 in the first year of the planning period of 2019.

Table J-1b2. Summary Table for Opportunity to Recycle: Drop-off Programs

V	Population		County		T-4-1
Year	Data	Stark	Tuscarawas	Wayne	Total
	Total County	377,197	93,062	116,265	586,524
2015	Credit	155,000	37,500	57,500	250,000
	% Access	41%	40 %	49%	43%
0040	Total County	374,419	92,893	116,152	583,464
2019 (Year 1)	Credit	160,000	37,500	57,500	255,000
(Teal T)	% Access	43%	40%	50%	44%
0000	Total County	371,568	92,700	115,837	580,106
2023 (Year 5)	Credit	160,000	37,500	57,500	255,000
(Teal 3)	% Access	43%	40%	50%	44%
0000	Total County	368,709	92,532	115,436	576,677
2028 (Year 10)	Credit	160,000	37,500	57,500	255,000
(Teal To)	% Access	43%	41%	50%	44%

Summary of Recycling Infrastructure

Multi-county solid waste management districts can provide less than 90 percent of the residential population in a county with the opportunity to recycle if the solid waste management plan can demonstrate both of the following:

- The District will provide recycling opportunities to no less than 90 percent of the total residential population of the entire District; and
- The District will provide recycling opportunities to no less than 85 percent of the residential population (or the equivalent of one less drop-off than would be necessary to achieve 90 percent, whichever is greater) in each individual county

The District has a total Access percentage of 90% in 2019 (see Table J-1c below). The only county under 90% access is Wayne at 89%.

Under the Format v4.0, this is acceptable under the condition that it is one full-time urban drop-off away from a 90% accessibility. In 2019, the District is adding an additional drop-off to Stark County. These will enable the District to demonstrate reaching Goal 1 through the entire planning period.

Table J-1c. Summary of Opportunity to Recycle (Access Percentage)

Year	Population		County		Total
Teal	Data	Stark	Tuscarawas	Wayne	TOTAL
	Total County	377,197	93,062	116,265	586,524
	Credit for:				
2015	Curbsides	179,345	46,154	45,655	271,154
2015	Drop-offs	155,000	37,500	57,500	250,000
	Total	334,345	83,654	103,155	521,154
	% Access	89%	90%	89%	89%
	Total County	374,419	92,893	116,152	583,464
	Credit for:				
2019	Curbsides	176,181	46,070	45,610	267,862
(Year 1)	Drop-offs	160,000	37,500	57,500	255,000
	Total	336,181	83,570	103,110	522,862
	% Access	90%	90%	89%	90%
	Total County	371,568	92,700	115,837	580,106
	Credit for:				
2023	Curbsides	174,759	46,000	45,524	266,283
(Year 5)	Drop-offs	160,000	37,500	57,500	255,000
	Total	334,759	83,500	103,024	521,283
	% Access	90%	90%	89%	90%
	Total County	368,709	92,532	115,436	576,677
	Credit for:				
2028	Curbsides	173,080	45,300	46,091	264,470
(Year 10)	Drop-offs	160,000	37,500	57,500	255,000
	Total	333,080	82,800	103,591	519,470
	% Access	90%	89%	90%	90%

B. Commercial Sector Opportunity to Recycle

Table J-4. Infrastructure Demonstration for the Commercial Sector

Service Provider	Type of Recycling Service Provided	Сс	Мр	Sc	PI	w
Stark						
Broadway Iron & Metal, Inc.	Hauler Collection, Drop-off, Buy-Back, Scrap Yard			✓		
FPT Canton	Hauler Collection, Drop-off, Buy-Back			✓		

Service Provider	Type of Recycling Service Provided	Сс	Мр	Sc	PI	W
PSC Metals, Inc.	Drop-off, Buy-Back, Scrap Yard			✓		
S Slesnick Company	Drop-off	✓	✓			
Slesnick Iron & Metal	Drop-off, Buy-Back, Scrap Yard			✓		
Jackson Twp. Recycling Station	Drop-off	✓	✓	✓	✓	
Kimble Recycling Center	Hauler Collection, Drop-off	✓	✓	✓	✓	✓
Premier Pallet and Recycling, Inc.	Pallet Refurbisher, Drop-off					✓
Tuscarawas						
Kimble Recycling Center	Hauler Collection, Drop-off	✓	✓	✓	✓	✓
Recycled Fiberized Products	Drop-off	✓	✓			
Gale's Recycle It	Drop-off	✓		✓		
Speedie Salvage Scrap Recycling	Drop-off, Scrap Yard			✓		
Wallick's Scrap Metal	Drop-off			✓		
Wayne						
PSC Metals, Inc.	Drop-off			✓		
Wayco Recycling Center	Drop-off	✓	✓	✓	✓	
Millwood Inc.	Hauler Collection, Pallet Refurbisher					✓

 $CC = corrugated\ cardboard,\ MP = mixed\ paper,\ SC = steel\ cans,\ PL = plastics,\ W = wood\ pallets$ and packaging, $FW = food\ waste$

Table J-4, "Infrastructure Demonstration for the Commercial Sector," presents drop-offs, buy backs, scrap yards, haulers, pallet refurbishers, and material recovery facilities 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:

Corrugated
 Mixed paper: 6
 Plastics: 4
 Steel cans: 12
 Wood pallets: 4

C. Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

In the reference year, the District's residential/commercial sector achieved a 23% waste reduction and recycling rate, which is below the 25% requirement to achieve Goal 2. The waste reduction and recycling rate for the residential/commercial sector is projected to increase to 24% by the end of the planning period based on anticipated volumes of recycling from

^{*}Offers rebate program to customers for metals.

scrap yards, processors, MRFs, retailers that report to Ohio EPA, scrap tire recyclers, the District's Recycling Drop-Off Program, curbside recycling programs, and organics diversion facilities.

2. 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:

- Commercial and Industrial Technical Assistance: The District provides resources for the commercial and industrial sector on its website which included information about grant opportunities, managing special materials such as food or construction waste, lowcost non-profit organizations that perform recycling services, office recycling guides, and waste audit manuals
- Commercial and Industrial Waste Audits: The District completes
 waste audits for commercial businesses, industries, agricultural
 operations, and non-profit organizations upon request for no cost.
 Audits evaluate the waste streams of each business/industry, the
 current disposal practices and costs, and current recycling practices
 and costs, and provide recommendations for recycling, source
 reduction, reuse and composting.
- Recycling and Reuse Guide: The annual comprehensive Recycling and Reuse Guide or Newsletter will be sent to the households in Stark, Tuscarawas, and Wayne Counties during the last quarter of the year. Newsletters were also made available to residents and businesses on the District's website. The guides contained the Recycling Report Card, educational articles about recycling, frequently asked questions, information on District recycling programs and drop-off locations, local recycling statistics, and a list of businesses/organizations that accept special materials for recycling such as appliances and propane tanks.
- Waste Reduction Report Card: The Recycling and Reuse Guide or Newsletter contains the Waste Reduction Report Card and shows the tonnages by community for drop-offs and curbside recycling.
- School Recycling Program: The District collected mixed paper and
 office paper from schools located throughout the three-county area.
 Some of the school programs also accepted plastics #1-#7, glass,
 aluminum, and steel. The District also collected data from local
 businesses that provided recycling services to schools, which
 include the Paper Retriever program and Sanmandy.

- Government Building Recycling: The District collected from Stark County government buildings, Stark County libraries, Tuscarawas County government buildings, and from Wayne County government buildings. The District also collected data from local businesses that provided recycling services to government buildings within the District. In Stark County, Royal Oak Recycling collected from bins at government buildings and from bins at libraries; in Wayne County, Paper Retriever collected from bins at government buildings.
- District Web Site: The web site will include a comprehensive resource guide and an Infrastructure Inventory. The website is used to promote all the recycling opportunities in the District and will include information and links useful to residents, business, and industry. The website will be updated regularly. (www.timetorecycle.org)
- Education and Awareness Program: This program includes speakers, presentations, advertisements, and other educational activities. The District's full-time Outreach Coordinator performs presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation.
- Community Development Grant (Ohio EPA) Promotion and Assistance: The District will promote the use of the Ohio EPA's Community Development Grant through its education and awareness program. This will include a dedicated portion of the District's website for recycling grant promotional activities.
- Recycling and Composting Infrastructure Enhancement Grant (for processors): The grant is available to entities that help the District meet State Plan goals #1 through #5.
- Recycling Drop-Off Clean-Up/Host Community Grants: The
 District continued to utilize Host Communities to assist with the
 clean-up and operation of recycling drop-off sites. Host
 Communities also help the District determine if a change in service
 frequency or container placement is necessary.
- Recycling Makes \$ense Grant Program: This program is only
 offered to municipal (cities, villages and township) programs that are
 not operated by the District directly with District equipment and staff.
- Program Start-Up Grants (for political subdivisions): The District awards funding to be used to start or improve curbside programs, recycling drop-offs and/or yard waste drop-offs, as well as purchase

equipment needed to operate the program and structural components needed to complete drop-off sites, such as concrete pads and fencing.

- Political Subdivisions Contract Renewal Assistance: The District
 will continue to work with political subdivisions when contracts are
 nearing renewal time to encourage them to make contract
 adjustments that will maximize recycling collected, such as adding a
 Pay-As-You-Throw element, increasing recycling container size,
 and/or requiring the hauler to provide ongoing education, such as a
 quarterly direct mailer to residents.
- Pay-As-You-Throw Grants: This grant option is a part of the Program Start-Up Grant program and is not considered a standalone program. Grant request under the Program Start-Up Grant may include funding for automated carts, PAYT program start-up, and ton limits based on a scale to give incentive for higher performance

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

The District has chosen to demonstrate compliance with Goal 1 of the *State Plan*. In this Appendix, the District will demonstrate its progress toward achieving Goal 2, 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) are projected from 2016 through 2028.

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)
	2015	586,524	146,438	488,922	635,360	23.05%	1.4
	2016	585,759	146,724	487,030	633,754	23.15%	1.4
	2017	584,994	147,987	485,145	633,131	23.37%	1.4
	2018	584,229	147,763	483,266	631,030	23.42%	1.4
×	2019	583,464	147,544	481,394	628,938	23.46%	1.4
	2020	582,699	147,328	479,528	626,857	23.50%	1.4
ing	2021	581,834	147,116	477,588	624,704	23.55%	1.4
ann	2022	580,970	146,907	475,654	622,561	23.60%	1.4
ear of Plá Period →	2023	580,106	146,702	473,727	620,429	23.65%	1.4
riof riog	2024	579,242	146,687	473,727	620,414	23.64%	1.4
eal Pel	2025	578,378	146,672	473,727	620,399	23.64%	1.4
First Year of Planning Period →	2026	577,527	146,657	473,727	620,384	23.64%	1.4
Firs	2027	576,677	146,642	473,727	620,369	23.64%	1.4
	2028	575,827	146,627	473,727	620,354	23.64%	1.4

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:

2015 Waste Reduction & Recycling Rate = (2015 Waste Reduced & Recycled ÷ 2015 Waste Generated) x 100

 $23.05\% = (146,438 \text{ tons} \div 635,360 \text{ tons}) \times 100$

2015 Per Capita Waste Reduction and Recycling Rate = ((2015 tons recycled x 2,000) ÷ 365) ÷ population

1.4 ppd = $((146,438 \text{ tons } \times 2,000) \div 365 \text{ days/year}) \div 586,524 \text{ residents}$

Table K-1 demonstrates that the District is not projected to meet the requirements of Goal 2 to reduce and recycle at least 25% of the solid waste generated by the residential/commercial during the planning period. However, if programs perform better than anticipated, the District may meet the requirements of Goal 2 during 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 sector 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	Waste Disposed	Waste Generated	Waste Reduction and Recycling Rate
	2015	1,019,243	345,666	1,364,910	74.67%
	2016	1,019,243	344,248	1,363,491	74.75%
	2017	1,019,243	342,835	1,362,078	74.83%
	2018	1,019,243	341,427	1,360,671	74.91%
×	2019	1,019,243	340,026	1,359,270	74.98%
	2020	1,019,243	338,630	1,357,874	75.06%
ing	2021	1,019,243	338,630	1,357,874	75.06%
Planning →	2022	1,019,243	338,630	1,357,874	75.06%
	2023	1,019,243	338,630	1,357,874	75.06%
of .	2024	1,019,243	338,630	1,357,874	75.06%
ear Per	2025	1,019,243	338,630	1,357,874	75.06%
st Y	2026	1,019,243	338,630	1,357,874	75.06%
First	2027	1,019,243	338,630	1,357,874	75.06%
	2028	1,019,243	338,630	1,357,874	75.06%

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:

2015 Waste Reduction & Recycling Rate = (2015 Waste Reduced & Recycled ÷ 2015 Waste Generated) x 100

 $74.67\% = (1,019,243 \text{ tons} \div 1,364,910 \text{ tons}) \times 100$

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 58 and 60 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 (percent)
	2015	1,165,682	834,588	2,000,270	58.28%
	2016	1,165,968	831,278	1,997,245	58.38%
	2017	1,167,230	827,980	1,995,210	58.50%
	2018	1,167,007	824,694	1,991,701	58.59%
×	2019	1,166,787	821,420	1,988,208	58.69%
	2020	1,166,572	818,159	1,984,730	58.78%
ing	2021	1,166,359	816,218	1,982,577	58.83%
Planning ↓	2022	1,166,151	814,284	1,980,435	58.88%
	2023	1,165,946	812,357	1,978,303	58.94%
r of riod	2024	1,165,931	812,357	1,978,288	58.94%
Yeal	2025	1,165,916	812,357	1,978,273	58.94%
	2026	1,165,901	812,357	1,978,258	58.94%
First	2027	1,165,886	812,357	1,978,243	58.94%
	2028	1,165,871	812,357	1,978,228	58.94%

Sources of Information:

Tables K-1 and K-2

Sample Calculations:

2015 Waste Generated = 2015 Waste reduced and recycled + 2015 waste disposed

2,000,270 tons = 1,165,682 tons + 834,588 tons

2015 Waste Reduction & Recycling Rate = (2015 Waste Reduced & Recycled ÷ 2015 Waste Generated) x 100

 $58.328\% = (1,165,682 \text{ tons} \div 2,000,270 \text{ tons}) \times 100$

APPENDIX L

MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

APPENDIX L. Outreach and Marketing Analysis

This section discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following bullet points summarize 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 guide
 - 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 list of the educational programs and their strengths and challenges can be found in Appendix H section 13.

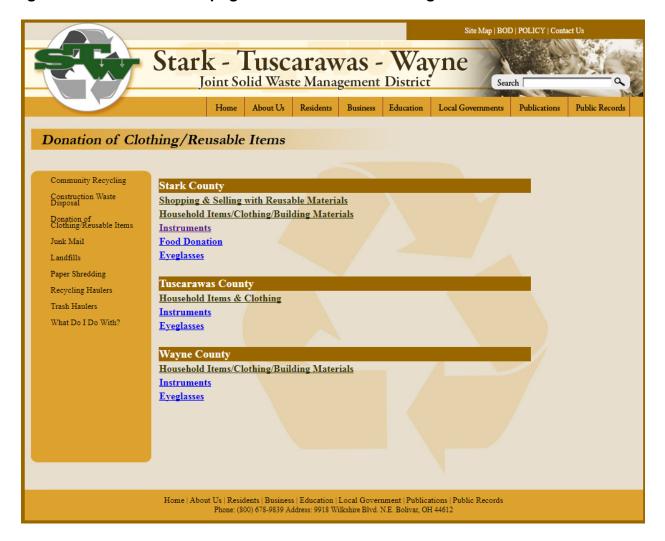
A. Minimum Required Education Programs

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.

1. Website

The District's website address is easy to remember (www.timetorecycle.org) and is updated regularly. The website includes drop-down menus for residents, businesses, education, local governments, publications and public records. Figure L-1 shows the webpage for Donation of Clothing/Reusable Items, which provides residents information on available drop-offs and the addresses for items that could be reused.

Figure L-1. District's Webpage for Donation of Clothing/Reusable Items



The District's website also includes a drop-down menu which provides links to useful public records, resources, and other information. The subjects incorporated in this menu include:

- Draft Plan
- Board of Directors Meetings
- BOD Packets
- Policy Committee Meetings
- POLICY Packets
- Sub-Committee Meetings
- Solid Waste Management Plan Update
- 10 Ways to Spend Money
- District Bylaws
- Tipping Fee Reports
- Annual District Reports

The District advertises the availability of its website using a variety of mechanisms. The website address appears in the Recycling and Reuse Guide and Recycling Newsletter developed for each county. Links to the District website have also been incorporated into the websites for each of the three counties and local

municipalities. The District also directs residents to the website in its radio and print advertisements.

Website updates are completed on an ongoing and as-needed basis. Examples of routine updates include adding upcoming events to the calendar, updating the Recycling Newsletter, and replacing the Solid Waste Plan each time a new update is approved. Maintaining and updating the District website is the responsibility of the District.

In 2015, the District started working with a contractor on the redesign of their website to expand and improve. The new website is expected to be launched by 2020.

In addition to the website, the District maintains a Facebook page (https://www.facebook.com/STWrecyclingdistrict) and LinkedIn page (https://www.linkedin.com/company/27128361/) to increase connections with the residents and businesses in the three county communities.

2. Comprehensive Resource Guide

The District hosts recycling outlet information on its website. Included on the website are drop-off locations and a "What Do I Do With?" section that contains information on where to recycle certain items in the tri-county area (Figure L-2). This "What Do I Do With?" guide is easily accessible on the home page and through the drop-down menu on the Residents tab.



Figure L-2. District's Webpage for "What Do I Do With?"

The District produces a "Recycling and Reuse Guide" or "Recycling Newsletter" for each county. These publications identify all the available drop-off locations for typical recyclables (i.e., paper, cardboard, plastic bottles, etc.), and provide a list of businesses which accept items such as lead-acid batteries, scrap tires, anti-freeze, and many other materials.

3. Inventory of Available Infrastructure

The District has posted its Solid Waste Plan Update on the website which includes an infrastructure inventory. Listed on the website are landfills, recycling haulers and trash haulers in the tri-county area (Figure L-3).

Landfills Community Recycling Countywide Recycling & American Landfill Construction Waste Disposal Disposal Facility Chad Abell, General Manager Tim Vandersall, General Manager cabell@wm.com VandersallT@repsrv.com Donation of Clothing/Reusable Items 7916 Chapel St SE 3619 Gracemont St. SW Waynesburg, OH 44688 Junk Mail East Sparta, OH 44626 (330) 866-3265 (330) 874-3855 Landfills Open Mon (6:30am) - Sat (Midnight) Open: Mon-Fri, 6:30am-4pm; Sat, 7am-11am Paper Shredding Map Recycling Haulers Kimble Sanitary Landfill Trash Haulers Keith Kimble, Owner What Do I Do With? kkimble@kimbleclay.com 3596 State Rt. 39 NW Dover, OH 44622 (330) 343-1226 Open: Mon-Fri, 7am-5pm; Sat, 7am-2pm

Figure L-3. District's Webpage for Landfills

4. Speaker/Presenter

The District supports an active education program and employs a full-time Outreach Coordinator who is available for classroom and area civic group presentations and discussions on recycling, composting, conservation, waste reduction and natural resources. The services are free of charge and subject matter and presentation length can be altered to meet the educational needs for any age group.

The District conducted 314 presentations for more than 10,000 residents on topics including recycling, waste reduction, household hazardous waste, and conservation in the reference year. The Districts tailors the presentations to the audience's needs for comprehension. Out of the Outreach Coordinator's total engagements:

- 68% elementary school presentations represented
- 9% middle school classes represented
- 9% high school classes represented
- 6% took place at public events such as county fairs
- 5% were performed for adult/civic groups
- 3% were performed for boy scout troops
- 1% of the presentations were given to preschool classes



Figure L-4. Environmental Education Activity in the District

B. Evaluation of Existing Outreach, Education, and Technical Assistance Programs

The District currently has existing programs which address the five required target audiences. (See Table L-1 below.) Some of these programs were described and evaluated in earlier sections of this appendix and will not be discussed here. The following discussion is organized by the target audience.

Table L-1. Target Audiences Addressed by Existing Programs

	Target Audience								
Existing Programs	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials				
District Website	✓	✓	✓	✓	✓				
Presentations	✓	✓	✓	✓	✓				
Comprehensive Resource Guides	✓	✓	✓	✓	✓				
Technical Assistance		✓	✓	✓	✓				
Waste Audit Program		✓	✓	✓	✓				
Recycling Newsletter	✓				✓				
Waste Reduction Report Card	✓				✓				
Total Program per Audience	5	5	5	5	7				

The District believes it is important to utilize the best tools to address the needs of different audiences. The tools/philosophies below help the District focus on the method a message is given to the audience and best fulfill their needs in education and outreach strategies.

Table L-2. Engagement Philosophies

	Target Audience								
Strategies	Residents	Schools	Industries		Communities & Elected Officials				
Detail Oriented			✓	✓					
Hands-On Activities	✓	✓							
Concise Concepts	✓		✓	✓	✓				
Handouts	✓	✓	✓	✓					
Presentations	✓	✓	✓	✓	✓				
Discussions	✓	✓	✓	✓					
Audience Participation	✓	✓							
Overarching Summative (Brief Statements & Main Points)			✓	✓	✓				
Visual Aids	✓	✓	✓	✓	✓				
Strategies per Audience	7	6	7	7	4				

1. Audience: Residents

a. Overview

As shown in Table L-1 above, the District endeavors to educate residents through several existing programs. While the District website is a primary source of information available for residents, other mechanisms are used as well to convey solid waste, recycling, and sustainability practices to the public.

All of the District's programs are intended for use by the residential sector. This includes the drop-off recycling program, yard waste collection program, household hazardous waste collection program, and scrap tire drop-off program and promotion of this available infrastructure is done through advertising campaigns, the District website, District publications, and presentations done at civic groups, fairs, and festivals. The District also provides information on landfills, recycling haulers and trash haulers through some of these outreach methods.

b. Using Social Marketing

The District does not currently use social marketing techniques with this audience, but it may explore them in the future.

c. Outreach Methodologies

The District relies on residents visiting its website, seeing its newspaper ads, hearing its radio ads, and attending its presentations to spread the educational messages associated with solid waste management. Technical assistance is provided to residents upon request through phone calls and in-person meetings. The District also periodically produces a guide or a newsletter containing information about upcoming events, how to recycle, important contact information, and descriptions of programs which may be useful. The publications are available on the District's website and are delivered to all households in the District.

2. Audience: Schools

a. Overview

The District provides several methods for schools to obtain information about solid waste management and sustainability. Teachers can visit the District's website to find (Figure L-5):

- Games. Activities & Contests
- Crafts to recycle materials
- Learn how to Close the Loop, Buy Recycled
- Reduce, Reuse, Recycle information
- Additional resources to expand research

Presentations are an important aspect of the District's education program to reach the school audience. The District's Outreach Coordinator is available to schools to discuss topics including recycling, waste reduction, landfills, material recovery facilities, composting, enviro-shopping, and vermicomposting. During 2015, she provided 314 presentations which included presentations in school classrooms. Publications and technical assistance are available from the District for use in schools as well.

The District's school recycling program (detailed in Appendix H) describes the infrastructure available for schools. The District primarily educates the schools about infrastructure as well as other recycling topics through presentations done at the schools by the Outreach Coordinator as well as occasional e-newsletters sent to some schools. The District also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

Stark - Tuscarawas - Wayne

Joint Solid Waste Management District

Home About Us Residents Business Education Local Governments Publications Public Records

Education

Education

Education Specialists
Games, Activities & Contests
Crafts
Crafts
Close the Loop, Buy Recycled - For recycled or reusable materials.

Close the Loop, Buy Recycled - For recycling to succeed, we must also purchase products made from recycled materials.

Resources
Resources
Resources
School Recycling
Information
Glossary

Home About Us Residents Business Education Local Government Publications Public Records
Phone (800) 678-9839 Address: 9918 Wilkshine Blod, N.E. Boliour, Ord 44612

Figure L-5. Educational Resources Available for Schools on District Website

b. Using Social Marketing

When the Outreach Coordinator finds out about a desire for school to explore a recycling program, she works with the administration and eventually students to ensure the program is set up properly and connects the school to available infrastructure and equipment (the District funds recycling containers for schools as the budget allows). The District may explore this interaction further by requiring a survey to be completed by any group requesting a presentation so that the District can identify ways to improve or implement a recycling program.

c. Outreach Methodologies

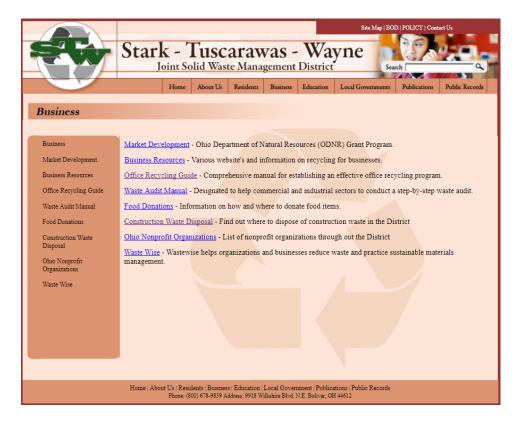
The District relies on schools visiting its website and requesting presentations to spread the educational messages associated with solid waste management. Through years of service provided, schools and teachers within the schools are also aware of the availability of Outreach Coordinator to assist with solid waste educational efforts.

3. Audience: Industries

a. Overview

The District offers several programs which have the potential to provide information and education to industrial businesses. The District website includes a drop-down menu on the homepage specifically for business and industry interests. (See Figure L-6.)

Figure L-6. Programs Available for Industries on District Website



The District has contacts with hundreds of industries throughout the tri-county area each year through its annual survey. Results from surveys are reviewed, and the District may follow-up with certain industries depending upon the information provided. For example, the company may request assistance or indicate that they would likely recycle if services were available.

The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

b. Using Social Marketing

The District will evaluate adding additional survey questions with the Annual District report when the surveys are updated. Questions may consist of asking if an industry would like to be contacted for recycling program options, waste audits, etc. this would allow the District to gather more information on how many industrial businesses would like more information as well as market the District's assistance and audit programs.

With this information, the District could focus on industries which request assistance. For example, by reaching out, the District opens the door to increase marketing outreach on how it can assist the business. With permission from the business, the District may share the highlights of the waste audit and improvements on Facebook and the website to increase interest in the program.

c. Outreach Methodologies

In addition to the District website and the annual survey, the District also provides technical assistance for market development of recyclables, waste audits upon request and assistance with grants. These programs and efforts are described and evaluated in Appendix H.

4. Audience: Institutions & Commercial Businesses

a. Overview

The District provides information on its website and in its "Office Recycling Guide" which can be useful to commercial businesses and institutions. The District conducts an annual survey of commercial businesses which not only collects information about businesses but also reminds companies that the District is available to provide assistance in solving waste management issues.

The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

b. Using Social Marketing

The District will evaluate adding additional survey questions with the Annual District report when the surveys are updated. Questions may consist of asking if a business would like to be contacted for recycling

program options, waste audits, etc. this would allow the District to gather more information on how many commercial businesses would like more information as well as market the District's assistance and audit programs.

With this information, the District could focus on businesses which request assistance. For example, by reaching out, the District opens the door to increase marketing outreach on how it can assist the business. With permission from the business, the District may share the highlights of the waste audit and improvements on Facebook and the website to increase interest in the program.

c. Outreach Methodologies

In addition to the District website and the annual survey, the District provides technical assistance for market development of recyclables, waste audits upon request and assistance with grants, as it does for industries. Commercial businesses and institutions are also eligible to participate in the District's Recycling and Composting Infrastructure Enhancement Grant Program which is another methodology used by the District to provide education and outreach to this audience. These programs and efforts are described and evaluated in Appendix H, sections 2 and 5.

5. Audience – Communities & Elected Officials

a. Overview

The District provides information on its website, in its comprehensive resource guide, in the Recycling Newsletter, and through presentations and events such as fairs and festivals which are all available to communities and elected officials.

The District's government recycling program (detailed in Appendix H) describes the infrastructure available for government offices. The District primarily educates the government offices about infrastructure through routine communication with these offices due to partnership with the District hosting drop-off sites or participation in District grant programs. In addition, the District's Executive Director meets with elected officials when they are considering a program change or implementation. The District provides information on landfills, recycling haulers and trash haulers on its website and also plans to add a section to its new website which describes the available infrastructure for this audience as well as technical assistance and other resources.

b. Using Social Marketing

The District does not currently use social marketing techniques with this audience.

c. Outreach Methodologies

In addition to the description provided above, the District staff typically meets with communities and elected officials in various forums throughout the year. For example, the District may give presentations at meetings for rotary clubs, chambers of commerce, and township trustees. Opportunities to interact with community officials to develop and maintain positive working relationships and provide educational information can occur through implementation of programs such as cleanups, participation in District grant programs, technical assistance to improve recycling programs and hosting the District recycling containers for the dropoff program.

C. Measuring the Results and Effectiveness

a. Measuring Results

There are multiple programs that reach the five different targeted audiences for the District. The District's website and presentations are programs designed to reach all five targeted audiences (Table L-1). The District uses their mailing lists to track the number of recipients that receive the Recycling and Reuse Guide and Recycling Newsletter. For the Annual District Report, the municipalities, commercial and industrial businesses who submit a survey with their tonnage recycled can be quantified.

Drop-off sites

District is developing a "clean up tracking sheet" for those who maintain recycling drop-off sites. In time, this sheet will help the District to identify which sites are most frequently dumped, target an outreach campaign, and then measure if dumping decreased after campaigns.

The new District website will feature analytics, as does the District's Facebook page, so the District will be able to track if visits to the site or interaction with the page increase after outreach campaigns. This should also help the District to identify which types of outreach are most effective.

The District occasionally distributes a recycling survey in conjunction with the publication of its publications. The District can evaluate how to increase survey participation as well as use the data from the responses to better target outreach campaigns.

The District could evaluate if an increase in the amount of tires collected/participation in the tire drop-off program due to an outreach campaign about it results in a decrease in the number of mosquito sprayings per community or number of mosquitos caught in traps. It would accomplish this by working with the Health Departments, who track this data.

Special Collections

For special collections, such as HHW collections, the District tracks car counts. This is a great way to see the number of cars (like households) which participate in an area for the collection event.

The District is exploring a container loan program for recycling. This would open more options for measuring the number of organizations which may request recycling containers for special events. The District would be able to measure the demand and the types of events which request materials. This data would allow the District to focus on outreach to specific and different types of events in the three counties.

The website is a great tool to spread information to all audiences. The District does not currently collect visitor information, but plans to with its new website.

b. Measuring Effectiveness

The District cannot confirm if the audience has read the material in its publications, but can see improvements in program tonnage that they may have focused on. For example, tonnage from the residential yard waste collection program increased after the publications were delivered to households in the tri-county area.

Drop-off sites can be tracked over time for contamination rates. This will allow the District to know which areas certain outreach methods work and others that may not respond as positively.

For the special collection events, when car counts are tallied up, the District can use these numbers and compare them to the weight of the materials collected. This allows for the District to measure effectiveness by the number of households reached but also that

amount per household may bring on average to help prepare for other events with similar materials collected.

D. Identification of Programs to Address Outreach and Education Priorities

The following programs were identified by the District to target audiences for outreach and education.

Advertising

The use of advertising can target many different audiences. An outreach campaign could be conducted for residents to target specific needs within the District.

Website

The District will benefit from the expansion of information on its website to become a "one-stop destination" for solid waste information. A fully stocked website with key word searches on the internet may boost visitors and increase recycling due to receiving the education and information.

Newsletter

The District Newsletter may use a targeted priority theme for outreach to distribute information to residents. Articles and pictures may help to capture the audience's attention.

Commercial and Industrial Technical Assistance

The Assistance program helps give businesses the opportunity to reach out for education on recycling and special waste reduction.

E. Outreach and Marketing Plan

The District's Outreach and Marketing plan includes reaching the five targeted audiences: Residents, Schools, Industries, Institutions & Commercial Businesses, and Communities & Elected Officials. The District chose the following marketing methods to aid outreach efforts to educate the tri-county area:

- Highlight specific areas of the website on the homepage
- Advertising
- Direct Mail

These methods may allow the District to continue to spread existing and new information to the targeted audiences. It is important to have information readily accessible to be able to reach more of the intended audience.

The District currently uses its tagline "By recycling, we can all make a difference" or shortened "recycling makes a difference" in its advertising campaigns, on its website, on its publications, and on its recycling trucks. This tagline's goal is focused on linking the District with focusing on the words "recycling" and "difference."

Over the course of the planning period, the District plans to focus on the contamination in drop-off sites (recycling and yard waste) and decrease the commercial usage of residential intended yard waste drop-off sites:

Contamination at public recycling drop-off sites:

Drop-off contamination has been identified as an outreach priority (see section F below for further details). Possible behavioral change tools include increased signage. installation of fencing/gates at high dumping, and also posting pictures of illegally dumped items at drop-off sites on social media and/or the website to draw attention.

Commercial use of public residential intended yard waste drop-off sites:

The District would also like to see a decrease in the amount of commercial use at its public yard waste drop-off sites as they are intended for residential use. Possible behavioral change tools include increased signage stating the sites are intended for residential use and commercial entities may be cited if they use the site and reminding residents (some of whom work at commercial businesses) in District publications/print ads that the sites are intended for residential use. In addition, if the District does identify commercial entities using the sites via the camera surveillance systems, it can use the follow up as a chance to distribute information about available recycling infrastructure and District technical assistance.

F. Outreach Priority

Priority – Public Recycling and Yard Waste Drop-off Site Contamination

The District would like to see a decrease in the amount of contamination at its public recycling drop-off sites and public yard waste drop-off sites. Contamination increases costs for the District and the time on routes for the collection of materials. The District believes focusing on the contamination amount and frequency of incidences at public sites will help in reducing contamination, increasing education outreach, and advertising the District's presence in the communities.

Behavioral change tools include:

- Increasing signage to state dumping is prohibited.
- Updating decals to clearly state which items are acceptable.

- Including an article in District publications for acceptable and unacceptable materials.
- Running radio/print campaigns with a focus on illegal dumping.
- Installing cameras at high dumping sites (presence could deter some contamination and help to identify and cite the responsible party).
- Installing fencing/gates at high dumping sites with possible relocation to a nearby site which may already have this infrastructure available.
- Posting pictures of illegally dumped items at drop-off sites on social media and/or the website to draw attention to monitoring. This could help lead those who intentionally dump being identified and cited.

Goals

- Decrease contamination rate of public recycling and yard waste drop-off sites.
- Increase public education of drop-off sites acceptable materials.
- Increase security at sites.

Targeted Audience

- Establishment of the program: District Staff & Communities
- Implementation of the program: Residents

Milestones

- Consistent signage for contamination education on all drop-off sites.
- Contamination site incidences reduced 15% by 2023
- Contamination site incidences reduced 30% by 2028
- Collection of decreasing volume of contaminate materials each year.

Who Implements the Strategy

 The District provides promotion and education related to public drop-off sites and provides assistance to political subdivisions or organizations that host collection sites.

Measurement of Success

- Quantify the type and amount of material in tons or loads.
- Number of residents who visit the drop-off section of the website.
- Number of high dumping drop-off sites within District.
- Tracked contamination site incidences over time.

APPENDIX M WASTE MANAGEMENT CAPACITY ANALYSIS

APPENDIX M. Waste Management Capacity Analysis

A. Access to Publicly-Available Landfill Facilities

The Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) has three in-district landfills that provide the majority of solid waste disposal capacity needed each year. In the reference year (2015), the landfills disposed at least 97 percent of the total waste sent for disposal. At the end of 2015, each of the landfills was estimated to have more than 30 years of remaining capacity based upon the current rate of landfill airspace used (see Table M-1). As a result, the District has concluded that adequate landfill capacity is available to serve the needs of the District for the entire planning period.

Table M-1. Remaining Operating Life of Publicly-Available Landfills

Facility	Location	Years of Remaining Capacity ^a
In-District		
American Landfill, Inc.	Stark	84.5
Countywide Recycling & Disposal Facility	Stark	75.6
Kimble Sanitary Landfill	Tuscarawas	30.8
Out-of-District		
Coshocton Landfill, Inc.	Coshocton	***
Crawford County Sanitary Landfill	Crawford	12.1
Pine Grove Regional Facility	Fairfield	60.1
Hancock County Sanitary Landfill	Hancock	30.1
Carbon Limestone Landfill LLC	Mahoning	60.7
Mahoning Landfill, Inc.	Mahoning	45.7
Noble Rd Landfill	Richland	8.6
Evergreen Recycling & Disposal	Wood	35.5
County Environmental of Wyandot	Wyandot	156.5
Suburban Landfill, Inc	Perry	20
Apex Sanitary Landfill	Jefferson	13
Tunnel Hill Reclamation Landfill	Perry	22
Pike Sanitation Landfill	Pike	75.1
Cherokee Run Landfill	Logan	29.1
Athens Hocking Cⅅ/Reclamation Center Landfill	Athens	51.2
Out-of-State		
Unknown	N/A	N/A

Source(s) of Information: Ohio EPA Facility Data, 2014.

^a Based on remaining life as reported by landfill owner/operators.

^{***} Denotes landfills with remaining life exceeding 200 years due to limited waste receipts in 2015 N/A = Not available

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. Incinerators and Energy Recovery Facilities

The District sent less than 10 percent of waste to incinerators. Therefore, Table M-4, "Incinerators and Energy Recovery Facilities Used by the District in the Reference Year," has been omitted.

APPENDIX N EVALUATING GREENHOUSE GAS EMISSIONS

808,132

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 2024. 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

Mixed waste

Commercial and industrial survey results

2015 (Reference Year) 2024 **Waste Category** Recycled Landfilled Composted Composted Recycled Landfilled 14,769 44,092 Yard Trimmings 57,451 78,469 Mixed Recyclables -11,868 13,709 Scrap tires

Table N-1. Tons of Solid Waste Applied to WARM

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 400,213 metric tons of carbon dioxide equivalents (MTCO $_2$ E) 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 2015, and is termed the alternative scenario. The alternative scenario results in a net generation of 212,844 MTCO $_2$ E.

834,588

Figure N-2. Greenhouse Gas Emissions Printout for Reference Year Data

GHG Emissions from Baseline Waste Management (MTCO2E):

400,213

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Anaerobically Digested	Total MTCO2E
Yard Trimmings	NA	14,769.3	-	-	-	(2,462)
Mixed Recyclables	-	57,450.8	-	NA	NA	20,669
Mixed MSW	NA	834,588.0	-	NA	NA	381,766
Tires	-	11,867.9	-	NA	NA	240

GHG Emissions from Alternative Waste Management Scenario (MTCO2E):

212,844

Material	Tons Source Reduce d	Tons Recycle d	Tons Landfille d	Tons Combuste d	Tons Composte d	Tons Anaerobicall y Digested	Total MTCO2E
Yard Trimmings	NA	NA	-	-	14,769.3	-	(2,161)
Mixed Recyclables	NA	57,450.8	-	-	NA	NA	(162,297)
Mixed MSW	NA	NA	834,588. 0	-	NA	NA	381,766
Tires	-	11,867.9	-	-	NA	NA	(4,464)

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 187,369 MTCO₂E.

Table N-3. Net GHG Reductions for 2015: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO₂E (Alternative - Baseline)
Yard Trimmings composted	301
Mixed recyclables	-182,965
Scrap tires recycled	-4,705
Mixed waste landfilled	0
Net Totals	-187,369

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. 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 2024. The following table shows that the net GHG reductions in 2024 by recycling are more than $254,000 \text{ MTCO}_2\text{E}$.

Table N-4. Net GHG Reductions for 2024: Alternative vs. Baseline Scenarios

Waste Category	Difference Between Scenarios in MTCO₂E (Alternative - Baseline)
Yard Trimmings composted	898
Mixed recyclables	-249,902
Scrap tires recycled	-5,434
Mixed waste landfilled	0
Net Totals	-254,438

Note: "MTCO2E" means metric tons of carbon dioxide equivalent.

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 2019-2028. 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 of Directors (Board), with the advice and assistance of the Executive Director, 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 Executive Director'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. These cost changes would be in compliance with this *Plan Update* are not a "material change in circumstance" regarding the implementation of this *Plan Update*.

A. Funding Mechanisms and Revenue Generated

1. Disposal Fees

The District earned the majority of its revenue from tiered solid waste disposal fees in 2015. The disposal fee has always been the primary funding mechanism for the District. In 2015, the disposal fee schedule was \$1.00 per ton for in-district waste, \$2.00 per ton for out-of-district waste and \$1.00 per ton for out-of-state waste. The disposal fee yielded \$3,570,976 in revenue for the District in 2015.

In-District revenue from 2016 to 2028 is based on the tonnages projected in Appendix D. The Out-of-District and Out-of-State revenues is projected to increase by 1% each year from the actual 2016 revenue. This percentage is based on the average percent increases from 2011 to 2016 by 1.067% for Out-of-District and 0.923% Out-of-State.

Table O-1: Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))

Year	Disposal Fee (\$/to		chedule	Waste Di	Waste Disposed at in-District Landfills		Revenue			Total Disposal
	In- District	Out-of- District	Out-of- State	In- District	Out-of- District	Out-of- State	In- District	Out-of- District	Out-of- State	Fee Revenue
2011	\$1.00	\$2.00	\$1.00	734,491	1,015,804	75,928	\$734,491	\$2,031,608	\$75,928	\$2,842,027
2012	\$1.00	\$2.00	\$1.00	775,231	1,217,579	40,541	\$775,231	\$2,435,157	\$40,541	\$3,250,929
2013	\$1.00	\$2.00	\$1.00	703,281	1,456,017	52,345	\$703,281	\$2,912,033	\$52,345	\$3,667,659
2014	\$1.00	\$2.00	\$1.00	712,531	1,529,861	52,851	\$712,531	\$3,059,721	\$52,851	\$3,825,103
2015	\$1.00	\$2.00	\$1.00	757,814	1,395,183	22,795	\$757,814	\$2,790,367	\$22,795	\$3,570,976
2016	\$1.00	\$2.00	\$1.00	831,278	1,365,751	30,827	\$796,447	\$2,731,501	\$30,827	\$3,558,775
2017	\$1.00	\$2.00	\$1.00	827,980	1,392,878	39,872	\$827,980	\$2,785,756	\$39,872	\$3,653,607
2018	\$1.00	\$2.00	\$1.00	824,694	1,406,807	40,270	\$824,694	\$2,813,613	\$40,270	\$3,678,578
2019	\$1.00	\$2.00	\$1.00	821,420	1,420,875	40,673	\$821,420	\$2,841,750	\$40,673	\$3,703,843
2020	\$1.00	\$2.00	\$1.00	818,159	1,435,084	41,080	\$818,159	\$2,870,167	\$41,080	\$3,729,406
2021	\$1.00	\$2.00	\$1.00	816,218	1,449,434	41,491	\$816,218	\$2,898,869	\$41,491	\$3,756,578
2022	\$1.00	\$2.00	\$1.00	814,284	1,463,929	41,906	\$814,284	\$2,927,857	\$41,906	\$3,784,047
2023	\$1.00	\$2.00	\$1.00	812,357	1,478,568	42,325	\$812,357	\$2,957,136	\$42,325	\$3,811,818
2024	\$1.00	\$2.00	\$1.00	812,357	1,493,354	42,748	\$812,357	\$2,986,707	\$42,748	\$3,841,812
2025	\$1.00	\$2.00	\$1.00	812,357	1,508,287	43,175	\$812,357	\$3,016,574	\$43,175	\$3,872,107
2026	\$1.00	\$2.00	\$1.00	812,357	1,523,370	43,607	\$812,357	\$3,046,740	\$43,607	\$3,902,704
2027	\$1.00	\$2.00	\$1.00	812,357	1,538,604	44,043	\$812,357	\$3,077,208	\$44,043	\$3,933,608
2028	\$1.00	\$2.00	\$1.00	812,357	1,553,990	44,484	\$812,357	\$3,107,980	\$44,484	\$3,964,820

2. Generation Fees

The District does not receive revenue from generation fees; therefore, Table O-2 has been omitted.

3. Designation Fees

The District does not receive revenue from designated facility fees; therefore, Table O-3 has been omitted.

4. Loans

The District does not have current loans and does not anticipate securing loans during the planning period therefore Table O-4 has been omitted.

5. Other Sources of Revenue

a. Grants

In 2016, the District was granted an Ohio EPA Community Development Grant. The grant was a pass-through grant and credited to the General Fund. 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-5.

b. Recycling Revenue

Starting in 2015, recycling revenue is credited to the District's General Fund for interest and non-tier disposal fee revenue purposes; therefore, the District projected \$0 throughout the planning period. In 2015, \$303,673 was credited to the General Fund and \$216,985 in 2016.

Contingent Funding

The District reserves the right, on an as needed basis, to transfer recycling revenue from the general fund to the recycling revenue line item of the solid waste plan implementation fund. The purpose of any transfer would be to balance the budget during any month or year throughout the planning period. The District conservatively projected \$50,000 of recycling revenue transferred from the general fund to the plan implementation fund under this line item starting in 2018 through the end of the planning period. The District would conduct the transfer only if needed or required to ensure the District

maintains a positive cash balance in any given year of the planning period.

c. User Fees

The District does not receive revenue from user fees; therefore, the District projected \$0 throughout the planning period.

d. Miscellaneous Revenue

Miscellaneous revenue represents donations and other forms of miscellaneous revenue. From 2010 to 2015, miscellaneous revenue ranged from a low of \$0 in 2011 to a high of \$17,702 in 2013. Based on the previous years, the District projects a conservative \$0 per year throughout the planning period.

Table O-5. Other Revenue and Other Revenue Sources

	Year	Reimbursements	Grants	Recycling Revenue	Miscellaneous	"Other Revenue" Total
	2011	\$6	\$0	\$358,494	\$0	\$358,500
	2012	\$4,707	\$0	\$313,152	\$1	\$317,860
	2013	\$25	\$0	\$278,213	\$17,702	\$295,940
	2014	\$0	\$2,895	\$308,470	\$9,208	\$320,573
	2015	\$0	\$0	\$0	\$11,539	\$11,539
	2016	\$0	\$0	\$0	\$112	\$112
	2017	\$0	\$0	\$0	\$0	\$0
	2018	\$0	\$0	\$50,000*	\$0	\$50,000
×	2019	\$0	\$0	\$50,000*	\$0	\$50,000
	2020	\$0	\$0	\$50,000	\$0	\$50,000
Planning →	2021	\$0	\$0	\$50,000	\$0	\$50,000
uur	2022	\$0	\$0	\$50,000	\$0	\$50,000
<u>≅</u> 1	2023	\$0	\$0	\$50,000	\$0	\$50,000
0 .	2024	\$0	\$0	\$50,000	\$0	\$50,000
Year of Period	2025	\$0	\$0	\$50,000	\$0	\$50,000
>	2026	\$0	\$0	\$50,000	\$0	\$50,000
First	2027	\$0	\$0	\$50,000	\$0	\$50,000
	2028	\$0	\$0	\$50,000	\$0	\$50,000

^{*}See Contingent Funding under Recycling Revenue above for explanation of revenue transfer.

Source(s) of Information: Quarterly Fee Reports, District Records

Sample Calculations:

2015 Other revenue = Reimbursements + Grants + Recycling Revenue + Miscellaneous \$11,539 = \$0 + \$0 + \$0 + \$11,539

6. Summary of District Revenues

The total revenue, comprised of disposal fees and other revenue, was \$3,582,515 during the reference year. Revenue in the first year of the planning period (2019) is projected to be \$3,703,843. Revenue is projected to increase annually from 2017 to 2028, ending with a total revenue of \$4,125,628. The following table presents a summary of the District's actual and projected total revenue from 2011 to 2028.

Table O-6. Total Revenue

	Year	Disposal Fees	Other Revenue	Total Revenue		
First Year of Planning X Period →	2011	\$2,842,027	\$358,500	\$3,200,527		
	2012	\$3,250,929	\$317,860	\$3,568,789		
	2013	\$3,667,659	\$295,940	\$3,963,599		
	2014	\$3,825,103	\$320,573	\$4,145,676		
	2015	\$3,570,976	<i>\$11,539</i>	\$3,582,515		
	2016	\$3,558,775	\$112	\$3,558,887		
	2017	\$3,653,607	\$0	\$3,653,607		
	2018	\$3,678,578	\$0	\$3,678,578		
	2019	\$3,703,843	\$50,000	\$3,753,843		
	2020	\$3,729,406	\$50,000	\$3,779,406		
	2021	\$3,756,578	\$50,000	\$3,806,578		
	2022	\$3,784,047	\$50,000	\$3,834,047		
	2023	\$3,811,818	\$50,000	\$3,861,818		
	2024	\$3,841,812	\$50,000	\$3,891,812		
	2025	\$3,872,107	\$50,000	\$3,922,107		
	2026	\$3,902,704	\$50,000	\$3,952,704		
	2027	\$3,933,608	\$50,000	\$3,983,608		
	2028	\$3,964,820	\$50,000	\$4,014,820		

Source(s) of Information: Quarterly Fee Reports

Sample Calculations (2015): Total Revenue = Disposal Fees + Other Revenues

\$3,582,515 = \$3,570,976 + \$11,539

B. Cost of Implementing Plan

1. Expenses

The projected budget, shown in table O-7, was developed based on programmatic needs identified in Appendices H, I and L.

Table O-7. Expenses

Table O-7. Expenses									
Line #	Category/Program	2011	2012	2013	2014	2015	2016		
	1. Plan Monitoring/Prep.	\$0	\$323	\$17	\$14,515	\$8,314	\$8,732		
1.a		\$0	\$0	\$0	\$14,515	\$0	\$1,095		
1.b	<u> </u>	\$0	\$0	\$0	\$0		\$7,637		
1.c		\$0	\$323	\$17	\$0		\$0		
	2. Plan Implementation	\$2,188,230	\$1,851,343	\$2,274,933			\$3,943,090		
2.a		\$548,279	\$521,876	\$540,988	\$543,125	\$525,160	\$549,331		
2.a.1	Personnel	\$387,618	\$386,691	\$358,690	\$367,956	\$345,806	\$372,009		
2.a.2	Office Overhead	\$124,475	\$102,111	\$148,730	\$173,594	\$176,505	\$176,272		
2.a.3		\$36,185	\$33,074	\$33,569	\$1,575	\$2,850	\$1,050		
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0		
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0		
2.b.2		\$0	\$0	\$0	\$0	\$0	\$0		
2.b.3		\$0	\$0	\$0	\$0	\$0	\$0		
2.b.4	Special Waste	\$0	\$0	\$0	\$0	\$0	\$0		
2.c		\$0	\$0	\$0	\$0	\$0	\$0		
2.d	d. Recycling Collection	\$1,372,078	\$1,136,170	\$1,567,496		\$2,070,860	\$2,016,695		
2.d.1	Curbside	\$375,377	\$302,478	\$271,769	\$303,382	\$348,223	\$472,454		
2.d.2		\$996,701	\$833,692	\$1,295,727	\$1,194,395	\$1,719,890	\$1,544,241		
2.d.3		\$0	\$0	\$0	\$0	\$0	\$0		
2.d.4		\$0	\$0	\$0	\$0	\$0	\$0		
2.d.5		\$0	\$0	\$0	\$0	\$2,746	\$0		
2.d.6		\$0	\$0	\$0	\$0	\$0	\$0		
2.e		\$39,130	\$42,661	\$46,764	\$52,226	\$76,077	\$186,284		
2.e.1	Tire Collection	\$33,132	\$42,661	\$46,764	\$52,226	\$56,531	\$72,639		
2.e.2		\$5,999	\$0 ©0	\$0 \$0	\$0 \$0	\$70	\$44,800		
2.e.3	}	\$0	\$0	\$0	\$0	\$9,643	\$58,525		
2.e.4	Appliance Collection	\$0	\$0	\$0	\$0	\$0	\$0		
2.e.5		\$0	\$0	\$0	\$0	\$9,832	\$10,321		
2.f		\$125,576	\$0	\$11,433	\$0	\$440,621	\$856,571		
2.g	g. Education/Awareness Education Staff	\$103,167	\$111,914	\$108,251	\$182,073	\$232,205	\$293,760		
2.g.1 2.g.2		\$103,167	\$111,914 \$0	\$108,251 \$0	\$182,073 \$0	\$50,126 \$173,820	\$48,326 \$210,511		
		\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$8,259	\$210,511		
2.g.3 2.h		\$0	\$0	\$0 \$0	\$0	\$94,454	\$39,500		
2.h.1	General Market Development Activities	\$0	\$0	\$0 \$0	\$0	\$94,454	\$39,500		
2.h.2	ODNR pass-through grant	\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$39,300 \$0		
2.ii.2	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0		
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0		
2.k	k. Waste Assessments/Audits	\$0	\$0	\$0	\$0	\$0	\$0		
2.1	I. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0		
2.m	m. Litter Collection/Education	\$0	\$0	\$0	\$0	\$0	\$0		
2.n	n. Emergency Debris Management	\$0	\$0	\$0	\$0	\$0	\$950		
2.0	o. Loan Payment	\$0	\$0	\$0	\$0	\$0	\$0		
2.p	p. Other	\$0	\$38,722	\$0	\$0	\$0	\$0		
	3. Health Dept. Enforcement	\$285,000	\$285,000	\$285,000	\$285,000		\$325,000		
	·	Stark County	Health Depart	ment, Tuscara	was County I	Health Departr			
	Health Department Name:	County Health	n Department,	and Canton C	ity Health De	partment [·]			
3.a		\$230,697	\$232,987	\$233,209	\$233,209	\$325,000	\$325,000		
3.b	b. Supplies	\$47,499	\$46,308	\$43,623	\$43,623	\$0	\$0		
3.c		\$0	\$0	\$0	\$0		\$0		
3.d		\$6,804	\$5,705	\$8,168		\$0	\$0		
3.e		\$0	\$0	\$0	\$0		\$0		
	4. County Assistance	\$0	\$0	\$0	\$0		\$300,000		
4.a		\$0	\$0	\$0	\$0	\$0	\$300,000		
4.b		\$0	\$0	\$0	\$0	\$0	\$0		
4.c		\$0	\$0	\$0	\$0	\$0	\$0		
4.d		\$0	\$0	\$0	\$0	\$0	\$0		
	5. Well Testing	\$0	\$9,280	\$0	\$0	\$0	\$0		
	6. Out-of-State Waste Inspection	\$0	\$0	\$0	\$0	\$0	\$0		
		\$255,000	\$254,000	\$252,320	\$255,000	\$285,000	\$285,000		
7.a		\$0	\$0	\$0	\$0		\$0		
7.b		\$255,000	\$254,000	\$252,320	\$255,000	\$285,000	\$285,000		
7.c		\$0	\$0	\$0	\$0	\$0	\$0		
	8. Health Department Training	\$0	\$0	\$0 \$0	\$0 \$0		\$0 \$0		
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0		
1 40	10. Compensation to Affected Community	\$0	\$0	\$0	\$0	\$0	\$0		
10	(ORC Section 3734.35)	· ·			<u> </u>				
	Total Expenses	\$2,728,230	\$2,399,946	\$2,812,270	\$2,829,716	\$4,057,690	\$4,861,822		

Table O-7. Expenses (continued)

		7. Expense:	s (contin	uea)			
Line #	Category/Program	2017	2018	2019	2020	2021	2022
1	1. Plan Monitoring/Prep.	\$40,000	\$18,200	\$8,700	\$8,700	\$31,854	\$32,018
1.a	a. Plan Preparation	\$31,800	\$10,000	\$0	\$0	\$23,154	\$23,154
1.b	b. Plan Monitoring	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$8,364
1.c		\$0	\$0	\$500	\$500	\$500	\$500
2	2. Plan Implementation	\$4,009,286	\$3,619,800	\$3,788,848	\$3,565,928		\$3,667,125
2.a		\$646,130	\$639,800	\$654,798	\$670,207	\$686,039	\$702,306
2.a.1		\$425,000	\$435,000	\$448,050	\$461,492	\$475,336	\$489,596
2.a.2		\$211,130	\$194,800	\$196,748	\$198,715	\$200,703	\$202,710
2.a.3		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
2.b		\$0	\$0	\$0 \$0	\$0	\$0 \$0	\$0
2.b.1	, ,	\$0	\$0	\$0	\$0	\$0	\$0
2.b.2		\$0	\$0	\$0	\$0	\$0	\$0
2.b.3		\$0	\$0	\$0	\$0	\$0	\$0
2.b.4		\$0	\$0	\$0	\$0	\$0	\$0
2.c		\$0	\$0	\$0	\$0	\$0	\$0
2.d		\$2,233,786	\$2,002,500	\$2,127,500	\$1,885,000		\$1,945,375
2.d.1	Curbside	\$476,286	\$470,000	\$395,000	\$395,000	\$395,000	\$395,000
2.d.2	Drop-off	\$1,607,500	\$1,282,500	\$1,582,500	\$1,340,000	\$1,640,000	\$1,400,375
2.d.3	Combined Curbside/Drop-off	\$0	\$0	\$0	\$0	\$0	\$0
2.d.4		\$0	\$0	\$0	\$0	\$0	\$0
2.d.5		\$0	\$0	\$0	\$0	\$0	\$0
2.d.6		\$150,000	\$250,000	\$150,000	\$150,000	\$150,000	\$150,000
2.d.0	†	\$356,870	\$385,000	\$387,250	\$389,568	\$391,955	\$394,413
2.e.1	<u> </u>	\$80,000	\$85,000	\$87,250	\$89,568	\$91,955	\$94,413
2.e.1		\$276,870	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
2.e.3		\$0	\$0	\$0	\$0	\$0	\$0
2.e.4		\$0	\$0	\$0	\$0	\$0	\$0
2.e.5		\$0	\$0	\$0	\$0	\$0	\$0
2.f		\$427,500	\$312,500	\$312,500	\$312,500	\$312,500	\$312,500
2.g		\$325,000	\$260,000	\$281,800	\$283,654	\$285,564	\$287,531
2.g.1	Education Staff	\$60,000	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531
2.g.2	Advertisement/Promotion	\$210,126	\$180,000	\$200,000	\$200,000	\$200,000	\$200,000
2.g.3	Other	\$54,874	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2.h		\$0	\$0	\$0	\$0	\$0	\$0
2.h.1		\$0	\$0	\$0	\$0	\$0	\$0
2.h.2		\$0	\$0	\$0	\$0	\$0	\$0
2.i		\$0	\$0	\$0	\$0	\$0	\$0
2.j	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0
2.k		\$0	\$0	\$0	\$0	\$0	\$0
2.1	I. Dump Cleanup	\$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	\$20,000	\$20,000	\$25,000	\$25,000	\$25,000	\$25,000
2.0		\$0	\$0	\$0	\$0	\$0	\$0
2.p		\$0	\$0	\$0	\$0	\$0	\$0
3	3. Health Dept. Enforcement	\$330,000	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000
	Health Department Name:	Stark County Heal					t, Wayne
	,	County Health De					
3.a		\$325,000	\$325,000		\$325,000	\$325,000	\$325,000
3.b		\$0	\$0	\$0	\$0		\$0
3.c		\$0	\$0	\$0	\$0	\$0	\$0
3.d		\$0	\$0	\$0	\$0	\$0	\$0
3.e		\$5,000	\$0	\$0	\$0	\$0	\$0
	4. County Assistance	\$0	\$0	\$0	\$0	\$0	\$0
4.a		\$0	\$0	\$0	\$0	\$0	\$0
4.b		\$0	\$0	\$0	\$0	\$0	\$0
4.c		\$0	\$0	\$0	\$0	\$0	\$0
4.d		\$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
	5. Well Testing						\$0 \$0
	6. Out-of-State Waste Inspection	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
	7. Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.a	<u> </u>	\$0	\$0	\$0	\$0	\$0	\$0
7.b		\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000
7.c		\$0	\$0	\$0	\$0	\$0	\$0
	8. Health Department Training	\$0	\$0	\$0	\$0	\$0	\$0
9	9. Municipal/Township Assistance	\$0	\$0	\$0	\$0	\$0	\$0
	10. Compensation to Affected Community	\$0	\$0	\$0	\$0	\$0	\$0
10	(ORC Section 3734.35)		•	φυ	φU	\$ 0	Φ0
	Total Expenses	\$4,664,286	\$4,248,000	\$4,407,548	\$4,184,628	\$4,527,911	\$4,309,143

Table O-7. Expenses (continued)

	Table O-7. Expenses (continued)							
Line #	Category/Program	2023	2024	2025	2026	2027	2028	
1	1. Plan Monitoring/Prep.	\$8,864	\$8,864	\$8,864	\$32,481	\$32,648	\$9,031	
1.a	a. Plan Preparation	\$0	\$0	\$0	\$23,617	\$23,617	\$0	
1.b		\$8,364	\$8,364	\$8,364	\$8,364	\$8,531	\$8,531	
1.c	-	\$500	\$500		\$500	\$500	\$500	
	2. Plan Implementation	\$3,751,791	\$3,611,791		\$3,611,791	\$3,611,791	\$3,611,791	
2.a			\$719,021	Ψ3,011,731 Φ710,021		\$719,021	\$719,021	
		\$719,021		\$719,021	\$719,021			
2.a.1		\$504,284	\$504,284		\$504,284	\$504,284	\$504,284	
2.a.2		\$204,737	\$204,737	\$204,737	\$204,737	\$204,737	\$204,737	
2.a.3		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
2.b	b. Facility Operation	\$0	\$0	\$0	\$0	\$0	\$0	
2.b.1	MRF/Recycling Center	\$0	\$0	\$0	\$0	\$0	\$0	
2.b.2		\$0	\$0	\$0	\$0	\$0	\$0	
2.b.3		\$0	\$0	\$0	\$0	\$0	\$0	
2.b.4		\$0	\$0		\$0	\$0	\$0	
2.0.4 2.c		\$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	
						7 -		
2.d	, ,	\$2,008,768	\$2,008,768			\$2,008,768	\$2,008,768	
2.d.1		\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	
2.d.2		\$1,463,768	\$1,463,768		\$1,463,768	\$1,463,768	\$1,463,768	
2.d.3		\$0	\$0	\$0	\$0	\$0	\$0	
2.d.4	Multi-family	\$0	\$0	\$0	\$0	\$0	\$0	
2.d.5		\$0	\$0	\$0	\$0	\$0	\$0	
2.d.6		\$150,000	\$0	\$0	\$0	\$0	\$0	
2.d.0		\$396.946	\$356,946	\$356,946	\$356,946	\$356,946	\$356,946	
2.e.1		1 ,				\$106,946		
2.e.1	Tire Collection	\$96,946	\$106,946		\$106,946		\$106,946	
2.e.2		\$300,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	
2.e.3		\$0	\$0	\$0	\$0	\$0	\$0	
2.e.4	Appliance Collection	\$0	\$0		\$0	\$0	\$0	
2.e.5		\$0	\$0	\$0	\$0	\$0	\$0	
2.f	f. Yard Waste/Other Organics	\$312,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	
2.g		\$289,556	\$289,556		\$289,556	\$289,556	\$289,556	
2.g.1		\$69,556	\$69,556		\$69,556	\$69,556	\$69,556	
2.g.2		\$200,000	\$200,000		\$220,000	\$200,000	\$200,000	
2.g.3		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
2.h	7 0	\$0	\$0	\$0	\$0	\$0	\$0	
2.h.1		\$0	\$0	\$0	\$0	\$0	\$0	
2.h.2	ODNR pass-through grant	\$0	\$0	\$0	\$0	\$0	\$0	
2.i	i. Service Contracts	\$0	\$0	\$0	\$0	\$0	\$0	
2.i	j. Feasibility Studies	\$0	\$0	\$0	\$0	\$0	\$0	
2.k		\$0	\$0	\$0	\$0	\$0	\$0	
2.1	I. Dump Cleanup	\$0	\$0	\$0	\$0	\$0	\$0	
2.m		\$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	
2.n	<u> </u>	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
2.0		\$0	\$0	\$0	\$0	\$0	\$0	
2.p	p. Other	\$0	\$0		\$0	\$0	\$0	
3	3. Health Dept. Enforcement	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000	\$325,000	
		Stark County		ment, Tuscara				
	Health Department Name:			and Canton C				
3.a	a. Personnel	\$325,000				\$325,000	\$325,000	
3.b		\$0	\$0		\$0	\$0	\$0	
3.c		\$0	\$0 \$0			\$0 \$0	\$0 \$0	
		\$0						
3.d			\$0		\$0	\$0	\$0	
3.e		\$0	\$0	\$0	\$0	\$0	\$0	
4	4. County Assistance	\$0	\$0		\$0	\$0	\$0	
4.a		\$0	\$0	\$0	\$0	\$0	\$0	
4.b	b. Maintaining Public Facilities	\$0	\$0	\$0	\$0	\$0	\$0	
4.c		\$0	\$0	\$0	\$0	\$0	\$0	
4.d		\$0	\$0	\$0	\$0	\$0	\$0	
	5. Well Testing	\$0	\$0		\$0	\$0	\$0	
	6. Out-of-State Waste Inspection	\$0	\$0 \$0	\$0	\$0 \$0	\$0 \$0	\$0 \$0	
	7. Open Dump, Litter Law Enforcement	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	
7.a	<u> </u>	\$0	\$0		\$0	\$0	\$0	
7.b		\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	\$285,000	
7.c		\$0	\$0	\$0	\$0	\$0	\$0	
	8. Health Department Training	\$0	\$0		\$0	\$0	\$0	
	9. Municipal/Township Assistance	\$0	\$0		\$0	\$0	\$0	
	10. Compensation to Affected Community							
10	(ORC Section 3734.35)	\$0	\$0	\$0	\$0	\$0	\$0	
10	***Total Expenses	\$4,370,655	\$3,880,655	\$3,880,655	\$3,904,272	\$3,904,439	\$3,880,822	
	i otai Expenses	ψ τ ,370,035	ψυ,000,000	ψυ,000,000	ψ5,504,272	ψ 5,304,4 39	ψ5,000,022	

2. Explanation of Expenses

Table O-7 includes actual expenses from 2011 to 2016, anticipated expenses from the District's approved budgets for 2017, and projected expenditures from 2018 to 2023. Line items explained below are numbered according to the corresponding line item number in the District's Quarterly Fee Reports. Line items that did not have any expenditures projected throughout the planning period were omitted from the discussion below. Projections were developed using the following assumptions or criteria:

1. Plan Preparation and Monitoring

- 1.a Plan Preparation Budget includes estimated expenses related to retaining a consultant for assistance with plan preparation for each 3-year update that will occur during the planning period.
- 1.b Plan Monitoring Budget includes estimated expenses related to retaining a consultant for assistance with plan monitoring for Annual District Reports during the planning period.

2. Plan Implementation

2.a District Administration

 2.a.1 Personnel – Budget includes expenditures for salaries, OPERS, workers' compensation, Medicare, and health insurance. Expenditures are projected to increase 3.0% annually based on historic trends and District practices.

The Personnel line item includes District Administrative staff minus the Outreach Coordinator (formerly Education Specialist), which is included in Education Staff. District Recycling Truck Drivers are included in Drop-off Recycling Collection. The District increased its Administrative staff by one staff member in 2017, which accounts for the increase in Personnel from 2016 to 2017.

 2.a.2 Office Overhead – Budget includes expenditures for a variety of administrative costs, including but not limited to liability insurance, software subscriptions, supplies, equipment, annual financial audit, postage, utilities, telecommunications, staff training, and trade organization memberships. The approved budget for 2018 was used to project an increase of 1.0% annually throughout the planning period.

 2.a.3 Other – The District budgets \$10,000 throughout the planning period. This is based on the amount not to exceed for annual legal counsel as determined by the District over the past few years.

2.d Recycling Collection

 2.d.1 Curbside – The Recycling Makes Sense grants (\$450,000 in 2019) were split between 2.d.1 Curbside (\$395,000) for all subdivisions except Jackson Township and 2.d.2 Drop-Off (\$55,000) for Jackson Township which operates a drop-off recycling center.

The Village of Dennison, City of Massillon, and City of Uhrichsville implemented curbside recycling programs at the end of 2014/beginning of 2015, so the District awarded more Recycling Makes Sense Grant funding. In addition, the Village of Marshallville and Cities of Dover, Orrville and Rittman all upgraded their programs to include larger wheeled recycling containers in 2015 and 2016, which increased the amount of tons their residents recycled; because the Recycling Makes Sense grant amount per quarter is based upon a set rate multiplied by the amount of tons, this resulted in increased grant funding. Also, the Village of Gnadenhutten was awarded a Program Startup Grant in 2016 for the purchase of larger wheeled recycling containers, SO the amount of tons/Recycling Makes Sense funding increased.

Curbside recycling expenses are projected to be less every year starting in 2019 because the District will be restructuring the funding levels of the Recycling Makes Sense Grant program (described in more detail in Appendix I).

 2.d.2 Drop-off – The Recycling Makes Sense grants (\$450,000 in 2019) were split between 2.d.1 Curbside (\$395,000) for all subdivisions except Jackson Township and 2.d.2 Drop-Off (\$55,000) for Jackson Township which operates a drop-off recycling center

The Host Cleanup grants (\$100,000) were split between the three types of host sites of 2.d.2 Drop-off (\$77,500), 2.e.1 Tire

collection (\$10,000), and 2.f Yard Waste/Other Organics (\$12,500)

The District spent more in 2015 (and more every odd year) due to the purchase of a recycling truck. In addition, the District hired another full-time driver and another part-time driver and completed a garage expansion at the Stark County Recycling Garage. The District budgets more in odd years to allow for the purchase of a recycling truck.

2.d.6 Other – The Program Startup grants (\$150,000) are budgeted in the plan under this section. These grants may be reported on Quarterly Fee Reports in another category such as curbside, drop-off, and/or yard waste dependent upon the applicants and funds granted. On the quarterly fee reports submitted to the OEPA, expenditures will actually be reflected within the program type including 2.d.1 Curbside, 2.d.2 Drop-Off, or 2.f. Yard Waste/Other Organics.

There was no feasible way to project how to allocate the monies since the applications differ from year to year and initiatives change from time to time between the recycling and yard waste sites.

Program cost in 2019 is \$150,000 and will stay at that amount until 2023. In 2024, no budget is allocated for this program until the District re-evaluates the budget availability to continue the program.

2.e Special Collections

• **2.e.1 Tire Collection** – The District's 2018 budget was used to project a 3.0% increase until 2023. At 2024, the budget is flatlined for the rest of the planning period. Additional funds are distributed from the Host Cleanup grants.

The Host Cleanup grants (\$100,000) were split between the three types of host sites of 2.d.2 Drop-off (\$77,500), 2.e.1 Tire collection (\$10,000), and 2.f Yard Waste/Other Organics (\$12,500).

 2.e.2 HHW Collection —Annual collection events will be evaluated to increase HHW disposal opportunities for District residents. Program costs in 2018 are \$300,000 and will stay at \$300,000 until 2023. In 2024, the budget drops to \$250,000 for the rest of the planning period.

The District intends on providing the HHW program at the budgeted amount; however, it understands that the program as it is currently operating is vulnerable because it is dependent upon the ability of the City of Canton Recycle Center to serve as the permanent drop-off site and Clean Harbors to maintain fundable rates for disposal, labor, transportation, materials and other supplies. Clean Harbors agreed to extend the rates they were offering to the Cuyahoga County Solid Waste District when the contract was initiated, but there are no guarantees of this lower rate moving into the future and there are a limited number of companies that can offer this service. If either of those circumstances changes. the program in its current form would not be possible, and due to the fact that the HHW collection does not aid the District in meeting the required Goal #1, the budget for the program may need to be altered to maintain recycling access and a balanced budget. In the circumstance that the program can continue but the costs for disposal, labor, transportation, materials and other supplies all rise or the District needs to explore another HHW company, the District would make every effort to maintain the current program but would monitor program costs and would explore restricting the amount of waste a resident can drop off at collection events (to reduce costs and also because the collection site is better equipped to identify if a large quantity of waste may be commercially generated).

The District will at a minimum would at least promote the disposal of HHW through private sector companies through our annual recycling publication as done from 2010-2015 if the District financially could not continue to contract with the City of Canton and Clean Harbors or other HHW company.

The intention of the HHW collection program is to provide an outlet for materials that do not have another outlet through the private sector, but if another outlet for a specific material is identified that may provide a cost savings to the District, it may be explored.

2.f Yard Waste/Other Organics – A flat annual budget of \$300,000 (plus any Host Community Cleanup, Program Startup, or Composting Infrastructure Enhancement Grants) is allocated from the yard waste program until 2023. In 2024, no budget is allocated for this program until the District re-evaluates the budget availability

to continue the program. Additional funds are distributed from the Host Cleanup grants.

The Host Cleanup grants (\$100,000) were split between the three types of host sites of 2.d.2 Drop-off (\$77,500), 2.e.1 Tire collection (\$10,000), and 2.f Yard Waste/Other Organics (\$12,500).

Companies were willing to collect yard waste material at no cost from 2010 to 2014 but ended the no-cost collection at the end of that year. In 2015, the District contracted with two compost facilities to haul and process materials from sites in Stark and Tuscarawas Counties. The expense in 2011 was due to the final Composting Makes Sense grant payments from 2010; this grant program was discontinued at the end of 2010.

In 2016, Program Startup grants geared toward yard waste management were awarded with corresponding payments totaling \$288,337.22. There were an additional \$90,208.52 carryover yard waste Program Startup Grant payments in 2016 as well. Lastly, Bull Country and Earth N Wood received Composting Infrastructure Enhancement Grants totaling \$130,000 which were also included in this line item. Altogether, those grants totaled \$508,545.74. The District is in the process of reducing the yard waste hauling costs in order to keep the program sustainable going forward so the target is \$300,000 per year plus \$12,500 for a few host compost cleanup grants to get to the revised total of \$312,500 in 2018.

Any yard waste host sites that wish to make enhancements will be directed to the District's Program Startup Grant Program.

2.g Education/Awareness

• **2.g.1 Education Staff** – The annual budget for this program is projected to increase 3.0% annually based on historic trends and District practices.

Separating the HHW Education Grants and Mini-Grants out in 2015 coincided with the OEPA's new quarterly fee report format which added a "District Grants" column and changed from two rows labeled "District Staff" and "Contracted Agencies/Services" to three rows labeled "Education Staff", "Advertisement/Promotion", and "Other". To align with grants to others under the "District Grants" column the District began reporting them in the "Other" row. Based on this thinking, the budget should be adjusted to show \$20,000 in "Other" (2.g.3.) for mini-grants every year beginning in 2019 going forward

and thus reducing the "Advertisement/Promotion" (2.g.2) to \$200,000 for same time period. The correction for this in 2018 should be to reduce "Advertisement/Promotion" to \$180,000 and increase "Other" to \$20,000. The correction for this in 2017 should be to reduce "Advertisement/Promotion" to \$210,126 and increase "Other" to \$54,873. The HHW Education grants totaled \$60,000 (\$20,000 per county) per year available although not all of the funding was actually awarded so that explains the increase in education funding in 2015-2017.

 2.g.2 Advertisement/Promotion – A flat annual budget of \$220,000 is allocated for marketing, advertisement, and promotion.

In 2019 and 2020, a reduce contamination campaign may be executed to inform residents about drop-off collection opportunities and what materials are accepted. In 2019 and 2020, a yard waste education campaign may be executed for residential users of yard waste sites to reduce contamination. From 2021 to 2028, the budget will also support program upkeep.

The District went from accounting for all Education activities and supplies in this line item to separately it out in 2015. Some of the activities separated out the HHW Education Grants and Mini-Grants out in 2015 coincided with the OEPA's new quarterly fee report format which added a "District Grants" column and changed from two rows labeled "District Staff" and "Contracted Agencies/Services" to three rows labeled "Education Staff", "Advertisement/Promotion", and "Other". To align with grants to others under the "District Grants" column the District began reporting them in the "Other" row.

The District began collecting HHW at Buehler's recycling collection events at the end of 2016, it decided to more heavily promote the events in 2017 via advertisements in newspapers.

The District has historically had four annual radio campaigns; in years when there wasn't a specific event or program update to announce, the advertisements were more generic, but for future outreach initiatives, the existing campaigns could be tailored to the specific message needed. In addition, the District has several low or no cost marketing tools at its disposal for these outreach initiatives including its website and

social media pages, press releases to local media, and articles in existing community newsletters (such as the District's own recycling publications and the Canton Connection). Also, the District already budgets for its Outreach Coordinator, who can provide in-person outreach such as attendance at community meetings, county fairs and festivals, and school and civic group presentations and for updated signage/bin decals at sites if needed, so the District does not anticipate needing to budget more than what has been spent in years past.

2.g Recycling Market Development

 2.h.1 General Market Development Activities – The District categorized the Recycling or Composting Infrastructure Enhancement Grants under this section.

In 2015 S. Slesnick Co. received a portion of their 2015 RIEG of \$49,500.00 for a new conveyor and bobcat & forklift and Earth N Wood received a portion of their 2015 CIEG of \$44,953.68 for a total of \$94,453.68. (Note: Bull Country also received \$16,000 of CIEG in 2015 but that amount was reflected in the Yard Waste/Other Organics row in Table O-7.) In 2016 S. Slesnick Co. received the carryover of their 2015 RIEG of \$39,500.00 for a new conveyor and bobcat & forklift.

2.n Emergency Debris Management – A flat annual budget of \$25,000 is allocated to this program and will be available to provide financial assistance to local governments in the event a natural disaster occurs and requires debris management and removal.

3. Health Department Enforcement

• **3.a Personnel** – A flat annual budget of \$325,000 is allocated to this program.

7. Open Dump, Litter Law Enforcement

• **7.b Local Law Enforcement** – A flat annual budget of \$285,000 is allocated to this program.

The District started the 2015 reference year with a carry-over balance of \$5,744,550. Based on revenue and expenditure projections discussed throughout this appendix, the District is expected to begin the planning period in 2019 with a carry-over balance of \$2,157,809 and end the planning period with a carry-over balance of \$411,528. Ample funding is projected

to be available to finance the implementation of this plan update. Table O-8 presents a summary of the District's budget, including revenue, expenditures, and fund balance.

Table O-8. Budget Summary

	Year	Revenue	Expenses	Annual Surplus/Deficit	Balance
	2010			Ending Balance	\$2,111,295
	2011	\$3,200,527	\$2,728,230	\$472,297	\$2,583,592
	2012	\$3,568,789	\$2,399,946	\$1,168,843	\$3,752,435
	2013	\$3,963,599	\$2,812,270	\$1,151,330	\$4,903,764
	2014	\$4,145,676	\$2,829,716	\$1,315,960	\$6,219,725
	2015	\$3,582,515	\$4,057,690	-\$475,175	\$5,744,550
	2016	\$3,558,887	\$4,861,822	-\$1,302,935	\$4,441,615
	2017	\$3,653,607	\$4,664,286	-\$1,010,679	\$3,430,936
	2018	\$3,678,578	\$4,248,000	-\$569,422	\$2,861,514
×	2019	\$3,753,843	\$4,407,548	-\$653,705	\$2,207,809
	2020	\$3,779,406	\$4,184,628	-\$405,223	\$1,802,586
Planning →	2021	\$3,806,578	\$4,527,911	-\$721,333	\$1,081,252
ann	2022	\$3,834,047	\$4,309,143	-\$475,095	\$606,157
	2023	\$3,861,818	\$4,370,655	-\$508,837	\$97,320
of iod	2024	\$3,891,812	\$3,880,655	\$11,157	\$108,477
ear Per	2025	\$3,922,107	\$3,880,655	\$41,452	\$149,929
ĭt Y	2026	\$3,952,704	\$3,904,272	\$48,432	\$198,361
First	2027	\$3,983,608	\$3,904,439	\$79,169	\$277,530
	2028	\$4,014,820	\$3,880,822	\$133,998	\$411,528

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 (Board) 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.

2. Description of the SWMD's Designation Process

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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.)

Decisions regarding designation, if implemented, or the granting of a designation waiver, if applicable, shall be made by the District, following a review of the request by the Policy Committee.

Where if 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(I)(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.
- Other criteria as defined in Section C of this appendices.

B. Designated Facilities

The District continues to support an open market for the collection, transport and disposal of solid waste. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is identifying all Ohio licensed and permitted solid waste landfill, transfer and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Appendix B Inventories.

The District is not designating any facilities in this *Plan Update* as shown in Table P-1.

Escility Name	Location		Facility Type	Year	
Facility Name	County State		Facility Type	Designated	
In-District					
None.					
Out-of-District					
None					
Out-of-State					
None.					

Table P-1. Facilities Designated

C. Waiver Process for the Use of Undesignated Facilities

The District is authorized to designate solid waste facilities. If the Board elects to designate solid waste facilities after this *Plan Update* is approved by the Director of the Ohio EPA, the following waiver process may be followed by any person,

municipal corporation, township or other entity that wishes to deliver waste to a solid waste facility not designated by the District.

In the event that any person, Municipal Corporation, township or other entity requests permission to use a facility, other than a designated facility, for the disposal of solid waste generated within the District, the entity must submit a written request for a waiver of designation to the Board. The request must contain the following information:

- 1. Identification of the persons, municipal corporation, township or other entity requesting the waiver;
- 2. Identification of the generators(s) of the solid waste for which the waiver is requested;
- 3. Identification of the type and quantity (in tons per year) of solid waste for which the waiver is requested;
- 4. Identification of the time period(s) for which the waiver is requested;
- 5. Identification of the disposal facility(s) to be used if the waiver is granted;
- If the solid waste is to be disposed in an Ohio landfill, a letter from the Solid Waste Management District where the solid waste will be disposed, acknowledging that the activity is consistent with that District's current plan;
- 7. An estimate of the financial impact to the District that would occur with issuance of the requested waiver; and
- 8. An explanation of the reason(s) for requesting the waiver.

Upon receipt of the written request containing all of the information listed above, District staff will review it and may request additional information necessary to conduct its review. The Board shall act on a waiver request within ninety days following receipt of the request. The Board may grant the request for a waiver only if the Board determines that:

- Issuance of the waiver is not inconsistent with projections contained in the District's approved *Plan Update* under Section 3734.53 (A)(6) and (A)(7) of the Ohio Revised Code;
- 2. Issuance of the waiver will not adversely affect implementation and financing of the District's approved *Plan Update*; and
- 3. The entity is willing to enter into an agreement requiring the payment of a waiver fee to the District if the generation fee is not collected.

APPENDIX Q DISTRICT RULES

APPENDIX Q. District Rules

A. Existing Rules

According to Ohio Revised Code Section 3734.53(C), "the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code." The District reserves the authority for the Board to adopt rules under the provision of Ohio Revised Code.

The District does not have any existing rules. There are no current plans to adopt new rules at the time of the development of this *Plan Update*.

B. Rule Making Authority – ORC 343.01

The solid waste management plan provides the authority to the Board of Directors (Board) to adopt, publish, and enforce all 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.

C. 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.

D. Proposed Rules

The District is not proposing any new rules in this *Plan Update*.

E. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board as provided in section 343.01(G).

APPENDIX R BLANK SURVEY FORMS AND RELATED INFORMATION











Dear Ohio Business:

The Stark-Tuscarawas-Wayne (STW) Joint Solid Waste Management District, Ohio Council of Retail Merchants, Ohio Manufacturers' Association, Ohio Chamber of Commerce and Ohio Environmental Protection Agency (Ohio EPA) invite you to participate in a statewide recycling survey.

The purpose of this survey is to collect data on the amounts and types of materials commercial and industrial businesses recycled in Ohio in 2015. The STW Joint Solid Waste Management District is required to document its recycling efforts in an annual report to Ohio EPA. The District uses the data it receives through surveys to complete that report. By submitting data, your business can help the STW Joint Solid Waste Management District meet its reporting requirements. Your data will also help the District track its progress towards meeting local and state recycling goals.

Why is your business being surveyed?

Your business is located in the Stark-Tuscarawas-Wayne Joint Solid Waste Management District. The District facilitates recycling and reduction efforts for commercial and industrial businesses, institutions, residents, and schools. In order to determine which programs are most effective and whether programs are achieving intended results, the STW Joint Solid Waste Management District needs to know the amounts and types of materials recycled.

Your completed survey will help the STW Joint Solid Waste Management District better understand recycling in the business community in Stark, Tuscarawas, and Wayne counties. Submitting a completed survey also allows your business to connect directly with the STW Joint Solid Waste Management District which may be able to assist your company with its recycling needs.

How do I participate in the survey?

To take the survey, please visit **www.survey.re-trac.com/TimeToRecycle** and choose an option to login or begin the survey. Follow the instructions for completing the survey, double check your information, then click "submit."

What happens to my data?

The STW Joint Solid Waste Management District or its consultant will combine your data with data it receives from other businesses and submit the combined data in its annual report to Ohio EPA. This data will be used to calculate recycling rates for the STW Joint Solid Waste Management District.

The District's 2014 data is posted on Ohio EPA's webpage (at http://epa.ohio.gov/portals/51/swmdsurvey/Stark-Tuscarawas-Wayne.pyr.pdf). Ohio EPA will also combine the data reported by all solid waste management districts to calculate a recycling rate for Ohio.

Who do I contact for more information?

For assistance, please contact Molly Kathleen at GT Environmental, the solid waste district's consultant, with any questions regarding this survey. Molly can be reached by phone at 740-212-3430, or by email at mkathleen@gtenvironmental.com.

Please submit your completed survey to the Stark-Tuscarawas-Wayne Joint Solid Waste Management District by April 15, 2016.

Thank you for your time and participation.

We K.DC

Sincerely,

David J. Held
Executive Director



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612 330-874-2258 • 800-678-9839 • 330-874-2449 FAX www.timetorecycle.org • district@timetorecycle.org

David Held Executive Director Erica Wright Finance Director

March 2016

Dear Solid Waste/Recycling Manager:

Thank you for providing information to the Stark-Tuscarawas-Wayne Joint Solid Waste Management District about the recycling opportunities your business offers. To show our appreciation for the role your business plays in reducing waste in our community, we have provided you with a free listing in our Recycling Guide.

Each year, our District is required to survey establishments that may accept or process materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. This information is critical for state-mandated data reporting and waste management planning.

We would greatly appreciate your participation in a brief survey regarding the total pounds/tons recycled by your business in 2015. 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 2015 information**. Completing this survey should only take a few minutes. Only materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio should be reported.

For your reference, the District's totals from 2014 are available at: http://epa.ohio.gov/portals/51/swmdsurvey/Stark-Tuscarawas-Wayne.pyr.pdf.

Please submit your completed survey in the enclosed envelope to the District's consultant, GT Environmental, by Friday April 15, 2016. You may also return your completed survey via e-mail (mkathleen@gtenvironmental.com) or by fax (614-899-9255). For assistance, please contact Molly Kathleen with any questions regarding this survey. Molly can be reached by phone at 740-212-3430. We appreciate your cooperation in completing this survey.

Sincerely,

David J. Held Executive Director

Me K. D. C.

Stark-Tuscarawas-Wayne Joint Solid Waste Management District

Enclosure

BOARD of DIRECTORS

STARK-TUSCARAWAS-WAYNE JOINT WASTE MANAGEMENT DISTRICT 2015 RECYCLING SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only report materials generated *within* Stark, Tuscarawas, and Wayne Counties in Ohio. **Confidentiality:** The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify recycling rates in Stark, Tuscarawas, and Wayne Counties. **Submitting:** Upon completion, please return this survey by **April 15, 2016** 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 Molly Kathleen, the District's consultant, at 740-212-3430.

Pa	rt 1 - General Infor	mation	
Company Name Street Address			
(City	Zip	
(Contact Person	Phone	
Pa	rt 2 – Facility Infori	mation	
In 2	2015, where did you	r facility accept material from? Please check all that apply.	
		s, and/or Wayne Counties s other than Stark, Tuscarawas, and/or Wayne Counties	Areas Outside Ohio
Pa	rt 3 – Recycling To	tals	

Please report the amount of materials recycled in 2015 that were generated within Stark, Tuscarawas, and Wayne Counties in Ohio 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 2015

	Category	Residential/Commercial Sector Tons Recycled	Industrial Sector Tons Recycled
	Example: Mixed Paper	265 tons	185 tons
Р	Paper (Newsprint, Office, Glossy, etc.)		
Paper	Cardboard/Paperboard		
er e	Books		
, P	Styrofoam/Packing Peanuts		
a Sa	Pallets		
Padkaging	Other Packaging Materials (specify):		
	Non-Ferrous Metals (aluminum, copper, brass)		
	Do not report auto bodies or construction/demolition materials such as		
	aluminum siding		
Metals	Ferrous Metals (steel, iron)		
als	Do not report auto bodies or		
	construction/demolition materials such as rebar		
	Gas/Propane Tanks		
	Appliances (white goods)		
D	Plastic Grocery Bags		
Pasics	Other Film Plastics (specify):		

	Category	Residential/Commercial Sector Tons Recycled	Industrial Sector Tons Recycled
	Used Tires		
	Used Motor Oil		
	Only report used oil from HHW collections, oil		
Auto	change service stations serving residential		
Ö	customers, and from residents. Do not include		
	used oil from commercial or industrial generators.		
	Used Antifreeze		
₽	Rechargeable Batteries		
Batteries	Lead-Acid Batteries		
8	Other Batteries		
	Electronics (Computers, TVs, Cellphones, etc.)		
	Ink/Toner Cartridges		
	Lawn Mowers, Weed Eaters, Snow Blowers		
	Carpet		
Q	Textiles (clothing, fabrics)		
Other	Other (specify):		
	Other (specify):		

Part 4 - Destination of Materials

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!



STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

9918 Wilkshire Blvd NE • Bolivar, OH 44612 330-874-2258 • 800-678-9839 • 330-874-2449 FAX www.timetorecycle.org • district@timetorecycle.org

David Held Executive Director Erica Wright Finance Director

March 2016

Dear Solid Waste/Recycling Manager:

The Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) requests your participation in a brief survey regarding the total pounds/tons recycled by your business in 2015. 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 accept or process materials generated within Stark, Tuscarawas, and Wayne Counties in 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 2015 information**. Completing this survey should only take a few minutes. Only materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio should be reported.

For your reference, the District's totals from 2014 are available at: http://epa.ohio.gov/portals/51/swmdsurvey/Stark-Tuscarawas-Wayne.pyr.pdf.

Please submit your completed survey in the enclosed envelope to the District's consultant, GT Environmental, by Friday April 15, 2016. You may also return your completed survey via e-mail (mkathleen@gtenvironmental.com) or by fax (614-899-9255). For assistance, please contact Molly Kathleen with any questions regarding this survey. Molly can be reached by phone at 740-212-3430. We appreciate your cooperation in completing this survey.

Sincerely,

David J. Held Executive Director

De KILLE

Stark-Tuscarawas-Wayne Joint Solid Waste Management District

Enclosure

STARK-TUSCARAWAS-WAYNE JOINT WASTE MANAGEMENT DISTRICT 2015 RECYCLING FACILITY/BROKER/PROCESSOR SURVEY

Instructions: Please complete all of the following survey to the best of your ability. Only report materials generated within Stark, Tuscarawas, and Wayne Counties in Ohio. Confidentiality: The Stark-Tuscarawas-Wayne Joint Solid Waste Management District will use the information in this survey for summary purposes only to identify recycling rates in Stark, Tuscarawas, and Wayne Counties. Submitting: Upon completion, please return this survev by April 15, 2016 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 Molly Kathleen, the District's consultant, at 740-212-3430.

Part 1 - General Infor Company Name	mation		
Street Address			
City	Zip		
Contact Person	Phone	_	
Part 2 – Facility Infor	mation		
In 2015, where did you	r facility accept material from? Please check all that apply.		
	s, and/or Wayne Counties s other than Stark, Tuscarawas, and/or Wayne Counties		Areas Outside Ohio
Part 3 – Recycling To	tals		

Please report the amount of materials recycled in 2015 that were generated within Stark, Tuscarawas, and Wayne Counties in Ohio 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 2015

	Category	Residential/Commercial	Industrial Sector
		Sector Tons Recycled 265 tons	Tons Recycled 185 tons
	Example: Mixed Paper	200 CONS	180 0000
Ď	Paper (Newsprint, Office, Glossy, etc.)		
aper	Cardboard		
4	Paperboard		
5	Wood Scrap		
Wood	Branches/Tree Trimmings		
ā	Pallets		
	Aluminum Beverage Containers		
	Steel Food/Beverage Containers		
	Non-Ferrous Metals (aluminum, copper,		
	brass)		
_	Do not report auto bodies or		
≤e	construction/demolition materials such as		
Metals	aluminum siding		
	Ferrous Metals (steel, iron)		
	Do not report auto bodies or		
	construction/demolition materials such as		
	rebar		
	Appliances (white goods)		

	Category	Residential/Commercial Sector Tons Recycled	Industrial Sector Tons Recycled
	Mixed plastics	-	-
	PETE Plastic (#1)		
Тъ	HDPE Plastic (#2)		
Plastics	PVC Plastic (#3)		
	LDPE Plastic (#4)		
S	Polypropylene Plastic (#5)		
	Polystyrene Plastic (#6)		
	Other Plastics (specify)		
Glass	Glass		
77	Rubber (not including tires)		
Rubber	Passenger or Truck Tires		
Вď	Tractor/Agricultural Tires		
	Ash		
	Commingled (mixed, single stream)		
	Concrete		
	Dry Cell Batteries		
	Electronics		
	Food		
	Ink/Toner Cartridges		
	Lead Acid Batteries		
	Non-Exempt Foundry Sand/Slag		
	Sludge		
	Stone/Clay/Sand		
0	Textiles (clothing, fabrics)		
Other	Used Antifreeze (residential only)		
~~	Used Oil		
	Only report used oil from HHW collections,		
	oil change service stations serving		
	residential customers, and from residents.		
	Do not include used oil from commercial or		
	industrial generators.		
	Yard Waste (grass, brush)		
	Other:		
	Totals		

Part 4 – Destination of Materials

f materials collected by your establishment that were reported above are sent to another company to be processed or recycled, please identify the destinations of materials in the box below.

Return the survey in the enclosed envelope, by email to mkathleen@gtenvironmental.com, or fax to 614-899-9255.

APPENDIX S SITING STRATEGY

APPENDIX S. Siting Strategy

The solid waste management plan must demonstrate that the SWMD will have access to enough capacity at landfill facilities to accept all of the waste the SWMD will need to dispose of during the planning period. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity.

The District Policy Committee has determined that sufficient disposal capacity exists for the entire planning period. The District does not anticipate constructing any solid waste facility or contracting with a private entity to do so on behalf of the District. As such, and in accordance with the Format 4.0, no siting criteria is necessary for this *Plan Update*.

APPENDIX T MISCELLANEOUS PLAN DOCUMENTS



Independent

the Suburbanite The Times-Reporter

500 MARKET AVE. S., CANTON, OH 44702

INVOICE FOR LEGAL ADVERTISING

Invoice Date: 06/01/2018

Account #: 127922

Amount This Invoice: \$272.80

Terms: Due Upon Receipt

ATTN: DAVID HELD STARK-TUSCARAWAS-WAYNE JOINT SOLID W. 9918 WILKSHIRE BLVD NE BOLIVAR, OH 44612-8978

Please Remit Payments To: THE TIMES-REPORTER 500 MARKET AVE S CANTON, OH 44702

< Return Portion Above Dotted Line >

Date Ad# PO/Case#

<u>Description</u> <u>Edition</u>

Amount

06/01/2018 21590 PUBLIC NOTICE STARK TIMES-REPORTER 272.80

PAY THIS AMOUNT IN U.S. FUNDS



\$272.80



Affidavit of Publication

STATE OF OHIO }
COUNTY OF STARK }
CITY OF CANTON }

SS

Diane Hamilton, being duly sworn, says:

That she is an authorized Clerk of the Canton Repository, a daily newspaper of general circulation, printed and published in Canton, Stark County, OHIO; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

June 01, 2018

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

an authorized Clerk

Subscribed to and sworn to me this 1st day of June 2018.

Lucy McFee, Notary Public, Stark County, OHIO

My commission expires: April 28, 2023

Publisher's Fee: \$272.80

Case Number:

00000348 00021590

A-STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MGMT 9918 WILKSHIRE BLVD NE BOLIVAR, OH 44612

Lucy McFee Notary Public, State of Ohio My Commission Expires April 28, 2023 **PUBLIC NOTICE**

STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT

Public Comment Period for Draft Solid Waste Management Plan Update

The Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) is establishing a 30-day written comment period (June 1 – June 30, 2018) 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 ward 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 is more than ten years of capacity available to the District. Specifically, the American Landfill, Inc. and Countywide Recycling & Disposal Facility has enough capacity to manage all of the waste generated in the District through 2028.

This draft Plan Update continues to authorize the Board of Commissioners to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. The District does not currently have facility designations and is not proposing to designate facilities during this planning period.

The draft Plan Update complies with State Plan Goal #1: Access to Waste Management Opportunities. The District shall provide access to recycling and waste minimization opportunities for municipal solid waste to its residents and businesses. The District currently funds plan programs and current operations through a disposal fee collected at District landfills and transfer stations of \$1.00 per ton for in-district solid waste, \$2.00 per ton for out-of-district solid waste, and \$1.00 per ton for out-of-state solid waste. These fees are not being proposed to change during the planning period.

The District will hold a public hearing to obtain oral comments regarding the draft Plan Update on Friday, July 6, 2018 at 10:00 a.m. at the District's office, 9918 Wilkshire Boulevard, NE, Bolivar, Ohio 44612. The District will accept written comments as required by Ohio Revised Code Section 3734.55 on the draft Plan Update from June 1, 2018 until June 30, 2018. Written comments should be sent to Mr. David Held, Executive Director, 9918 Wilkshire Boulevard, NE, Bolivar, Ohio 44612.

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Tuscarawas County Commissioners Office: 125 E High Ave, New Philadelphia, OH 44663, during normal business hours

Wayne County Commissioners Office: 428 W Liberty St, Wooster, OH 44691, during normal business hours

District website at https://www.timetorecycle.org/

Please call (330) 874-2258 with any questions about the Plan Update.

the Suburbanite The Times-Reporter

500 MARKET AVE. S., CANTON, OH 44702

INVOICE FOR LEGAL ADVERTISING

Invoice Date: 06/01/2018

Account #: 14977

Amount This Invoice: \$347.90

Terms: Due Upon Receipt

ATTN: DAVID HELD L-STARK-TUSC-WAYNE JOINT SOLID 9918 WILKSHIRE BLVD NE BOLIVAR, OH 44612-8978

Please Remit Payments To: THE REPOSITORY 500 MARKET AVE S CANTON, OH 44702

< Return Portion Above Dotted Line >

Date Ad# PO/Case# Description Edition Amount

06/01/2018 21596 PUBLIC NOTICE STA REPOSITORY 347.90

PAY THIS AMOUNT IN U.S. FUNDS



\$347.90



Affidavit of Publication

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COUNTY OF STARK }
CITY OF CANTON }

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an authorized Clerk

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Lucy McFee, Notary Public, Stark County, OHIO

My commission expires: April 28, 2023

Publisher's Fee: \$347.90

Case Number:

00005166 00021596

L-STARK-TUSC WAYNE JOINT SOLID 9918 WILKSHIRE BLVD. BOLIVAR, OH 44612



Lucy McFee Notary Public, State of Ohio My Commission Expires April 28, 2023

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District website at https://www.timetorecycle.org/

Wooster Daily Record Inc L.L.C.

The Daily Record • The Extra • www.the-daily-record.com
The Holmes County Shopper Hub • The Holmes County shopper News
The Wayne-Holmes Property Magazine • Buckeye Printing
Spectrum Publications

212 E. Liberty Street • P.O. Box 918 • Wooster, OH 44691 PHONE (330) 264-1125 • FAX (330) 264-3756 A Division of GateHouse Media

Stark-Tuscarawas-Wayne Joint Solid Waste District Attn: LEGALS 9918 Wilkshire Blvd NE Bolivar OH 44612 44612

CLASSIFIED ADVERTISING INVOICE

SPR

Invoice Date: 06/01/18	Payment Due Upon Receipt
Order Number: 12452892	
Customer Number: 10026268	

DATE	PUBLICATION	DESCRIPTION	# OF INS	LINES	AMOUNT
06/01/18	20 Daily Record	Stark-Tusc legal Start: 06/01/18 End: 06/01/18 DECEIVE JUN 11 2018 STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE DISTRICT	1	66	309.96 \$275.52 (per attack email)

Please detach and return this portion with payment. To ensure proper credit to your account, please write your customer number on your	Invoice Date 06/01/18	Order Number 12452892
check. If you have any questions about your account, please contact Accounts Receivable at	Customer Number 10026268	
Payment due upon receipt.	PLEASE PAY:	309.96 § 27 <i>5.5</i> 2

Wooster Daily Record P.O. Box 918 Wooster, OH 44691 (330) 264-1125 Stark-Tuscarawas-Wayne Joint Solid Wa 9918 Wilkshire Blvd NE Bolivar OH 44612 Gatehouse Media P.O. Box 918 Wooster, OH 44691 Phone: 330-264-1125

Fax. 330-264-3756

I, Elizabeth Miles, being first duly sworn depose and say that I am Office Manager of THE DAILY RECORD

Elizabeth Miles

Name of Account: Stark-Tuscarawas-Wayre JSWS

Ad Number: 12452892

No. of lines / inches: _____

Day(s) published: June 1, 2018

Sworn to and described before me this 5 th day of ______, 20_18

Debra A. Snyder Notary Public



-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT Public Comment Period for Draft Solid Waste Management Plan Update

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- Tuscarawas County Commissioners Office: 125 E High Ave, New Philadelphia, OH 44663, during normal
- Wayne County Commissioners Office: 428 W Liberty St, Wooster, OH 44691, during normal business " mile as all once all so Charles for some by by the soften the soften of the source HANDS HOUSE NOW A 1870
- hours
 - District website at https://www.timetorecycle.org/

Please call (330) 874-2258 with any questions about the Plan Update.

Publish Wooster Daily Record June 1, 2018

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CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Stark-Tuscarawas-Wayne Joint 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 ten 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.

Stark County

Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner	meet Wheelen	,
Largest City	Musco	5
Health District	Harit Nains	
Townships	Douglas L. Baum	
Industry		
General Interest of Citizens	and al	
Public	Carl W Plasa	
Total Votes	6	

Tuscarawas County

Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner	De Sminth	
Largest City	Jel Beden Wy	
Health District	V	<i>y</i>
Townships		
Industry	MAD Park	
General Interest of Citizens	Cala / Fing	
Public	Pail Smeds	
Total Votes	5	

Wayne County

Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner	Ron Amsterly	
Largest City	on	4
Health District	That and	
Townships	Bullit	
Industry	fu Stor	
General Interest of Citizens		
Public	Al Din Cont	¥
Total Votes		- 4

Resolution Adopting the Solid Waste Management Plan

Resolution # 2018-____

A RESOLUTION DECLARING THAT THE AMENDED SOLID WASTE MANAGEMENT PLAN FOR THE STARK-TUSCARAWAS-WAYNE JOINT SOLID WASTE MANAGEMENT DISTRICT HAS BEEN ADOPTED.

Whereas, the Stark-Tuscarawas-Wayne Joint 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 December 19, 2017 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on February 2, 2018.

Whereas, the District's Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken their comments into consideration and incorporated changes into the amended Plan as appropriate;

Whereas the District has conducted a 30-day comment period from Friday, June 1, 2018 until Saturday, June 30, 2018 and a public hearing held on July 6, 2018 to provide the public an opportunity to have comment on the Plan. No public comments were received through the above processes.

NOW, THEREFORE, BE IT RESOLVED that the District Policy Committee:

- 1. Adopts the amended Plan as the District Plan, as amended by the Policy Committee for clerical and language clarifications.
- 2. 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 ten-year period covered by the Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format Revision 4.0.
- 3. Directs that copies of the adopted Plan be delivered to the Boards of County Commissioners of Stark, Tuscarawas and Wayne Counties and to the legislative authority of each municipal corporation and township under the jurisdiction of the District for ratification.

This resolution shall be in effect immediately upon its adoption

Stark County			
Representation	Signature for Yes Vote Signature for No Vote		
County Commissioner	aut Creek		
Largest City) from		
Health District	La Carbol		
Townships			
Industry			
General Interest of Citizens			
Public	Walan		
Total Votes	4 //		

Date: 7-13-18

Tuscarawas County			
Representation	Signature for Yes Vote	Signature for No Vote	
County Commissioner	Oce Scringt		
Largest City	Soll Denly		
Health District	Middle		
Townships	Marker / Allen		
Industry			
General Interest of Citizens			
Public			
Total Votes	4		

Date: 7-13-18

Wayne County			
Representation	Signature for Yes, Vote	Signature for No Vote	
County Commissioner	Those I brush		
Largest City	1 -4		
Health District	Ron Anduly		
Townships			
Industry			
General Interest of Citizens	Will Walled		
Public	Ani Gat		
Total Votes	4		

Resolution Certifying the Draft, Amended Solid Waste Management Plan was Ratified Resolution #2018-12

The policy committee for the Stark-Tuscarawas-Wayne Joint Solid Waste Management District (District) passed a resolution declaring that the District 's draft, amended solid waste management plan was ratified in accordance with Section 3734.55 of the Ohio Revised Code.

WHEREAS, the policy committee adopted the draft, amended solid waste management plan on July 13, 2018;

WHEREAS this policy committee received copies of resolutions and ordinances approving the draft, amended solid waste management plan from the boards of county commissioners, the legislative bodies of the largest municipality in each county within the District, and from legislative jurisdictions representing at least 60 percent of the residential population within the District;

NOW, THEREFORE, BE IT RESOLVED that the policy committee for the Stark-Tuscarawas-Wayne Joint Solid Waste Management District declares that the draft, amended solid waste management plan for the Stark-Tuscarawas-Wayne Joint Solid Waste Management District was ratified in accordance with Section 3734.55 of the Ohio Revised Code, and the policy committee shall submit the draft, amended solid waste management plan to the director of the Ohio Environmental Protection Agency for review.

This resolution shall be in effect immediately upon its adoption.

Stark County

Representation	Voting for the Resolution	Voting against the Resolution
County Commissioner or Designee	Bill And	
Mayor of Largest City or Designee	gna	
Township Representative	Douglas L. Baum	
Health Commissioner or Designee	Kikland X. Monis	
Commercial, Industrial or Institutional Representative		¥ ·
Member Representing General Interests of Citizens – no conflict	Δ4 Λ /	
Public Representative	Ma CozN	
Total Votes		

Tuscarawas County

Representation	Voting for the Resolution	Voting against the Resolution
County Commissioner or Designee	go Sitt	
Mayor of Largest City or Designee	Je Bedunk	
Township Representative	Marken J. Rithered	;
Health Commissioner or Designee	Mars B	
Commercial, Industrial or Institutional Representative		
Member Representing General Interests of Citizens – no conflict	lee Coul 7: why	
Public Representative		
Total Votes		

Wayne County Voting for the Resolution Representation **Voting against the Resolution County Commissioner or** Seel Smail Designee Mayor of Largest City or Designee Mark Nussbaum **Township** Representative **Health Commissioner or** Designee Commercial, Industrial or Institutional Representative Member Representing General Interests of

This is to certify that the foregoing is a true and correct copy of the resolution passed by the Solid Waste Management District Policy Committee on November 2, 2018 and recorded in the Journal of said Policy Committee.

11-2-18

Total Votes

Citizens – no conflict

Public Representative

Date

Secretary for the Policy Committee

Rachel Lotherlie

APPENDIX U RATIFICATION RESULTS

APPENDIX U. Ratification Results

Stark			
Community	Population (2017)		
Community	Approved	Not Responded	Rejected
Cities			
Alliance city	21,791		
Canal Fulton city	5,451		
Canton city	70,909		
Louisville city	9,335		
Massillon city	32,342		
North Canton city	17,290		
Townships			
Bethlehem township	3,448		
Canton township	12,592		
Jackson township	40,186		
Lake township	27,001		
Lawrence township	8,273		
Lexington township	5,261		
Marlboro township	4,370		
Nimishillen township	9,533		
Osnaburg township	4,022		
Paris township	3,749		
Perry township	28,218		
Pike township	3,145		
Plain township	34,857		
Sandy township	2,041		
Sugar Creek township	3,038		
Tuscarawas township	5,869		
Washington township	4,604		
Villages	.,		
Beach City village	1,001		
Brewster village	2,162		
East Canton village	_, . 3 _	1,583	
East Sparta village	803	.,230	
Hartville village	3,026		
Hills and Dales village	223		
Limaville village		142	
Magnolia village	967	. 12	
Meyers Lake village		567	
Minerva village	3,640	557	
Navarre village	1,901		
Waynesburg village	1,501	911	
Wilmot village	296	311	
County Commissioners	✓		
Total	371,344	3,203	_
County Population	371,544	5,205	<u>-</u>
	·		
Ratification Percentage:	99.1%		

Community Cities Dover city New Philadelphia city Uhrichsville city Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township Mill township	12,766 17,424 5,351 1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	Population (2017) Not Responded 1,056	Rejected
Cities Dover city New Philadelphia city Uhrichsville city Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	12,766 17,424 5,351 1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132		Rejected
Dover city New Philadelphia city Uhrichsville city Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	17,424 5,351 1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
New Philadelphia city Uhrichsville city Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	17,424 5,351 1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
Uhrichsville city Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	5,351 1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
Townships Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	1,126 737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
Auburn township Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
Bucks township Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132	1,056	
Clay township Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	737 4,404 1,492 2,070 3,903 784 4,603 1,952 1,132		
Dover township Fairfield township Franklin township Goshen township Jefferson township Lawrence township	4,404 1,492 2,070 3,903 784 4,603 1,952 1,132		
Fairfield township Franklin township Goshen township Jefferson township Lawrence township	1,492 2,070 3,903 784 4,603 1,952 1,132		
Franklin township Goshen township Jefferson township Lawrence township	2,070 3,903 784 4,603 1,952 1,132		
Goshen township Jefferson township Lawrence township	3,903 784 4,603 1,952 1,132		
Jefferson township Lawrence township	784 4,603 1,952 1,132		
Lawrence township	4,603 1,952 1,132		
	1,952 1,132		
Vill township	1,132		
Oxford township			
Perry township	433		
Rush township			877
Salem township	1,134		
Sandy township	2,274		
Sugar Creek township	1,950		
Union township	.,000	1,261	
Warren township	1,165	.,=0.	
Warwick township	1,703		
Washington township	814		
Wayne township	2,152		
York township	2,102	1,335	
Villages		1,333	
	785		
Baltic village			
Barnhill village	392		
Bolivar village	978		
Dennison village	2,613		
Gnadenhutten village	1,266		
Midvale village	744		
Mineral City village	714		
Newcomerstown village	3,764		
Parral village	215		
Port Washington village	568		
Roswell village	216	1-	
Stone Creek village		174	
Strasburg village	2,678		
Sugarcreek village	2,212		
Tuscarawas village	1,049		
Zoar village	177		
County Commissioners	✓		
Total	87,740	3,826	877
County Population	92,443 94.9%		

Wayne			
Community	Population (2017)		
Community	Approved	Not Responded	Rejected
Cities			
Orrville city	8,458		
Rittman city	6,564		
Wooster city	26,618		
Townships			
Baughman township	2,962		
Canaan township	2,692		
Chester township	3,104		
Chippewa township	7,045		
Clinton township	1,587		
Congress township	2,870		
East Union township	5,731		
Franklin township	3,926		
Greene township	3,399		
Milton township	3,037		
Paint township	3,000		
Plain township	3,125		
Salt Creek township	3,946		
Sugar Creek township	4,887		
Wayne township	4,159		
Wooster township	4,757		
Villages			
Apple Creek village	1,187		
Burbank village	201		
Congress village		181	
Creston village	2,195		
Dalton village	1,851		
Doylestown village	3,086		
Fredericksburg village		424	
Marshallville village	763		
Mount Eaton village		237	
Shreve village	1,517		
Smithville village	1,263		
West Salem village	1,475		
County Commissioners	✓		
Total	115,405	842	-
County Population	116,247		
Ratification Percentage:	99.3%		

County	Population (2017)		
County	Approved	Not Responded	Rejected
Stark	371,344	3,203	-
Tuscarawas	87,740	3,826	877
Wayne	115,405	842	-
Total	574,489	7,871	877
District Population	583,237		
Ratification Percentage:	98.5%		

APPENDIX V MISCELLANEOUS DOCUMENTS REQUIRED BY OHIO REVISED CODE

APPENDIX V. 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 V has been developed to meet the following miscellaneous requirements:

A. Solid Waste Management and Recycling Inventories Requirement

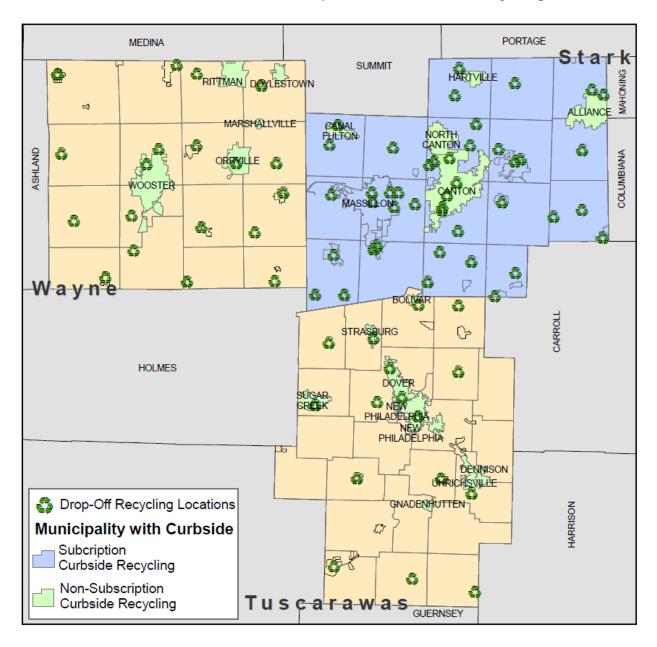
Ohio Revised Code Section 3734.53 (A)(2) requires "...an inventory of all existing facilities were solid wastes are being disposed of, all resource recovery facilities, and all recycling activities within the district. The inventory shall identify each such facility or activity and, for each disposal 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

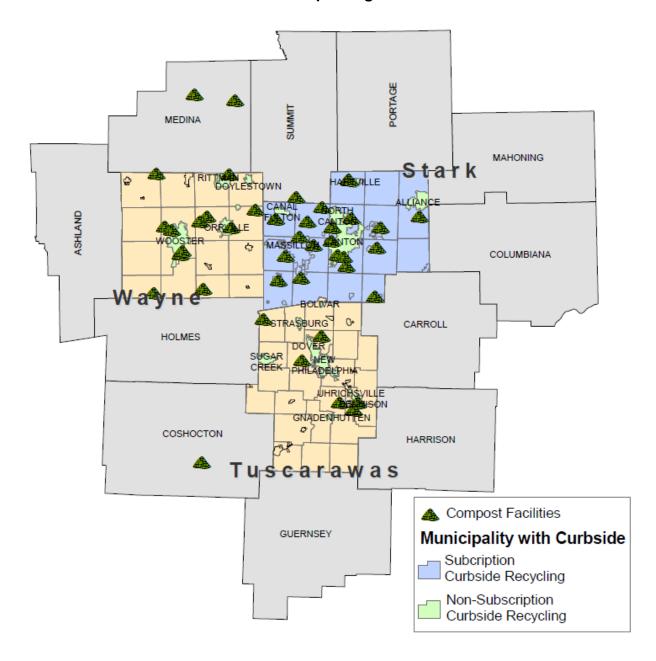
Appendix B of the Plan Update includes a recycling infrastructure inventory providing data and information on curbside recycling, drop-offs, and composting facilities/activities operating in the District. Appendix D includes an inventory of landfills and transfer facilities managing waste generated in 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 2015 reference year.

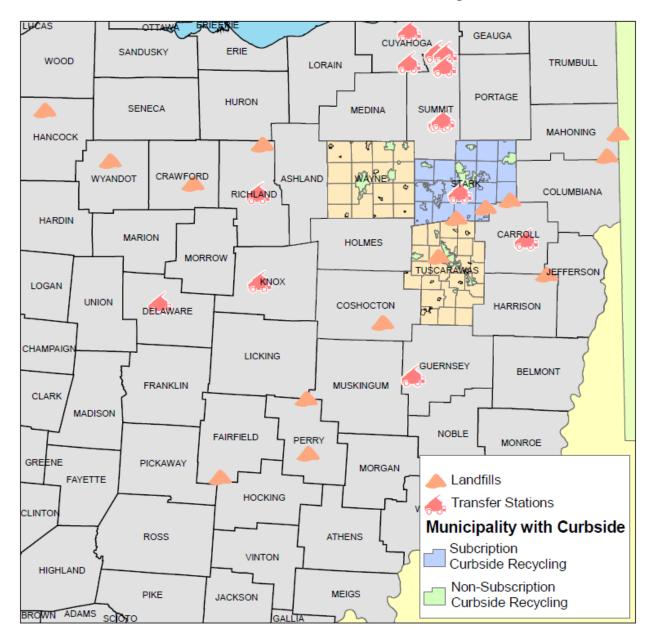
2015 District Access to Drop-Off and Curbside Recycling



2015 District Yard Waste Composting Facilities and Activities



2015 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

The following tables are the open dumps site for 2015 in the District.

011 1 11	5
Site Location (describe briefly)	Description of Materials Dumped
Open Dump Sites (2015) - Stark Co	
417 Harter Ave NW, Canton, OH 44708	MSW
2039 Baird Ave NE, Paris, OH 44669	MSW
	MSW
8327 Cleveland Ave NW, Canton, OH 44720	
139 Main St S, Waynesburg, OH 44688	MSW MSW
148 Wrexham Ave SW, Massillon, OH 44646 506 Poplar Ave NW 506 508 510, Canton, OH 44708	MSW
	MSW
3004 Perrydale St NW, Uniontown, OH 44685 824 Bellflower Ave NW, Canton, OH 44708	MSW
	MSW
86 Bayton St E, Alliance, OH 44601	
3951 Ennis Cir NE, Canton, OH 44705	MSW
10331 Louisville St NE, Louisville, OH 44641	MSW
3021 38th St SW, Canton, OH 44706	MSW
4710 Roosevelt Ave NE, Canton, OH 44705	MSW
6909 Middlebranch Ave NE, Canton, OH 44721	MSW MSW
3942 Paradise St SW, Canton, OH 44706	
3795 Mt Pleasant St NW, Canton, OH 44720	MSW
233 Oakpark St NW, Canton, OH 44720	MSW
10050 Columbus Rd NE, Louisville, OH 44641	MSW
162 Manor Ave NW, Canton, OH 44708	MSW
315 Gnau Ave SW, Massillon, OH 44646	MSW
8750 Dawnhaven St SE, Canton, OH 44730	MSW
4045 Guilford Ave NW, Canton, OH 44709	MSW MSW
4225 Middlebranch Ave NE, Canton, OH 44705 Fohldale St SW, Canton, OH 44706	Tires
·	MSW
4015 9th St NW, Canton, OH 44708	
2308 Reno Dr NE, Louisville, OH 44641	MSW MSW
4026 9th St NW, Canton, OH 44708 4049 orchard Dale Dr NW, Canton, OH 44709	MSW
4119 orchard Dale Dr NW, Canton, OH 44709	MSW
4061 orchard Dale Dr NW, Canton, OH 44709	MSW
4125 orchard Dale Dr NW, Canton, OH 44709	MSW
4025 Cleveland Ave NW, Canton, OH 44709	MSW
, ,	MSW
11265 Peachlane St SE, Robertsville, OH 44670 11268 Lincoln St SE, Robertsville, OH 44670	MSW
423 & 427 Harter Ave NW, Canton, OH 44708	MSW MSW
353 W Maple St, Hartville, OH 44632 2555 30th St NE, Canton, OH 44705	MSW
1130 Elcar Ave NW, Canton, OH 44708	Bedbug, Fleas
147 Harding Ave NW, Massillon, OH 44646 1225 Glenway, North Lawrence, OH 44666	Other, Peste/Vermin
-	MSW
1225 Glenway, North Lawrence, OH 44666	MSW
6732 Pinetree Ave NE, Canton, OH 44721	MSW
2851 Lincoln Way E, Massillon, OH 44646	MSW
6767 Amsel Ave NE, Canton, OH 44721 9430 Main Ave SE, East Sparta, OH 44626	MSW Podbug Floor
134 Sunnyside St SW, Hartville, OH 44632	Bedbug, Fleas MSW
134 Sulfryside St Svv, Hartville, OH 44032	IVIOVV

Cita Lagration	Description of	
Site Location (describe briefly)	Description of Materials Dumped	
Open Dump Sites (2015) - Stark County		
4233 Cloverhill St SW, Canton, OH 44706 12788 Union Ave NE, Alliance, OH 44601	Standing Water MSW	
8032 Georgetown St NE, Louisville, OH 44641	MSW	
35 N Jefferson St, Limaville, OH 44640	MSW	
1109 Oak Dr NW, Canton, OH 44708	MSW	
1100 Brandt Ave NW, Canton, OH 44708	MSW	
1116 Oak Dr NW, Canton, OH 44708	MSW	
1117 Brandt Ave NW, Canton, OH 44708	MSW	
8575 Hickory Lane Ave NW, Clinton, OH 44216	MSW	
2510 Mt Pleasant St NE, Canton, OH 44721	MSW	
1026 Trump Ave NE, Canton, OH 44730	MSW	
9th St NW, Canton, OH 44708	MSW	
	MSW	
6732 Pinetree Ave NE, Canton, OH 44721	Construction issues and	
12017 Easton St NE, Alliance, OH 44601	animal issues	
1112 Oak Dr NW, Canton, OH 44708	MSW	
4741 Hillport Dr SW, Canton, OH 44706	MSW	
121 7th St NE, Canton, OH 44720	MSW	
438 Market St NE, Navarre, OH 44662	MSW	
3463 Alabama Ave SW, Dalton, OH 44618	MSW	
40 N Adams St, Limaville, OH 44640	MSW	
3846 Amherst Ave NW, Massillon, OH 44646	Mold Construction	
13559 Price St NE, Alliance, OH 44601	MSW	
152 Wilson St, Waynesburg, OH 44688	MSW	
3033 Pine Hills Dr SW, Massillon, OH 44646	MSW	
210 Cole Ave SE, Canton, OH 44707	MSW	
3033 Pine Hills Dr SW, Massillon, OH 44646	MSW	
Sycamore Ave SE, Canton, OH 44707	Tires	
Systemoto 7 tto SE, Santon, STI 11707	Tires	
	MSW	
1466 - 2624 Lucy Ave NE, Canton, OH 44730	Construction and demolition	
	debris	
	Construction and demolition	
4369 Ravenna Ave SE, East Canton, OH 44730	debris	
	Construction and demolition	
5542 Georgetown St NE, Louisville, OH 44641	debris	
10855 Johnston St NW, Canal Fulton, OH 44614	Construction Debri	
512 Poplar Ave NW, Canton, OH 44708	Bedbugs	
·	MSW	
5266 Glenhaven Ave NE, Louisville, OH 44641	Tires	
506 Poplar Ave NW 506 508 510 512, Canton, OH 44708	MSW	
2637 Maxine Ave NE, Canton, OH 44705	Abandoned home	
2301 Blake Ave NW, Canton, OH 44708	MSW	
11581 Salina Ave NE, Alliance, OH 44601	MSW	
2209 Harmon St NE, Canton, OH 44705	Tires	
3218 2nd St SE, Canton, OH 44707	Mosquito/Pool	
13342 Louisville St NE, Paris, OH 44669	MSW	
5150 12th St SW, Canton, OH 44710	Mosquito/Pool	
	 	
3424 Pigeon Run Ave SW, Massillon, OH 44647	MSW MSW	
4885 Stoner Ave NE, Louisville, OH 44641	Tires	
401 North St P.O. Box 222, Wilmot, OH 44689	MSW	
2866 Genera St NW, Lake Township, OH	Construction and demolition debris	
4659 Brunnerdale Ave NW, Canton, OH 44718	MSW	
4881 Barrie St NW, Canton, OH 44708	MSW	
4049 orchard Dale Dr NW, Canton, OH 44709	MSW	
126 E Main St, Louisville, OH 44641	MSW	
11191 Newbury Ave NW, Uniontown, OH 44685	MSW	
3894 State St NW, Canton, OH 44720	MSW	
1637 Carnwise St SW, Canton, OH 44706	MSW	
1621 Menlough Ave NW, Canton, OH 44708	MSW	
8085 Ravenna Ave SE, Waynesburg, OH 44688	MSW	
3033 Pine Hills Dr SW, Massillon, OH 44646	MSW	
1000 2. 0.7, 17100011011, 071 110 10		

Site Location	Description of	
(describe briefly)	Materials Dumped	
Open Dump Sites (2015) - Stark County		
3033 Pine Hills Dr SW, Massillon, OH 44646	MSW	
7373 Sherman Church Ave SW 705, East Sparta, OH	Tires	
44626	riies	
244 Market Ave SW, Hartville, OH 44632	MSW	
12700 Market Ave NW, Hartville, OH 44632	MSW	
4240 Fargo Ave NE, Louisville, OH 44641	MSW	
1900 Whipple Ave NW, Canton, OH 44708	MSW	
136 36th St NE, Canton, OH 44714	MSW	
1125 Chaparrel Rd SW, Hartville, OH 44632	MSW	
8234 Waynesburg Dr SE, Waynesburg, OH 44688	MSW	
13000 Etter Rd NE, Hartville, OH 44632	MSW	
1239 Delaware Ave SW	MSW	
Canton, OH 44710	IVISVV	
2315 Broadhaven Ave NW, Massillon, OH 44646	MSW	
7919 Chatham Ave NW, Canton, OH 44720	MSW	
7857 Eland St SE, Waynesburg, OH 44688	MSW	
2403 Broadhaven Ave NW, Massillon, OH 44646	MSW	
4011 Hiram Rd NW, Canton, OH 44718	MSW	
9535 Main Ave W, East Sparta, OH 44626	MSW	
3047 15th St NW, Canton, OH 44708	MSW	
2305 Crosshaven Rd NW, Canton, OH 44708	Mold pool	
8190 Nickel Plate Ave NE, Louisville, OH 44641	MSW	
8 190 Nickel Flate Ave NL, Louisville, OT1 4404 I	Open burning	
2505 Howenstine Dr SE, East Sparta, OH 44626	MSW	
3033 Pine Hills Dr SW, Massillon, OH 44646	MSW	
, ,	Feces	
3922 Middlebranch Ave NE, Canton, OH 44705	MSW	
8418 Mapleford St SW, Navarre, OH 44662	MSW	
5053 Southway St SW, Canton, OH 44706	Tire burning	
	MSW	
Stark Rd NE, Louisville, OH 44641	Tires	
	Scrap metal	
8718 Paris Ave NE, Louisville, OH 44641	MSW	
1	Tires	
3119 Martindale Rd NE, Canton, OH 44714	MSW	
7901 East Sparta Ave SE, Magnolia, OH 44643	MSW	
6950 Navarre Rd SW, Massillon, OH 44646	MSW	
2611 Ullet St SW, East Sparta, OH 44626	MSW	
7919 Chatham Ave NW, Canton, OH 44720	MSW	
5477 East Sparta Ave SE, East Sparta, OH 44626	MSW	
Higbee Ave NW, Canton,1:137 OH 44718	MSW	
	Tires	
	Construction waste	

Site Location (describe briefly)	Description of Materials Dumped	
Open Dump Sites (2015) - Tuscarawas County		
Dunkle (Bucks)	C&D MSW	
Petry Hill (Clay)	MSW Tires	
River (Clay)	MSW	
Enos (Clay)	Vehicles Shingles	
Blacksnake road North	Appliances Furniture Shingles	
Blacksnake road South	Tires	

Site Location (describe briefly)	Description of Materials Dumped	
Open Dump Sites (2015) - Wayne County 5968 Kister Rd., Wooster, OH 44691 MSW		
150 CONGRESS ST, WEST SALEM, OH 44287	MSW	
151 INDUSTRIAL ST./IOO INDUSTRIAL, RITTMAN, OH	MSW	
44270	Tires	
13000 S. PORTAGE STREET, DOVLESTOWN. OH 44230	MSW	
	Open dumping	
3930 s. FIRESTDNE ROAD, SHREVE. OH 44676	MSW	
9035 SENFF ROAD, DUNDEE (PAINT TWP). OH 44624	MSW	
	Open burning	
	Commercial waste	
6632 E. MESSNER ROAD, APPLE CREEK, OH 44606	MSW Junk cars	
3097 DOVER ROAD, WOOSTER. OH 44691	MSW	
11280 MYERS RD, WEST SALEM. OH 44237	MSW	
	MSW	
7579 ICKES RD, WOOSTER. OH 44691	Junk cars	
40545 MOUL CAMUTU DD. WEST SALEM OU 44267	MSW	
10545 WOHLGAMUTH RD., WEST SALEM. OH 44267	Tires	
10272 ROHRER RD., ORRVILLE. OH 44667	MSW	
1541SSALT CRK RD	MSW	
MARKET ST (BARN) 5. OF Cemetary Mt. EATON, OH 44659	MSW	
6113 WEILERSVILLE RD, SMITHVILLE. OH 44677	MSW	
5968 Kister Rd., WOOSTER. OH 44691	MSW	
	MSW	
1580 SHERCK BLVD, WOOSTER. OH 44691	Tires	
CORNER N WILD CHERRY & SR 604	MSW	
5257 E. STERLING RD., CRESTON. OH 44217	MSW	
72 N. FUNK ROAD, WOOSTER. OH 44591	MSW	
10008 JEFFREY RD., WEST SALEM. OH 44287	MSW	
,	MSW	
2223 SYLVAN ROAD, WOOSTER. OH 44591	Junk Cars	
	Tires	
1128 FOX LAKE ROAD, WOOSTER. OH 44691	MSW	
1931 MYRTA DRIVE, WOOSTER. OH 44691	MSW	
	Junk Cars	
114 S. MAPLE ST., WEST SALEM. OH 44287	MSW	
296 N. MARKET ST., SHREVE, OH 44675	MSW	
104 1/2 BROOKLYN AVE., CRESTON. OH 44217	MSW	
6251 NEWKIRK RD, SHREVE OH 44676	MSW	
119 N. MAPLE ST., CONGRESS Village WEST SALEM. OH 44267	MSW	
	MSW	
227 N. BEVER STREET, WOOSTER, OH 44691	Feces	
2151/2 N. COLUMBUS ROAD, WOOSTER, OH 44691	MSW	
MILLTOWN RD, WOOSTER. OH 44691	MSW	
2846 WOODSIDE DRIVE, WOOSTER. OH 44691	MSW	
4430 FRIENDSVILLE ROAD, WOOSTER, 0H 44/391	MSW	
4226 EGYPT RD., SMITHVILLE, OH 44677	MSW	
10272 ROHRER ROAD, ORRVILLE, OH 44667	MSW	
7447 FOX LAKE ROAD, STERLING. OH 44276	MSW	
6170 FOX LAKE ROAD, SMITHVILLE. OH 44677	MSW	
2639 SHREVE ROAD, WOOSTER, OH 44691	MSW	

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 and Effect of Newly Regulated Waste Streams Response

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 reference year, 693,619 tons of solid waste and excluded waste was direct landfilled at in-District landfills. During this same year, 18,897 tons of solid waste and excluded waste was direct landfilled in facilities outside of the District and 47 tons were disposed directly at out of state facilities. Waste generated outside the District is 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 includes a statement on identification of facilities: The District is identifying all Ohio licensed and permitted solid waste landfill, transfer and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Appendix B Inventories.

2. Facility Closure, Expansion, Establishment Schedule Response

Appendix M shows all in-District landfills and their remaining capacity, all of which far exceed the planning period for this *Plan Update*. Therefore, the District is not aware of any closure activities for any licensed solid waste facilities during the 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.