

# SOLID WASTE MANAGEMENT PLAN

HANCOCK COUNTY SOLID WASTE  
MANAGEMENT DISTRICT

JUNE 2020

PREPARED FOR:  
HANCOCK COUNTY SOLID WASTE  
MANAGEMENT DISTRICT  
3763 COUNTY ROAD 140  
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## HANCOCK COUNTY SOLID WASTE MANAGEMENT DISTRICT

### Solid Waste Management District Information

SWMD Name	Hancock County Solid Waste Management District
Member Counties	Hancock County
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## 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 These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio's outdated solid waste regulatory program and established a comprehensive solid waste planning process.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, protective 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

As a result 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 through a resolution. 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.<sup>1</sup>

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.<sup>2</sup>

#### 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.

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<sup>1</sup>Counties 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.

<sup>2</sup>In 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.

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

The Hancock County Solid Waste Management District was originally created on March 7, 1989. The District is made up of all of Hancock County as well as portions of the City of Fostoria and City of Bluffton that reside in Hancock County. Multiple cities, villages, townships, and unincorporated communities reside in Hancock County, with Findlay being the County Seat.

The centerpiece of the District is the Hancock County Sanitary Landfill which is an environmentally secure solid waste disposal facility. Hancock County Sanitary Landfill is operated in a safe and protective manner for the purpose of handling the solid waste disposal needs of all the residential, commercial, industrial, agricultural, and institutional generators of solid waste within the District.

### 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:

1. The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.
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.
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.
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.
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.
6. The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

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.
8. The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.
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 considered to be 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 and Appendix I for descriptions of the programs the SWMD will use to achieve the nine goals.



## CHAPTER 2 DISTRICT PROFILE

### Purpose

This chapter provides context for the SWMD's solid waste management plan by providing an overview of general characteristics of the SWMD. Characteristics discussed in this chapter include:

The communities and political jurisdictions within the SWMD;  
The SWMD's population in the reference year and throughout the planning period;  
The available infrastructure for managing waste and recyclable materials within the SWMD;  
The commercial businesses and institutional entities located within the SWMD;  
The industrial businesses located within the SWMD; and  
Any other characteristics that are unique to the SWMD and affect waste management within the SWMD or provide challenges to the SWMD.

Understanding these characteristics helps the policy committee make decisions about the types of programs that will most effectively address the needs of residents, businesses, and other waste generators within the SWMD's jurisdiction.

Population distribution, density, and change affect the types of recycling opportunities that make sense for a particular community and for the SWMD as a whole.

The make-up of the commercial and industrial sectors within the SWMD influences the types of wastes generated and the types of programs the SWMD provides to assist those sectors with their recycling and waste reduction efforts.

Unique circumstances, such as hosting an amusement park, a large university, or a coal burning power plant present challenges, particularly for providing waste reduction and recycling programs.

The policy committee must take into account all of these characteristics when developing its overall waste management strategy.

### A. Profile and Political Jurisdiction

#### 1. Counties in the Solid Waste Management District

The Hancock County Solid Waste Management District consists entirely of Hancock County although portions of the City of Fostoria and the Village of Bluffton are located in Seneca County and Allen County, respectively. Thus, the population of the District has been adjusted to exclude the populations of the portions of Fostoria and Bluffton located within Hancock County.

#### 2. County Overview

Hancock County is located in Northwest Ohio. Named for John Hancock, the first signer of the Declaration of Independence, It was created in 1820 and later organized in 1828. The county seat is Findlay which is the county's largest population center with 41,202 residents in 2010. Hancock County experienced a 4.9% increase in population between 2000 and 2010. An average of 141 people live in each of Hancock County's 534 square miles.

Hancock County is heavily rural, with urban areas comprising just 0.05% of the county's land mass. Farming and agriculture are prevalent in the rural area of the county and manufacturing and

distribution are common industries in the urban areas. The median income for a household in the county was \$43,856, and the median income for a family was \$51,490. About 7.5% of the population were living below the poverty line at that time.

## B. Population

### 1. Reference Year Population

According to the Ohio Department of Development's Office of Strategic Research, the population of Hancock County in 2016 was 72,941 people, as obtained from the 2010 U.S. Census.

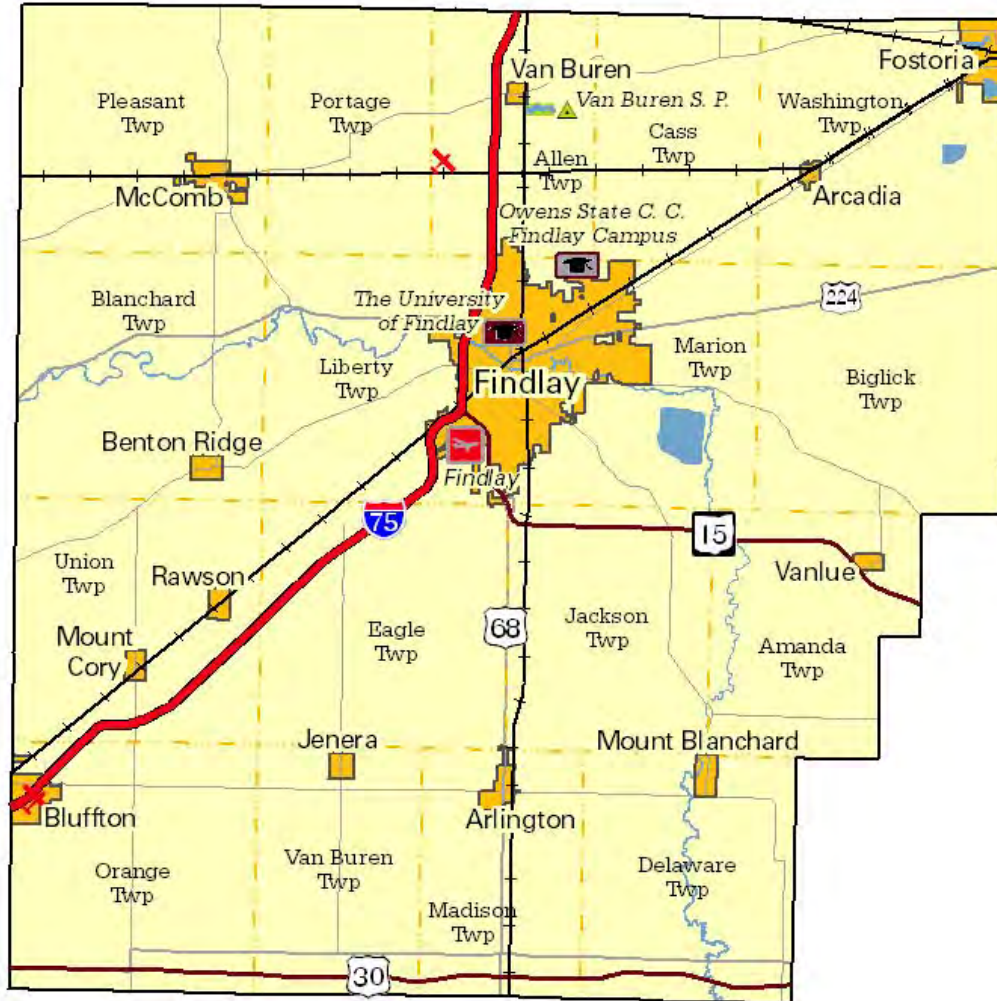
Ohio law requires that the entire population of a municipality or village that straddles solid waste management district boundaries be considered in the population estimate for the district where the majority of the population of the municipality or village resides. There are two communities that are located partially within the District and partially in other solid waste management districts. Portions of the City of Fostoria and the Village of Bluffton are located in Seneca County and Allen County, respectively. Thus, the population of the District has been adjusted to exclude the populations of the portions of Fostoria and Bluffton located within Hancock County.

As stated previously, the total population of Hancock County was 72,941 people. According to the 2010 U.S. Census, the populations of the portions of Fostoria and Bluffton that are located within Hancock County were 2,120 and 909 people, respectively.

### 2. Population Distribution

Cities	Population	Villages	Population	Townships	Population	
					Incorp	Unincorp
Findlay	41,202	Arcadia	590	Allen	328	2,205
Fostoria	13,441	Arlington	1,455	Amanda	359	665
		Benton Ridge	299	Biglick		1,106
		Bluffton	4,125	Blanchard	299	824
		Jenera	221	Cass		993
		McComb	1,648	Delaware	492	793
		Mount Blanchard	492	Eagle		1,084
		Mount Cory	204	Jackson		1,065
		Rawson	570	Liberty		6,660
		Van Buren	328	Madison		844
		Vanlue	359	Marion		2,759
				Orange	173	1,175
				Pleasant	1,648	823
				Portage		692
				Union	774	1,009
				Van Buren	221	694
				Washington	3,522	918
Total	54,643		10,291		7,816	24,309

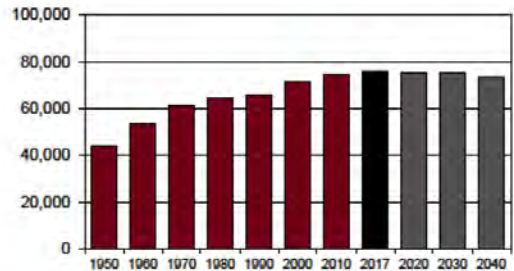
The largest political jurisdiction in Hancock County is Findlay which has 41,202 people and accounts for 56% of the Hancock County population. Approximately 75% of the county's population is located within the borders of a city and 14% are located within one of the villages. The remaining 11% of the population resides in the unincorporated portions of the townships.



### 3. Population Change

#### Total Population

Census		Estimated	
1800		2012	75,443
1810		2013	75,516
1820		2014	75,189
1830	813	2015	75,493
1840	9,986	2016	75,590
1850	16,751	2017	75,754
1860	22,886	<b>Projected</b>	
1870	23,847	2020	75,330
1880	27,784	2030	75,140
1890	42,563	2040	73,500
1900	41,993		
	1910	37,860	
	1920	38,394	
	1930	40,404	
	1940	40,793	
	1950	44,280	
	1960	53,686	
	1970	61,217	
	1980	64,581	
	1990	65,536	
	2000	71,295	
	2010	74,782	



Data from Ohio Development Services Agency  
<https://development.ohio.gov/files/research/C1033.pdf>

The population data from ODSA indicates that the population of Hancock County peaked in 2010, and has held fairly constant since that time. The population projections for the county indicate a slight decrease. Similar data from the same source indicates that the overall population of Ohio has steadily increased since 1950 and is projected to level off in the coming years.

**4. Implications for Solid Waste Management**

With the population on a slow decrease, there is an assumption that recycling within the commercial/institutional and industrial sector will also decrease. Through calculations it appears that the commercial/instructional and industrial recycling will increase at a slow rate and then stabilize in 2021. The rate then appears to remain constant until the next planning period. This slow increase and then stabilization does not appear to impact the management of solid waste or recycling programs. The District does not anticipate problems meeting the needs of the population.

**C. Profile of Commercial and Institutional Sector**

The economy of Hancock County consists primarily of manufacturing with approximately 10,553 jobs; healthcare and social assistance with approximately 4,520 jobs; and retail with approximately 4,316 jobs. (<https://datausa.io/profile/geo/hancock-county-oh/>).

According to the Findlay 2016 Comprehensive Annual Financial Report (CAFR), the following companies are the top employers in the city:

<b>Company</b>	<b># of Jobs</b>
1. Whirlpool	2,400
2. Marathon Petroleum	2,200
3. Blanchard Valley Regional Health Center	2,025
4. Cooper Tire & Rubber Company	2,000
5. Nissin Brake	936
6. Findlay City Schools	872
7. Lowe's Distribution Center	697
8. The University of Findlay	650
9. Hancock County	469
10. Roki America	458

The economic growth appears to remain relatively flat through the planning period.

## CHAPTER 3 WASTE GENERATION

### Purpose of Chapter 3

This chapter of the solid waste management plan provides a summary of the SWMD's historical and projected solid waste generation. The policy committee needs to understand the waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the policy committee 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 SWMD's policy committee 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. To calculate how much waste was generated, the policy committee added the quantities of waste disposed of in landfills and reduced/recycled.

The SWMD's policy committee obtained reduction and recycling data 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 policy committee relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, the policy committee gets only a partial picture of recycling activity. How much data the policy committee obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

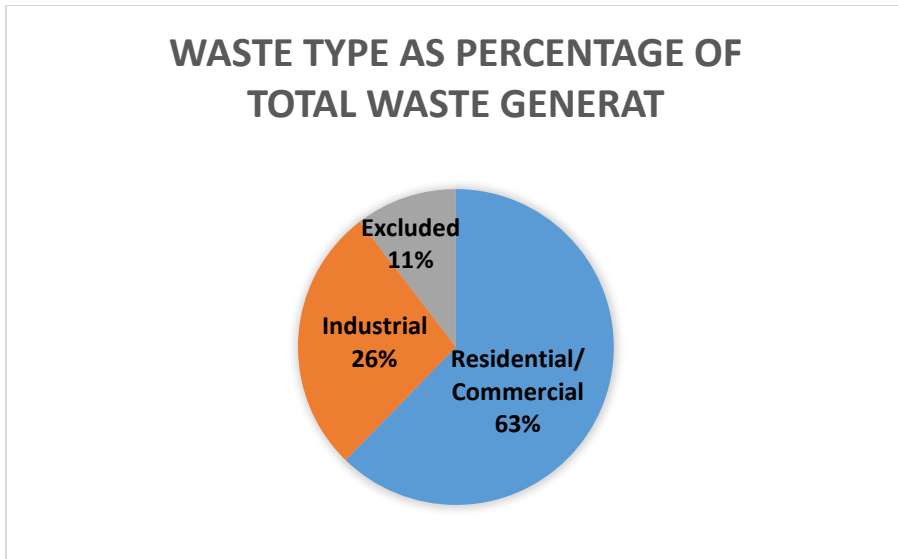
The policy committee obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities submit annual reports to Ohio EPA. In these reports, owners/operators summarize the types, origins, and amounts of waste that were accepted at their facilities. Ohio EPA adjusts the reported disposal data by adding in waste disposed in out-of-state landfills.

The policy committee 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 Solid Waste Generated in the Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	114,664
Industrial	48,168
Excluded	19,528
Total	182,360



Source(s) of Information: Annual District Report 2016; Ohio EPA website

#### 1. Residential/Commercial Waste Generated in Reference Year

The 114,000 tons of residential and commercial waste generated in Hancock County during 2016 is calculated based on the tonnage of municipal solid waste accepted at transfer stations, disposed of through direct haul at a landfill, and recycled through the various programs that are tracked by the Hancock County SWMD.

Based on the 2016 Facility Data Report compiled by Ohio EPA in 2016, there were six landfills that reported direct haul acceptance of 76,235 tons of municipal solid waste generated in Hancock County. The Ohio EPA's 2016 Facility Data Report also listed one transfer stations that reported acceptance of one ton of municipal solid waste generated in Hancock County for transfer and disposal.

The Hancock County Landfill accepted the largest portion of direct hauled waste, 75,938 tons or 99.6%. The remaining waste direct hauled to a landfill went to County Environmental of Wyandot (Wyandot County), Wood County Landfill (Wood County), Evergreen Recycling & Disposal Facility (Wood County), Sunny Farms Landfill (Seneca County), and Arden Landfill (Washington County, Pennsylvania). The Waste Management of Ohio Transfer Station in Lima, Ohio reported one ton of Hancock County municipal solid waste accepted for transfer and disposal.

The remaining 38,428 tons of municipal solid waste generated in Hancock County in 2016 were recycled by the commercial establishments in the County and through the various programs established by the Hancock County SWMD. The recycled waste was tracked through the 2016 Hancock County SWMD Annual District Report surveys and the Ohio EPA's Commercial Business Report. The three types of material that made up the largest portion of commercial waste recycled were wood (38%), yard waste (34%) and corrugated cardboard (17%).

#### 2. Industrial Waste Generated in Reference Year

In 2016, 48,168 tons of industrial solid waste was generated in Hancock County. This figure is calculated based on the tonnage of industrial solid waste accepted at transfer stations, disposed of through direct haul at a landfill and recycled by the industries generating them and tracked by the Hancock County SWMD.

Based on the 2016 Facility Data Report compiled by Ohio EPA in 2016, there were four landfills that reported direct haul acceptance of 11,170 tons of industrial solid waste generated in Hancock County. The Hancock County Landfill accepted the largest portion of direct hauled industrial waste, 10,273 tons or 92%. The remaining 8% of industrial waste was direct hauled to the County Environmental of Wyandot (Wyandot County), Evergreen Recycling and Disposal Facility (Wood County) and a landfill in Indiana. No Industrial solid waste was managed through a transfer station.

The remaining 36,998 tons of industrial waste generated in Hancock County in 2016 were recycled by the generators. These tonnages were reported to the Hancock County SWMD through the 2016 Hancock County SWMD Annual District Report surveys. The two material that made up the largest portion of commercial waste recycled were nonferrous metal (52%) and ferrous metal (47%).

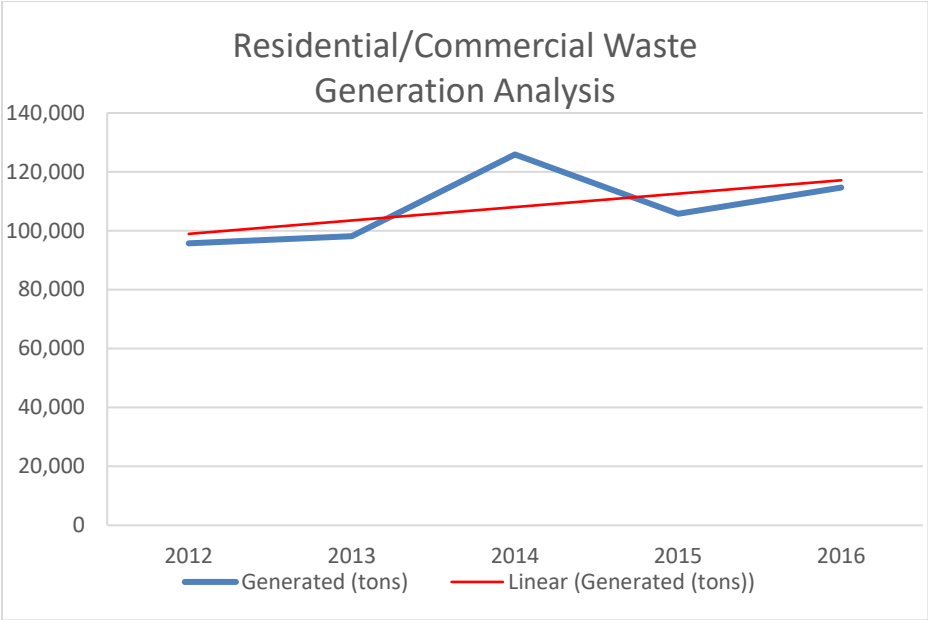
**3. Excluded Waste Generated in Reference Year**

In 2016, there were 19,528 tons of excluded waste generated in Hancock County. 97% of this material was disposed of at the Hancock county Landfill. Construction and demolition debris made up the vast majority of the exempt waste and was generated due to a program implemented by the City of Findlay to remove structures from the floodplain of the Blanchard River.

**B. Historical Waste Generated**

The period reviewed for historic waste generation includes our reference year (2016) and the four prior years (2012 – 2015). Where appropriate additional data back to 2010 was also used in the historic review period.

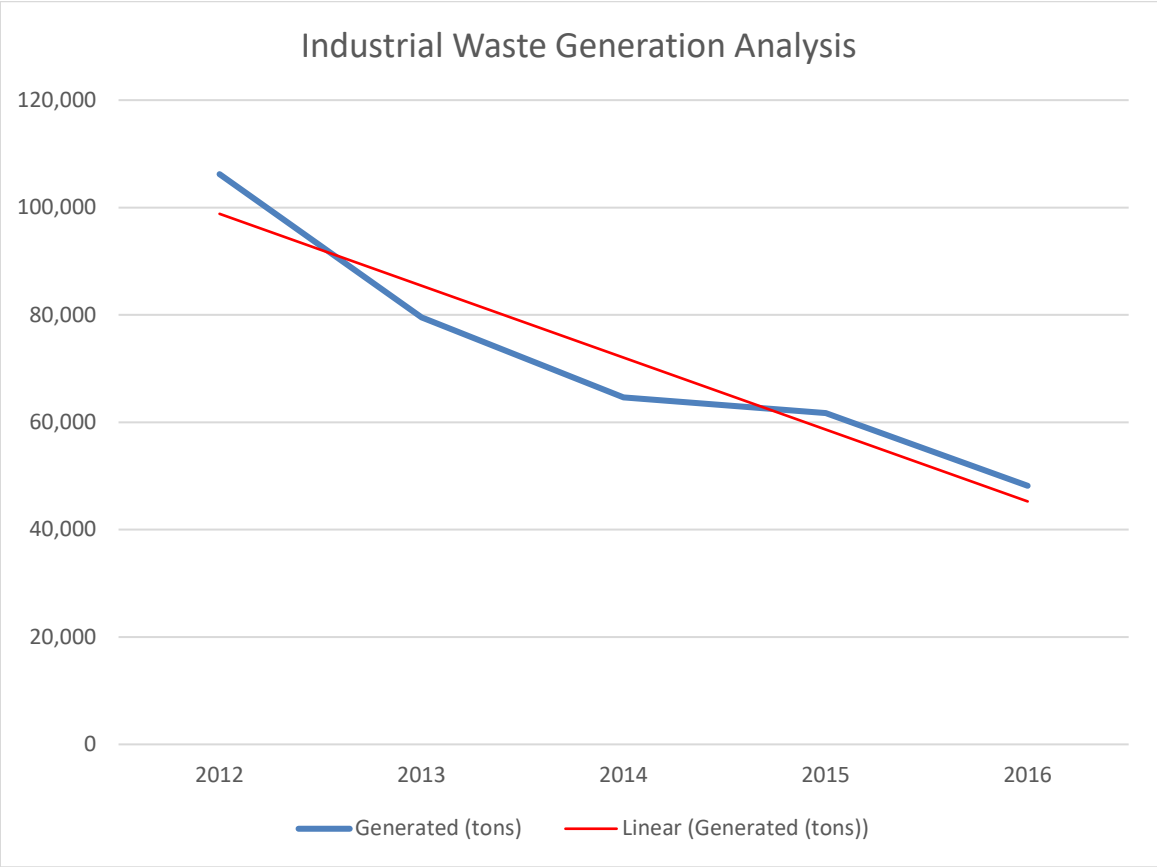
**1. Historical Residential/Commercial Waste Generated**



The data representing the generation of residential/commercial waste in Hancock County shows a slight upward trend through the review period (114,000 to 125,000). This is about a 2% average

increase each year. The population change through the review period is very flat. The trend for recycling represented by the residential/ commercial sector data is also very flat for the review period. Finally, the disposal rate for the residential/commercial sector has increased through the review period by an average of approximately 1.5% each year. These trends would imply that the additional waste generated is being disposed in the landfill. While the data shows that landfill disposal is up, Hancock County SWMD believes that there is additional recycling occurring in the county that is not being reported. Throughout this planning period, the District intends to work to increase the amount of data collected from businesses and recyclers located in Hancock County.

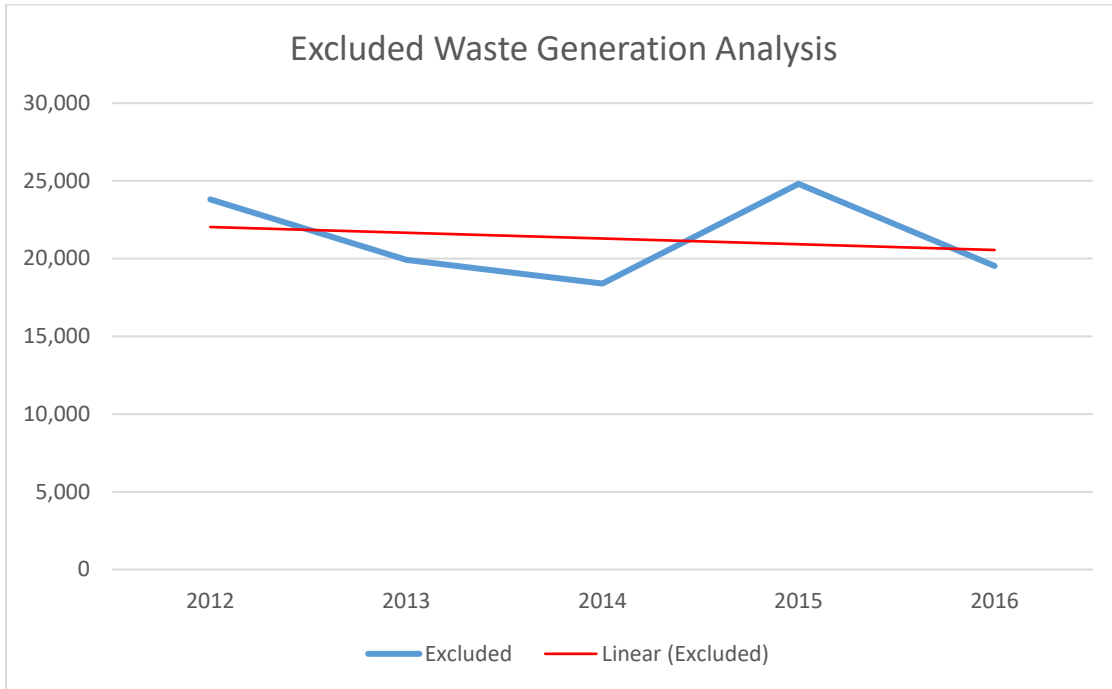
**2. Historical Industrial Waste Generated**



The data collected during the review period shows that the industrial waste generation in Hancock County is on a decreasing trend. Both the rates of disposal and recycling are trending in a downward direction. The Hancock County SWMD believes that the industrial sector recycling rate has likely not dropped as much as the data indicate, but feel that there are businesses that have not reported recycling numbers in recent years. So likely the generation rate is slightly higher than what is currently being predicted.



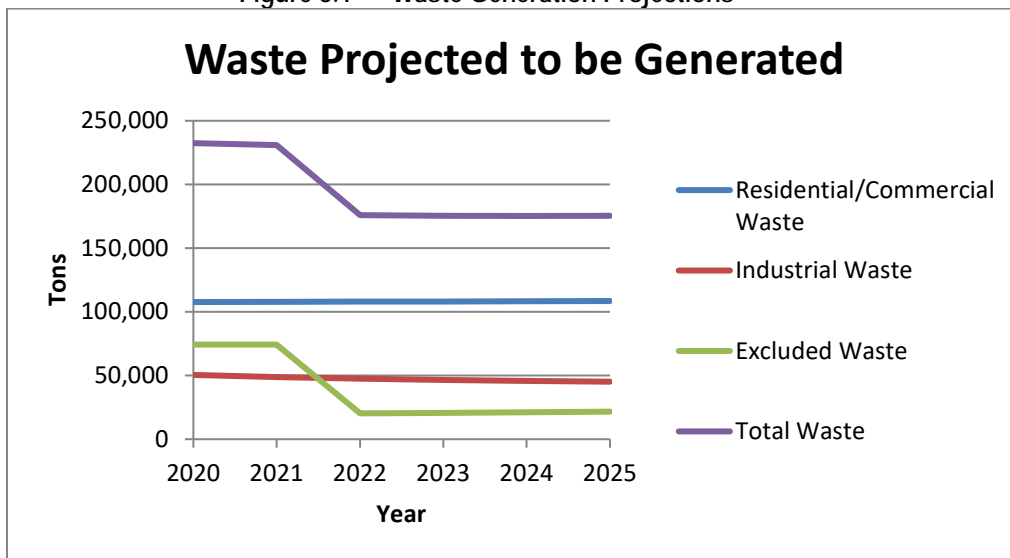
### 3. Historical Excluded Waste Generated



The excluded waste generated in Hancock County has slowly decreased through the review period. The excluded waste reported is identified as construction & demolition debris as well as exempt waste. The majority of the exempt waste from the review period has been from demolition projects in the City of Findlay. The city is currently working to clear structures that have been damaged from past floods or are in the floodplain and need to be removed to facilitate future flood mitigation projects.

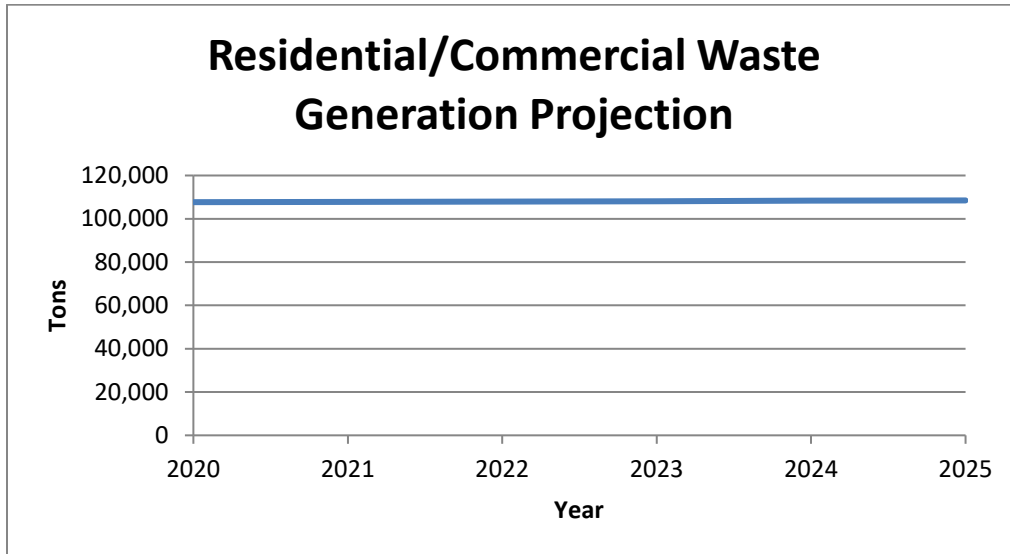
### C. Waste Generation Projections

Figure 3.1 Waste Generation Projections



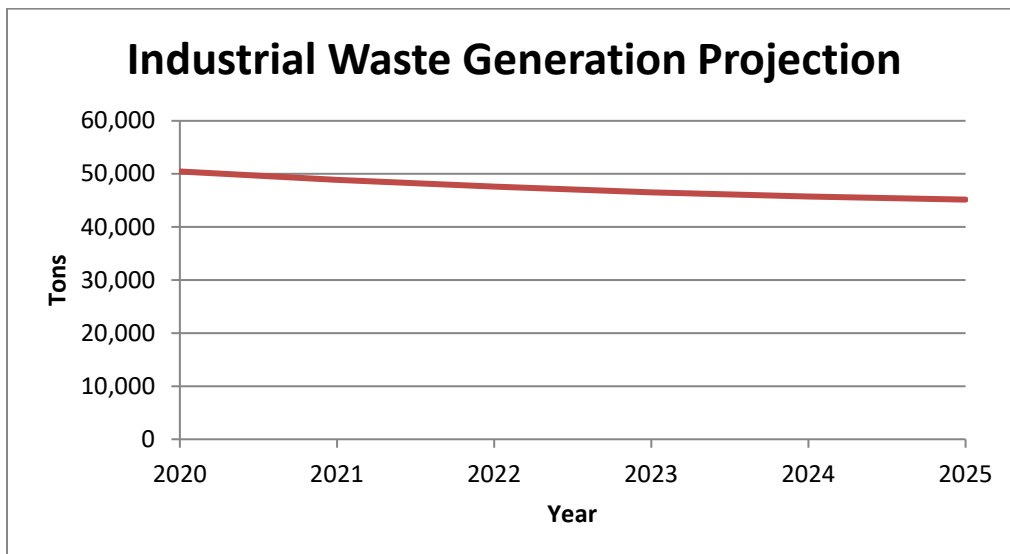
Source(s) of Information: Annual District Report 2016; Ohio EPA website

1. Residential/Commercial Waste Projections



During the review period, we saw a slight increase in the amount of residential/commercial waste generated. Specifically the amount of residential/commercial waste being landfilled increased; however, the amount being recycled was constant. Projecting into the future, both disposal and recycling rates are expected to increase. This is anticipated to result in a small but regular increase in the generation of residential/Commercial waste throughout the planning period.

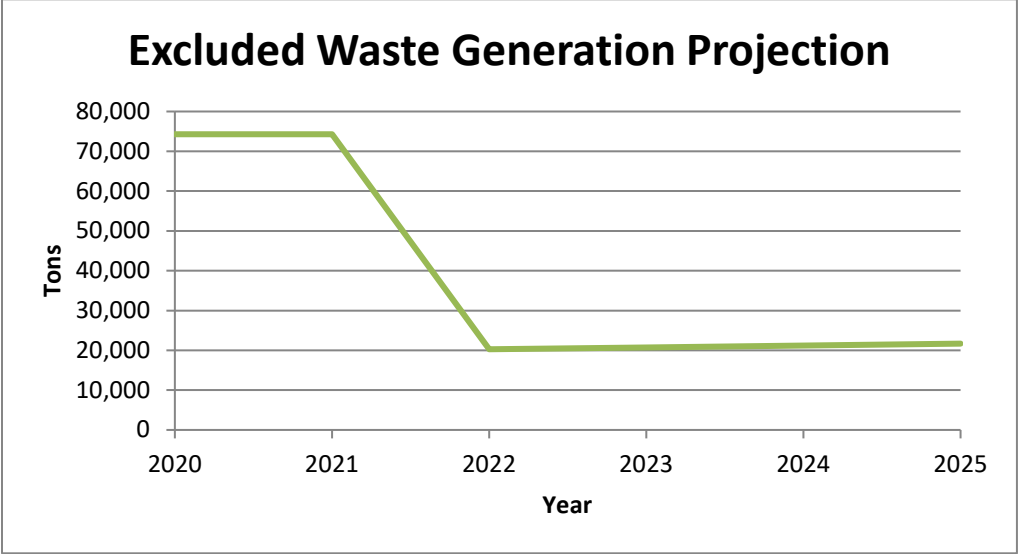
2. Industrial Waste Projections



Through the planning period, the Hancock County SWMD is assuming that the industries in Hancock County will grow and the industrial waste disposal will grow as a result. Because of the data collected during the review period shows a decline in industrial recycling the District is planning for a decline in the rate of industrial wastes that are recycled. The District's main focus to

correct this predicted decline will be to focus on data collection. The District believes that the industrial sector is recycling and continues to recycle more material than what has been reported.

3. Excluded Waste Projections



The data collected during the review period for excluded waste was skewed by the demolition projects that the City of Findlay has been completing as part of the flood mitigation along the Blanchard River. To account for the material generated from these projects, the Hancock County SWMD has assumed that the excluded waste generation will be held constant for the first years of the planning period and then drop to a generation rate that is more in line with the rate prior to Findlay's demolition projects.

## CHAPTER 4 WASTE MANAGEMENT

### Purpose of Chapter 4

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.

To ensure that the SWMD has access to facilities, the solid waste management plan identifies the facilities the policy committee 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 policy committee 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 get 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 as 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 Hancock County is managed by three major categories: recycling, composting, and landfilling. Some waste is managed through transfer stations, but it is minimal. These methods of waste management are anticipated to continue handling the District's waste throughout the planning period. Table 4-1 shows the projections for each management method for the first six years of the planning period and indicates that disposal will continue to comprise the largest category.

**Table 4.1 Methods for Managing Waste**

Year	Generate <sup>1</sup>	Recycle <sup>2</sup>	Compost <sup>3</sup>	Transfer <sup>4</sup>	Landfill <sup>5</sup>
2020	182,360	60,674	14,752	1	106,934
2021	232,428	56,023	9,954	2	166,450
2022	231,014	53,522	9,954	2	167,536
2023	175,856	51,231	9,954	1	114,670
2024	175,431	49,134	9,954	1	116,342
2025	175,261	47,215	9,954	1	118,091

<sup>1</sup> "Generate" represents the total of the other four columns.

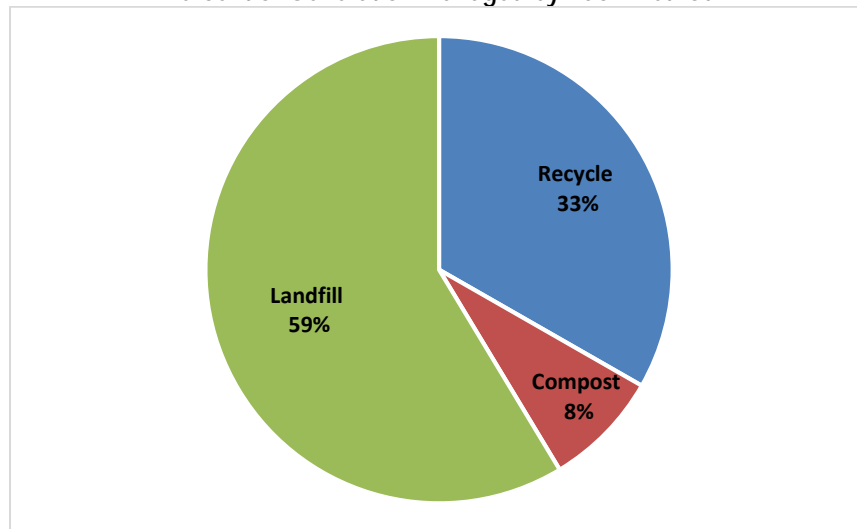
<sup>2</sup> "Recycle" is the total amount reduced and recycled minus composting.

<sup>3</sup> "Transferred" is the amount sent to transfer stations prior to delivery to a landfill.

<sup>4</sup> "Landfilled" plus the "Transferred" amount equals the total disposal.

The following pie chart shows that recycling as a percentage of total generation for 2020 is projected to be 35%; composted material as a percentage of the total generation is projected to be 8%; and the remaining materials that are landfilled are projected to be at 57% of the total generation.

**Percent of Generation Managed by Each Method**



By 2025, recycling as a percentage of total generation is projected to decrease to 27 percent and compost is projected to decrease to 6 percent. The tonnage sent directly to landfills for disposal is projected to increase to 67 percent of total generation.

**B. Profile of Waste Management Infrastructure and Solid Waste Facilities used in the Reference Year**

The Hancock County SWMD has one solid waste landfill Hancock County. There multiple composting and recycling facilities located in the county. All the facilities used by the District during 2016 are discussed below.

**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 (2016) are shown in Table 4-2 below. This table

illustrates that the majority (98%) of the direct hauled waste was disposed at the Hancock County Landfill, which is publicly available and publicly owned. The Hancock County Landfill had 33.8 years of remaining capacity at the end of 2016. The eight other Ohio landfills that accepted Hancock County waste through direct haul had a combined capacity of 372 years at the end of 2016 and are identified below. Two out of state landfills also reported receiving a small amount of Hancock County waste.

**Table 4.2 Landfill Facilities Used by the District in the Reference Year**

Facility Name	Location		Waste Accepted from the SWMD			
	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Celina Sanitary Landfill	Mercer	Ohio	-	0	10	10
County Environmental of Wyandot	Wyandot	Ohio	128	823	216	1,167
Wood County Landfill	Wood	Ohio	4	-	-	4
Evergreen Recycling & Disposal	Wood	Ohio	130	39	29	198
Sunny Farms Landfill LLC	Seneca	Ohio	13	-	181	194
Suburban Landfill, Inc.	Perry	Ohio	-	0	-	0
Port Clinton Landfill, Inc.	Ottawa	Ohio	-	-	3	3
Hancock County Sanitary Landfill	Hancock	Ohio	75,938	10,273	19,085	105,296
Defiance County Sanitary Landfill	Defiance	Ohio	-	-	4	4
Arden Landfill	Washington	Pennsylvania	23	-	-	23
Indiana		Indiana	-	35	-	35
<b>Total</b>			<b>76,235</b>	<b>11,170</b>	<b>19,528</b>	<b>106,934</b>

## 2. Transfer Facilities

In 2016, there was minimal waste from Hancock County sent to a transfer station. Because the Hancock County Landfill is the designated facility for the District, it is uncommon for waste to be sent to a transfer facility.

## 3. Compost Facilities

Four different composting facilities accepted Hancock County waste and are identified below in Table 4.3.

**Table 4.3 Composting Facilities Used by the District in the Reference Year**

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
City of Findlay Broad Avenue	Class IV	Y	330 N. Court Street Findlay, Ohio	0	4,887	4,887
Findlay Warehousing Company	Class IV	Y	8556 County Road 140 Findlay, Ohio	0	6,152	6,152
City of Fostoria	Class IV	Y	213 South Main Street Fostoria, Ohio	0	1,865	1,865
Hirzel Farms	Class II	Y	2422 SR 105 Pemberville, Ohio	1,470	379	1,849
<b>Total</b>				<b>1,470</b>	<b>13,282</b>	<b>14,752</b>

#### 4. Processing Facilities

The Hancock County SWMD operates Litter Landing. Litter Landing is where all of the recyclables collected by the district are sorted and processed. In addition to Litter Landing H&O Recycling in Findlay operates a processing facility

#### 5. Other Waste Management Facilities

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

### C. Solid Waste Facilities Used in the Planning Period

In general, the Hancock County SWMD 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. The Hancock County Landfill which received the majority of District-generated waste during 2016 is estimated to have more than 20 years remaining capacity.

Transfer stations have managed little of the District's waste in past years. The Hancock County SWMD does not anticipate any increase in the use of transfer stations to manage District waste.

The amount of materials composted throughout the planning period is expected to increase. However, the projected increase should not be significant. The number of operating composting facilities processing the majority of yard waste from Hancock County is not expected to change, and composting facility capacity should remain adequate throughout the planning period.

### D. Siting Strategy

#### Purpose of the Siting Strategy

As explained earlier, 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.

Although unlikely, the policy committee can conclude that that it is in the SWMD's best interest to construct a new solid waste landfill facility to secure disposal capacity. In that situation, Ohio law requires the policy committee to develop a strategy for identifying a suitable location for the facility. That requirement is found in [Ohio Revised Code Section 3734.53\(A\)\(8\)](#). This strategy is referred to as a siting strategy. The policy committee must include its siting strategy in the solid waste management plan. If this solid waste management plan includes a siting strategy, then that strategy is summarized in this chapter and presented in full in Appendix S.

The Hancock County SWMD does not plan to site, build or finance any new public or private solid waste transfer or disposal facilities during the planning period to serve Hancock County's needs.

If a private owner decides to site a waste disposal facility or transfer station in Hancock County which requires a permit, the Hancock County SWMD will review the permit applications that are submitted to Ohio EPA and will actively participate in the public review and comment process. The Hancock County SWMD has chosen not to include a siting strategy in this plan because the District does not believe that it has the necessary authority to approve or deny facility siting.

The Hancock County SWMD does not believe that a formal siting process is necessary for facilities that do not require solid waste facility permits, like recycling facilities. These facilities are subject to local zoning and building regulations and should be treated like other manufacturing and processing facilities.

## E. Designation

### Purpose of 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.

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

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

Once the board of directors designates facilities, only designated facilities can take the SWMD's waste. That means, 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 in a situation where, 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 how long the board has to make a decision on a waiver request.

If the board of directors designates facilities, then the next section will provide a summary of the designation process and Table 4-6 will list currently designated facilities.

### 1. Description of the SWMD's Designation Process

#### Authorization Statement to Designate

The Board of Directors of the Hancock County Solid Waste Management District is hereby authorized to establish facility designations in accordance with ORC Section 343.014 of the Ohio Revised Code after this plan has been approved by the director of the Ohio Environmental Protection Agency.

#### Description of the SWMD's Designation Process

Decisions regarding designation or the granting of a designation waiver shall be made by the District, following a review of the request by the Board of Directors.

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(l)(2). The Board of



Directors will evaluate each request for designation or waiver based upon, at least, the following general criteria:

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

**List of Designated Facilities**

At the present time the Hancock County Solid Waste Management District has designated the Hancock County Landfill to be the landfill that is to manage Hancock County waste. The Hancock County SWMD reserves the right to designate additional facilities.

## CHAPTER 5 WASTE REDUCTION AND RECYCLING

### Purpose of Chapter 5

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

Between 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. These programs and services collectively represent the SWMD's strategy for furthering reduction and recycling in its member counties.

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 SWMD'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 SWMD 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/how well is it performing?
- What is the SWMD'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).

The Hancock County SWMD believes that the highest priorities identified during this Plan Update process were to continue implementation of all existing programs, work with local businesses and industry to improve the annual survey responses and enhance its education, awareness and outreach programs. The District reserves the right to ensure the implementation of these programs and initiatives first and before all other secondary new programs or initiatives. The Hancock County SWMD also realizes that the existing staff resources and budgetary constraints are limited and can also be a reason that certain newly identified programs or initiatives may or may not be implemented. This explains why many of the newly identified programs and initiatives contained in Appendix I and this Chapter may be designated as "considered for implementation" versus "will be implemented".

### A. Program Evaluations and Priorities

#### 1. Strategic Analysis

All existing Hancock County SWMD programs have been evaluated qualitatively in terms of the suggestions included within Ohio EPA's guidance document (i.e., Format v4.0), and the strengths

and weaknesses identified for each program. For programs which have data available, quantitative evaluations were incorporated, also. The District conducted additional analyses for subject areas or issues not necessarily related to an existing program where appropriate.

The following table 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, and recycling provided through special collections.

#	Section Name	Subsection	District Program or Topic Name/Description
1	Residential Recycling Infrastructure Analysis	A. Drop-off Recycling	<i>Drop-off Recycling for Publicly Available Sites</i>
		B. Curbside Recycling	<i>City of Findlay subscription Curbside Recycling Program</i>
			<i>City of Arlington subscription Curbside Recycling Program</i>
			<i>Village of Benton Ridge subscription Curbside Recycling Program</i>
			<i>Village of Van Buren subscription Curbside Recycling Program</i>
			<i>Tons Recovered</i>
C. Special Collections	<i>Litter Landing</i>		
2	Commercial/Institutional Sector Analysis		
3	Industrial Sector Analysis		
4	Residential/Commercial Waste Composition Analysis		
5	Economic Incentive Analysis		
6	Restricted and Difficult to Manage Waste Streams	A. Scrap Tires	
		B. HHW	
		C. Lead-Acid Batteries	
		D. Appliances	
7	Diversion Analysis	A. Residential/Commercial Sector	
		B. Industrial Sector	
8	Special Program Needs Analysis		
9	Financial Analysis	A. Revenues	
		B. Expenditures	
		C. Balances	
10	Regional Analysis		
11	Population Analysis		
12	Data Collection Analysis	A. Data Reporting Program	
13	Education/Outreach Analysis		
14	Recyclable Material Processing Capacity Analysis		

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

- The locations of drop-offs to determine if the current number of sites is adequate and convenient for residents in each city, village, and township;
- The types of materials accepted at each drop-off;
- The operation of the drop-off program;
- The education and awareness efforts used to inform residents how to use the program effectively.

## 2. Conclusions and Priorities

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

After compiling a list of all the existing programs and the new initiatives, the District staff and the Board of Directors employed a ranking system to prioritize solid waste management efforts within Hancock County. Each existing program and new initiative were ranked from 1 to 5 based upon its importance and feasibility/ease of implementing. All programs and initiatives with a ranking of “4” or “5” are recommended for implementation, as well as some with a ranking of “3.” All others are not recommended at this time.

The ranking process recommends that all existing programs be continued through the planning period associated with this Plan Update (2020 – 2034). Several new initiatives are also recommended for potential implementation, and are listed in the following table. For a complete listing of all existing programs and initiatives, including those with a ranking of “1”, “2”, or “3”, see Appendix I. In many cases, the new initiatives are intended to address problems identified for an existing program, or to enhance an existing program.

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

Program Category	Action or Program Name	District Priority	Policy Committee Decision
<b><i>Residential Recycling Infrastructure</i></b>			
Curbside Recycling Services	Continue existing programs	3	Implement
	Facilitate implementation of non-subscription curbside collection in villages and townships	3	Implement for communities that are interested
	Facilitate the formation of collection consortiums	3	Implement for communities that are interested
Drop-off Recycling: Publicly-Available Sites	Continue existing program	5	Implement
	Minimize contamination and littering	3	Not a concern at this time
<b><i>Commercial/Institutional Sector Reduction/Recycling</i></b>			
Drop-off Recycling	Continue existing program	4	Implement
Education/Awareness	Continue existing program	5	Implement
<b><i>Industrial Sector Reduction/Recycling</i></b>			
Recycling Center Access	Continue existing program	4	Implement

Program Category	Action or Program Name	District Priority	Policy Committee Decision
Waste Assessments and Audits	Continue existing program	5	Implement
<b><i>Restricted/Difficult to Manage Wastes</i></b>			
Scrap Tires	Continue existing program	4	Implement
	Explore ways of reducing collection event costs	4	Implement
	Encourage residents to turn in old tires at dealers	4	Implement
HHW	Continue existing program	4	Implement
	Explore collection options for HHW materials not accepted locally	4	Implement
Lead Acid Batteries	Continue existing program	5	Implement
E-Waste	Continue existing program	5	Implement
	Watch for sustainable options for collection of TVs	5	Implement
	Evaluate cost containment options	4	Implement
Appliances	Continue existing program	5	Implement
Household Batteries	Continue existing program	3	Implement
Bulk Items	Continue existing program	3	Implement
<b><i>Outreach, Education, Awareness, and Technical Assistance</i></b>			
Covered in Appendix L	See table below		
<b><i>Funding</i></b>			
Funding	Continue existing funding sources	5	Implement
Grants	Promote community development grant to communities and institutions	4	Implement
	Promote market development grant to businesses	4	Implement
<b><i>Economic Incentives</i></b>			
Technical Assistance	Continue existing program	4	Implement
<b><i>Facilities</i></b>			
Recyclables Processing	Continue existing program	4	Implement
<b><i>Data Collection</i></b>			
Data Collection	Contact set number of businesses annually	4	Implement

## B. Program Descriptions

### 1. Residential Recycling Infrastructure

#### *Curbside Recycling Services*

The existing subscription curbside recycling services available to residents of the District in the reference year are expected to continue. The programs are shown below in the following table.

A&E Curbside Services offers the subscription programs. The materials which residents can recycle through curbside collection include:

- paper
- cardboard
- aluminum cans
- steel cans
- glass,
- plastic containers

For additional details regarding these curbside programs, see Appendix B.

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

- Facilitate implementation of non-subscription curbside collection in villages and townships.
- Facilitate the formation of collection consortiums.

***Drop-off Recycling: Publicly-Available Sites***

The drop-off recycling program for publicly-available sites will continue. A map of drop-off recycling sites within Hancock County is shown below as well as a listing of those sites in the following table.



The publicly-available drop-off program includes seven sites categorized as “full-time urban” (one of these is located at the Litter Landing Facility) and twelve sites which are “full-time rural.” All of these locations except the one at Litter Landing are open seven days per week for 24 hours each day. Two additional sites are classified as part-time urban and two as part-time rural.

The District will continue to initiate a program to evaluate adding, removing, or adjusting sites on an ongoing basis. The following table summarizes all the programs and initiatives anticipated for the District’s residential recycling infrastructure at the time of the writing of this plan.

Program	Description	OEPA ID	Start Date	End Date	Goal(s)
<b>Residential Recycling Infrastructure</b>					
<b>Curbside Recycling Services</b>	Subscription Curbside Recycling	Findlay	Ongoing	Ongoing	1,2,7
		Arlington			
		Benton Ridge			
		Van Buren			
Technical Assistance	Encourage implementation of non-subscription curbside collection in villages and townships		As communities show interest	1,2,7	
Technical Assistance	Encourage the formation of collection consortiums as appropriate		As communities show interest	3,4	
<b>Drop-off Recycling</b>	Full Time Urban	50 North Senior Center (Findlay)	Ongoing	Ongoing	1,2,7
		Chamberlain Hill (Findlay)	Ongoing	Ongoing	1,2,7
		Litter Landing (Findlay)	Ongoing	Ongoing	1,2,7
		Hancock County Education Service Center (Liberty Township)	Ongoing	Ongoing	1,2,7
		H&O Services (Findlay)	Ongoing	Ongoing	1,2,7
		H&O Services – Kroger (Fostoria)	Ongoing	Ongoing	1,2,7
		H&O Services – Red Hawk Run (Findlay)()	Ongoing	Ongoing	1,2,7
	Part-Time Urban	First Presbyterian Church (Findlay)	Ongoing	Ongoing	1,2,7
		Trinity Lutheran Church (Findlay)	Ongoing	Ongoing	1,2,7
	Full-Time Rural	Allen Township - Village of Van Buren	Ongoing	Ongoing	1,2,7
		Amanda Township - Village of Vanlue	Ongoing	Ongoing	1,2,7
		Biglick Township - Township Hall	Ongoing	Ongoing	1,2,7
		Blanchard Township - Benton Ridge Village	Ongoing	Ongoing	1,2,7
		Delaware Township - Riverdale School	Ongoing	Ongoing	1,2,7
		Delaware Twp - Village of Mount Blanchard	Ongoing	Ongoing	1,2,7
		Pleasant Township - Village of McComb	Ongoing	Ongoing	1,2,7
		Portage Township - Township House	Ongoing	Ongoing	1,2,7
		Union Township - Village of Mount Cory	Ongoing	Ongoing	1,2,7
		Union Township - Village of Rawson	Ongoing	Ongoing	1,2,7
		Jackson Township - Township Hall	Ongoing	Ongoing	1,2,7
		Biglick Township - West Independence United Methodist Church	Ongoing	Ongoing	1,2,7
		Part-Time Rural	Mobile Drop Off-Deweyville	Ongoing	Ongoing
	Mobile Drop Off-Madison Township		Ongoing	Ongoing	1,2,7
	Add, remove or adjust sites as needed		2020	2034	1,2,7
	Minimize contamination and littering through additional education and signage		2020	2034	N/A



## 2. Commercial/Institutional Sector Reduction and Recycling Programs

### *Drop-Off Recycling: Small Businesses*

The District accepts drop-off collection for small businesses at Litter Landing. This service is intended to continue and will be evaluated throughout the planning period to determine the need for additional collections or modifications to existing service.

### *Waste Assessments/Waste Audits*

The District will continue to offer waste assessment and waste audits to businesses within the County. No changes are anticipated for this program.

Program	Description	Start Date	End Date	Goal(s)
<i>Collection Service</i>	Hancock County SWMD government and institution collection route. *Although the District plans to continue this service, it is not a required part of this Plan and may substitute drop-off facilities for commercial paper and OCC in conjunction with residential drop-offs in convenient locations for commercial recyclers.	Ongoing	Ongoing	1,2,7
	Add, remove or adjust collection route as needed	Ongoing	Ongoing	1,2,7
<i>Waste Audits and Assessments</i>	Continue providing waste audits and assessments	2020	2034	3,4
	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.	2020	2034	3,4
	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.	2020	2034	3,4

## 3. Industrial Sector Reduction and Recycling Programs

The waste assessment/waste audit program will continue for the industrial sector. The District will implement a follow up process with companies that have completed a waste audit or assessment to determine if any changes in their waste management practices were implemented and what benefits they realized from the changes.

Program	Description	Start Date	End Date	Goals
<i>Waste Audits and Assessments</i> NA	Continue providing waste audits and assessments	2020	2034	3,4
	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.	2020	2034	3,4
	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.	2020	2034	3,4

#### 4. Restricted/Difficult to Manage Wastes

##### ***Yard Waste***

The District anticipates that all of the yard waste programs which operated during the reference year will continue. The existing yard waste programs which will continue include the field spreading of leaves by cities, villages and townships. The District will continue to offer education and information to the public through the website and printed materials regarding yard waste management and composting.

##### ***Household Hazardous Waste***

The District will continue to provide education and information to the public regarding the proper disposal of household hazardous wastes. In addition, the District will continue to collect limited HHW and “difficult to manage waste” at Litter Landing as funds are available.

##### ***Scrap Tires***

The District will continue to offer education and outreach to the public through its website and other means with regard to the proper management of scrap tires. Scrap tire collections will also continue. The District will explore ways of reducing costs for collection events and encourage residents to turn in old tires at dealers when buying new tires.

##### ***Electronic Equipment***

The District will continue to publicize the collection of electronic equipment at Litter Landing. Reduction of collection costs are continuously explored by the District.

##### ***Lead-Acid Batteries***

The District provides information on its website and in paper flyers which list numerous businesses that accept lead-acid batteries. Collection programs and education for residents for proper management of lead-acid batteries will continue at Litter Landing.

##### ***Appliances***

The District will continue to publicize the collection of appliances at Litter Landing. Reduction of collection costs are continuously explored by the District.

Program	Description	Start Date	End Date	Goals
<b><i>Household Hazardous Waste</i></b>	Continue to accept HHW at Litter Landing	Ongoing	Ongoing	3,4
	Education program for HHW, electronics, and lead-acid batteries	Ongoing	Ongoing	3,4
	Limited HHW and “difficult to manage waste” events. *Optional events held to meet identified needs if funds are available.	Ongoing	Ongoing	2,5,7
<b><i>Scrap Tires</i></b>	Tire Collection Day	Ongoing	Ongoing	2,5,7
	Year-round tire collection at Hancock County Landfill	Ongoing	Ongoing	2,5,7
	Encourage residents to turn in old tires at dealers	2020	2034	3,4
<b><i>Electronics</i></b>	Litter Landing Electronics collection	Ongoing	Ongoing	5,7
	Evaluate cost containment options	2020	2034	5,7
<b><i>Lead-Acid Batteries</i></b>	Lead-acid battery collection at local retail and Litter Landing	Ongoing	Ongoing	2,5,7
<b><i>Appliances</i></b>	Appliance collection at Litter Landing; Hancock County Landfill	Ongoing	Ongoing	2,5,7
<b><i>Yard Waste</i></b>	Field spreading of leaves by cities, villages and townships	Ongoing	Ongoing	2,5
	Composting and “don’t bag it” education provided by Hancock County SWMD staff and programs	Ongoing	Ongoing	5

## 5. Funding/Grants

The District will continue to implement their current funding sources and apply for grants as necessary to improve the implementation of the recycling and waste management programs in Hancock County. The District will continue to assist the Hancock County Health Department with funding to offset the cost of implementing their programs to monitor the management of solid waste in Hancock County.

As appropriate, the District will promote community development grants and market development grants to the communities and businesses of Hancock County.

### *Economic Incentives*

The District will communicate with the communities and businesses in Hancock County regarding recycling opportunities or marketing information to which they become aware. Opportunities to partner or foster partnerships that enhance the District's programs will be encouraged.

The District will continue to provide technical assistance to communities and businesses with regard to the design of recycling and waste reduction programs. As part of the technical assistance, the District promotes the use of collection strategies which provide economic incentives encouraging waste reduction.

Program	Description	Start Date	End Date	Goals
<b>Funding/Grants</b>				
<b>Funding</b>	Continue existing funding sources	Ongoing	Ongoing	
	Health Department funding	Ongoing	Ongoing	
<b>Grants</b>	Promote community development grant to communities and institutions	Ongoing	2032	Varies
	Promote market development grant to businesses	Ongoing	Ongoing	3,4
<b>Economic Incentives</b>				
<b>Technical Assistance</b>	Guidelines and methodology for performing waste audits	Ongoing	Ongoing	3,4
	Communicate recycling opportunities, goals and marketing information to industrial, commercial and residential sectors	Ongoing	Ongoing	3,4

## 6. Facilities

The District will continue to operate the Mid-Ohio Recycling Facility throughout the planning period.

## 7. Data Collection

The District collects data each year from entities located both within Hancock County and facilities located outside the County. Disposal data is reported to the District by solid waste facilities which remit fees to the District. The District also receives data from Ohio EPA each year.

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

Appendix H. In addition, the District intends to contact a set number of businesses each year to facilitate data collection and provide technical assistance.

Program	Description		Start Date	End Date	Goals
<i>Data Reporting Program</i>	Annual Surveying	District sends surveys to commercial and industrial businesses annually.	Ongoing	Ongoing	9
	Survey Follow-Up	Contact set number of businesses annually	2020	2034	9

## 8. Outreach, Education, Awareness, and Technical Assistance

### *Web Page*

The District maintains a website to provide many different types of information to the public. The website will continue, and the District will continue to improve the usefulness of the website by improving the ease of its use and evaluating its use.

### *Resource Guide*

Each year and as changes occur, the District updates the Recycling Guide, which is a comprehensive list identifying recycling opportunities for residents and businesses. The guide is available on the website and the District will continue to make printed copies available for distribution at community events and presentations.

### *Education Provider*

During the reference year, the District performed education and outreach activities. These activities included in-school and civic group presentations, organized recycling programs for students, planned and managed recycling facility tours, and participated in special community events, such as hosting a booth at the county fair. These activities are expected to continue and will be enhanced by promoting the availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District's website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.

<i>Outreach, Education, Awareness, and Technical Assistance</i>					
<i>Web Page</i>	District website		Ongoing	Ongoing	3,4
	Track the number of visits to the website.		2020	2034	3,4
	Minimize the website's "down time" by fixing pages that are under construction as quickly as possible.		Website experiences little "down time" repairs made as necessary		3,4
	Include the Recycling Guide online as a downloadable, printable PDF.		Ongoing	Ongoing	3,4
<i>Presentations</i>	Environmental education coordination		2001	Ongoing	3,4
	Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.		2020	2034	3,4

<b><i>Outreach, Education, Awareness, and Technical Assistance</i></b>				
	Begin tracking number of individuals attending each presentation and name of each school so the District can identify number of students and schools reached each year.	2020	2034	3,4
	Request that educators or group leaders complete a feedback form after a presentation has been completed.	2020	2034	3,4
	In-service training for teachers and youth leaders	Ongoing	Ongoing	3,4
	Resource library for teachers and youth leaders	Ongoing	Ongoing	3,4
	Grade appropriate classroom presentations in environmental classroom or in schools	Ongoing	Ongoing	3,4
<b><i>Adopt-a-Road program</i></b>	Continue to operate Adopt-a-Road program	Ongoing	Ongoing	3,4
	Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt- a-Road program.	2020	2034	3,4
	Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.	2020	2034	3,4
<b><i>Educational Displays</i></b>	Continue hosting education displays at fairgrounds and community events	1995	Ongoing	3,4
	Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.	2020	2034	3,4
	Comprehensive resource guide	Ongoing	Ongoing	3,4,5
	Marketing plan updated annually including at minimum a) Materials to be used for public information/education, b) educational displays/exhibits, c) advertising/public service announcements and d) special promotional events/activities.	Ongoing	Ongoing	3,4
	Annually provide one public outreach activity that engages local elected officials and other community leaders designed to increase recycling opportunities for communities	Ongoing	Ongoing	3,4
<b><i>Contests</i></b>	Gage interest in a poster contest in Hancock County Schools	2020	2021	3,4
	If schools/teachers are interested implement the contest. Possible billboard or calendar	2021	as long as interest	3,4
<b><i>Tours</i></b>	The District will continue to host tours at solid waste and recycling facilities.	Ongoing	Ongoing	3,4

***Outreach and Marketing Plan***

The District evaluated the existing education and outreach programs in terms of effectiveness and in the context of the State Plan's minimum requirements for reaching the required target audiences. The following table provides a summary of the evaluation, and shows for instance, that the District's website addresses five of the five target audiences. The District will continue to offer all the existing education and outreach programs to residents of Hancock County.

Existing Programs	Target Audience				
	Residents	Schools	Industries	Institutions & Commercial Businesses	Communities & Elected Officials
Website	✓	✓	✓	✓	✓
Presentations	✓	✓	✓	✓	✓
Contests	✓	✓			✓
Adopt-a Road	✓	✓		✓	
Educational Displays	✓	✓	✓	✓	
Business/Industrial Sector Waste Audits		✓	✓	✓	
<b>Total Program per Group</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>3</b>

***Other Programs***

*Health Department Support*

Hancock Public Health: The District provides funds to the Hancock County Health Department that are intended to help them administer the solid waste program in Hancock County. Areas of the solid waste program that the District helps fund include inspections at the landfill, tire facilities, compost facilities, etc., trash haulers inspection and registration, and dump site investigations.

**C. Waste Reduction and Recycling Rates**

**1. Residential/Commercial Recycling in Hancock County**

Waste reduction and recycling in the residential/commercial sector is expected to increase slightly during the first six years of the planning period based upon the tons collected (see following table).

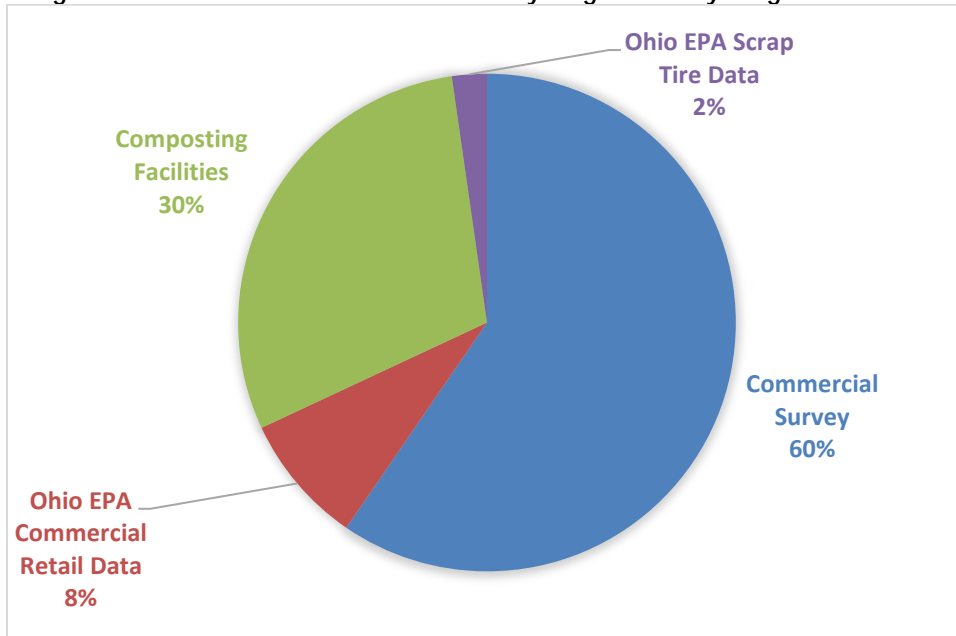
**Table 5.1 Residential/Commercial Waste Reduction and Recycling Rate**

Year	Projected Quantity Collected	Residential/ Commercial WRR <sup>1</sup>
2020	46,978	39%
2021	48,733	40%
2022	50,558	40%
2023	52,455	41%
2024	54,428	42%
2025	56,479	43%

<sup>1</sup>WRR = Waste Reduction and Recycling Rate

The program areas expected to provide the waste reduction and recycling for the amounts shown in the table above are depicted in the following figure. The largest amount of reduction and recycling is projected from the category entitled, "Commercial Survey" which includes recycling data from the businesses in Hancock County gathered by the Hancock County SWMD.

Figure 5.1 R/C Waste Reduction and Recycling in 2018 by Program Area



2. Industrial Recycling in the District

The following table shows the projected amount of waste reduction and recycling for the industrial sector during the first six years of the planning period. Based on the data collected during the review period, the waste reduction and recycling rate is expected to start around 65 percent, which is just under the State Plan industrial sector goal of 66 percent and then decrease each of the subsequent years. The District believes that the industrial sector will actually hold steady or possibly increase to meet the state goal of 66 percent. This will hopefully be the case as the District increases the survey effort associated with the annual district report.

Table 5.2 Industrial Waste Reduction and Recycling Rate

Year	Projected Quantity Collected	Industrial WRR
2020	32,453	64%
2021	29,858	61%
2022	27,470	58%
2023	25,273	54%
2024	23,252	51%
2025	21,393	47%

<sup>1</sup>WRR = Waste Reduction and Recycling Rate

## CHAPTER 6 BUDGET

### Purpose of Chapter 6

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 SWMD's Budget

During the 2016 reference year, the District's overall revenue was \$638,839. In the first year of the planning period (2020), revenue is projected to be \$674,776. Revenue is projected to increase annually to \$698,941 in 2026. Current revenue is generated through disposal fees, generation fees, and recycling revenue.

Projected expenditures were developed based on the programmatic needs identified in Appendix H, I, and L. During the first five years of the planning period, annual expenditures range from approximately \$583,118 to \$668,523. 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 2020 with a carryover balance of approximately \$1,125,029 and end the planning period with a carryover balance of approximately \$1,591,792.

### 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.

## 1. Disposal Fees

In 2016, the District was primarily funded by an existing disposal fee that was structured as follows:

- waste that was generated within the District and disposed at a sanitary landfill located within the District was assessed \$1.50 per ton;
- waste that was generated outside the District but within the State of Ohio and disposed of at a sanitary landfill located within the District was assessed \$3:00 per ton; and
- waste that was generated outside the State of Ohio and disposed at a sanitary landfill located within the District was assessed \$1.50 per ton

(i.e. a disposal fee with a ratio of \$1.50:\$3.00:\$1.50).

Table O-1 presents the District's disposal fee schedule, along with the projected revenue to be collected. The revenue reported for 2012 through 2018 are the actual amounts collected in those years. The amount projected for 2019 is the average of the revenue collected from 2012 to 2018. The amount projected from 2019 forward is based on a calculated annual average percentage change of 5% each year.

**2. Generation Fees**

In 2016, the District was also funded by a generation fee of \$1.50 per ton collected on all solid waste generated within the District and disposed within the State of Ohio. Table O-2 presents the District's generation fee schedule along with the amounts of revenue that are projected to be collected throughout the planning period. The revenue reported for 2012 through 2018 is the actual amount collected in those years. The amount projected for 2019 is the average of the revenue collected from 2012 to 2018. The amount projected from 2019 forward is based on a calculated annual average percentage change of 3% each year.

**3. Fees Collected via Designation Agreements**

Hancock County SWMD does not have any fees collected via designation agreements.

**4. Other Funding Mechanisms**

*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 commodities processed at Litter Landing.

**5. Summary of Revenue**

The following table presents the District's total revenue by source for the 2016 reference year and the first six years of the Plan (2020 to 2025).

**Table 6.1 Summary of Revenue**

Year	Disposal Fees	Generation Fees	Recycling revenue	Total Revenue
Reference Year				
2016	\$238,605	\$159,590	\$238,780	\$638,839
Planning Period				
2020	\$238,291	\$163,441	\$241,888	\$643,620
2021	\$243,057	\$166,710	\$228,100	\$637,867
2022	\$247,918	\$170,044	\$215,099	\$633,060
2023	\$252,876	\$173,445	\$202,838	\$629,159
2024	\$257,934	\$176,914	\$191,276	\$626,124
2025	\$257,934	\$176,914	\$180,373	\$615,221

Source(s) of Information: Plan Tables O-3 and O-5

## 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 anti-littering laws and ordinances.
8. Financial assistance to approved boards of health for operator certification training.
9. Financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.
10. Financial assistance to communities adjacent to and affected by a publicly-owned landfill when those communities are not located within the SWMD or do not host the landfill.

In most cases, 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. Examples include:

- salaries and benefits;
- purchasing and operating equipment (such as collection vehicles and drop-off containers);
- operating facilities (such as recycling centers, solid waste transfer facilities, and composting facilities);
- offering collection programs (such as for yard waste 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 2014 reference year and for the first six years of the planning period (2020 to 2053) broken into specific expense categories.

Table 6.2 Summary of Expenses

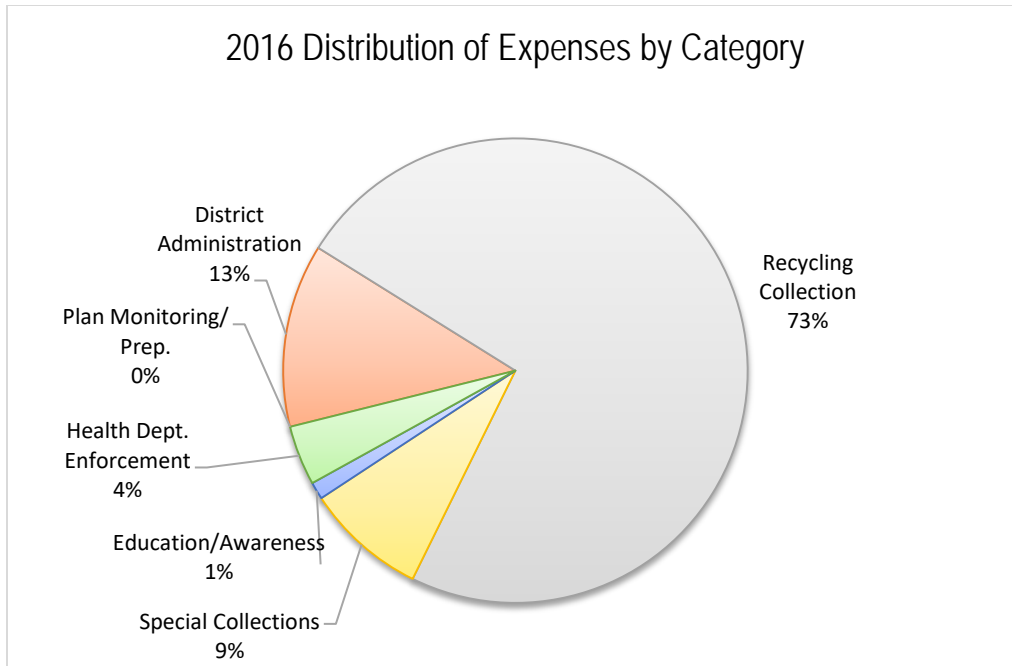
Expense Category	Year						
	Reference	Planning Period					
	2016	2020	2021	2022	2023	2024	2025
Plan Monitoring/Prep.	\$0	\$5,583	\$5,666	\$5,751	\$5,837	\$45,925	\$6,014
Plan Implementation	\$605,035	\$577,535	\$588,482	\$599,638	\$611,009	\$622,598	\$634,409
District Administration	\$76,742	\$44,660	\$45,330	\$46,010	\$46,700	\$47,400	\$48,112
Recycling Collection	\$441,680	\$456,750	\$465,885	\$475,203	\$484,707	\$494,401	\$504,289
Special Collections	\$50,835	\$50,750	\$51,511	\$52,284	\$53,068	\$53,864	\$54,672
Education/Awareness	\$7,259	\$25,375	\$25,756	\$26,142	\$26,534	\$26,932	\$27,336
Health Dept. Enforcement	\$25,000	\$0	\$0	\$25,000	\$0	\$0	\$25,000
Hancock Public Health	\$25,000			\$25,000			\$25,000
<b>Total Expenses</b>	<b>\$630,035</b>	<b>\$583,118</b>	<b>\$594,148</b>	<b>\$630,390</b>	<b>\$616,847</b>	<b>\$668,523</b>	<b>\$665,423</b>

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

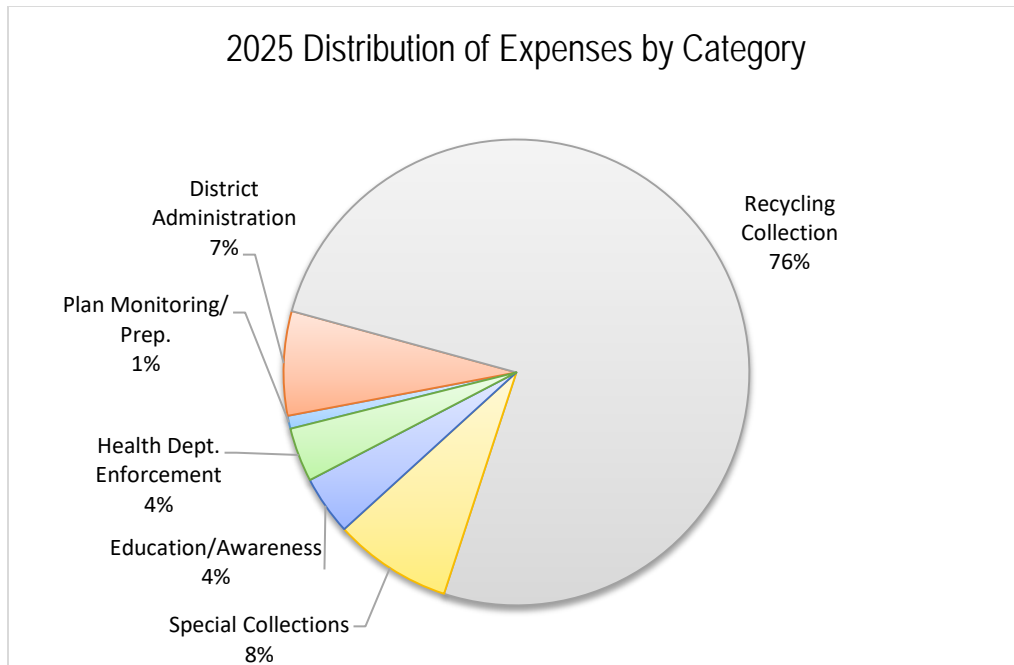
Expense categories in Table 6.2 include the following:

- **Plan Preparation/Monitoring** – Represents expenditures for assistance from consultants with developing solid waste plan updates and preparing the annual district report
- **Plan Implementation includes the following costs:**
  - **Direct Administration** – Budget includes expenditures for salaries, OPERS, FICA, unemployment compensation, workers' compensation, health insurance, and office overhead such as postage, office rent, utilities, telecommunications, and other supplies.
  - **Recycling Collection (Drop-off and Litter Landing)** – The cost for collection and processing of recyclable materials in Hancock County by the Hancock County SWMD are contained in two programs, drop-off collections and Litter Landing. The costs for these programs consist of 3.5 FTE employees, vehicles and fuel, utilities and maintenance.
  - **Special Collections** – The special collections held in Hancock County are generally conducted at Litter Landing. These collections include HHW, scrap tires, electronics and appliances. The electronics and HHW are conducted in partnership with Rader Environmental. For the scrap tire event, the District partners with Cooper Tire.
  - **Education/Awareness** – Reflects expenditures for education staff, advertisement, and promotion costs.
- **Health Department Financial Assistance** – Reflects funding allocated to the County Health Department for solid waste enforcement activities.

In 2016, 73% of the District's regular expenses were attributed to the collection of recyclables and the operations at Litter Landing.



Throughout the first six years of the planning period, the distribution of expenses among categories remains nearly the same. As the recyclable market continues to fluctuate, the costs associated with recyclables management will likely fluctuate as well. Throughout the planning period, the District will monitor these costs.



#### D. Budget Summary

Table 6.3 presents a summary of the budget for the 2016 reference year and the first six years of the planning period (2020 to 2025). The summary includes revenue, expenditures, net balance, and year-end

fund balance. Revenue decreases from \$650,364 in 2020 to \$626,124 in 2025; expenses are predicted to grow from \$583,118 in 2020 to \$665,423 in 2025. The District's ending balance during the first six years of the planning period decreases from \$1,022,693 in 2020 to \$1,017,193 in 2025. Ample funding should be available to operate the programs outlined throughout this Plan. At the time of the next planning period, a potential rate increase will be evaluated.

**Table 6.3 Budget Summary**

Year	Revenue	Expenses	Net Difference	Ending Balance
<b>Reference Year</b>				
2016	\$638,839	\$630,035	\$8,804	\$565,996
<b>Planning Period</b>				
2020	\$650,364	\$583,118	\$67,246	\$1,022,693
2021	\$643,620	\$594,148	\$49,472	\$1,072,165
2022	\$637,867	\$630,390	\$7,477	\$1,079,642
2023	\$633,060	\$616,847	\$16,214	\$1,095,856
2024	\$629,159	\$668,523	(\$39,364)	\$1,056,492
2025	\$626,124	\$665,423	(\$39,299)	\$1,017,193

APPENDIX A  
MISCELLANEOUS INFORMATION



**A. Reference Year**

The reference year for this solid waste management plan is 2016.

**B. Planning Period (first and last years)**

The planning period for this solid waste management plan is: 2020 to 2034.

**C. Goal Statement**

The Hancock County Solid Waste Management District (HCSWMD) will achieve Goal # 1 from the 2009 State Solid Waste Management Plan.

Goal #1 – The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

The HCSWMD will comply with the requirements of Goal #1. The District will show adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste. The opportunities that exist in Hancock County consist of subscription curbside pick-up, and drop off recycling. In addition, commercial businesses are contracting to recycle packaging and other materials generated as part of their operations. The commercial numbers used in this report were directly reported to Ohio EPA by the individual businesses.

In order to meet the adequate infrastructure goal, HCSWMD intends to keep the present recycling drop-off activities including the recycling bins that are stationed around the county. In addition to these programs run by the HCSWMD, the recycling opportunities provided by H & O Services will contribute to the adequate infrastructure goal.

HCSWMD is proud of the education and public awareness programs that provide waste reduction and recycling education for children and adults. The District intends to continue these programs and their focus on increasing waste reduction and recycling. The District will also share information and provide technical assistance to help business and industry reduce waste.

**D. 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 data previously reported by the Hancock County Solid Waste Management District was used to prepare this plan.

- b. Differences in financial information reported in quarterly fee reports and the financial data used in the solid waste management plan.

The data previously reported by the Hancock County Solid Waste Management District was used to prepare this plan.



## E. Material Change in Circumstances/Contingencies

### *Criteria for Determining Material Change*

In accordance with ORC 3734.56(0), the Plan must be revised if the Board of County Commissioners has determined that "circumstances materially changed from those addressed in the approved initial or amended plan of the district. The following criteria will be monitored to determine if a material change in circumstances has occurred in the District, which may require a revision of the approved Plan:

- Change in the solid waste management facilities designated by the Plan. Solid waste management facilities are identified in the Plan to ensure waste disposal options for the District. The addition of a facility to the designated list need not be a material change. However, if a designated facility should close, be replaced, or otherwise be unable to handle District waste, the District would determine a material change, providing no suitable alternate facilities are available.
- Change in waste generation. A change in waste generation within the District that impairs the ability of designated and/or identified facilities to adequately process District generated waste and/or a change in waste generation within the District that impairs the ability of the District to financially fund programs would constitute a material change in circumstances.
- Change in the capacity available for disposal, transfer, composting, etc. Capacity shortfall to one or more waste management methods identified in the Plan would be deemed a material change if other waste management methods identified in the Plan, or waste management methods not identified in the Plan but deemed acceptable by the Policy Committee, were unavailable. However, if other waste management methods are capable of handling the capacity shortfall, the change in capacity would not be deemed a material change in circumstances.
- Change in strategies for waste reduction and/or recycling. Strategies for waste reduction and/or recycling are dependent upon many variable factors. The District is committed to promoting recycling; however, changes in recycling markets and/or the recycling needs of the District would constitute a material change if they result in the discontinuation of strategies that are necessary in order to demonstrate compliance with required State Plan goals.
- Change in the availability of revenues for plan implementation. Any significant shortfall in revenues that (1) could not be addressed via implementation of revisions to the District's fees and (2) would result in a program discontinuation would be deemed a material change in circumstances if the lack of funding prohibits demonstration of required State Plan goals.
- Change in the procedures to be followed for plan implementation. Significant changes in the procedures for implementing the Plan would only be deemed a material change in circumstances if said changes would prevent District staff from implementing programs necessary to meet required State Plan goals.
- Change in the timetable for implementation of programs and/or activities. Significant changes or delays in program implementation would be deemed a material change in circumstances only if said changes resulted in non-compliance with State Plan goals.
- Change in the District structure. Any change in the existing District structure, such as the addition or subtraction of counties included in the District, would constitute a material change in circumstances.
- Change in the basic legal authority of the District. A change in the basic legal authority of the District due to future legislation or court decisions would be deemed a material change of circumstances.

### *Monitoring Procedure*

The District's Board of County Commissioners (the Board) and the solid waste coordinator will monitor the changes indicated above on an annual basis by reviewing implementation of the approved plan and looking for indicators such as:

- An increase or decrease of 50% or more from the 2016 baseline, for two or more consecutive years, of waste quantities reported to Ohio EPA for solid waste disposal facilities used by the District.
- A significant decrease in remaining capacity in the District's permitted landfill facility, along with an absence of suitable alternatives, such that a capacity shortfall arises for the 15-year planning period.
- A decrease in District revenues or increase in the costs of programs and strategies planned by the District throughout the planning years, such that implementation costs exceed the available District revenues and the District is unable to fulfill required State Plan goals.
- A one year decrease of 50% or more in total recycling tonnage collected by local recycling activities.
- The loss of one or more entire recycling markets such that the District would be unable to recycle one or more of the required designated materials necessary to meet Goal # I of the State Plan.

***Timetable for Analyzing the Determination***

Within 30 days after the Board makes a determination that a material change has occurred, the Board will call a meeting of the Policy Committee to analyze the change. The Policy Committee, after analyzing all factors affecting the change, will make an advisory recommendation to the Board as to whether a material change has occurred in the circumstances addressed in the approved Plan. If the Board makes such a determination, it is the Policy Committee's mandatory duty to make appropriate amendments to the Plan.

***Notification Procedure***

After the Policy Committee has decided that a material change has occurred, the Board will notify Ohio EPA and the municipal corporations and townships within the District of its intention to revise the Plan because of a material change in circumstances from those addressed in the approved Plan. The notification will explain in detail the change or changes that led to the decision.

APPENDIX B  
RECYCLING INFRASTRUCTURE INVENTORY



A. Curbside Recycling Services, Drop-Off Recycling Locations, and Mixed Solid Waste Materials Recovery Facilities

1. Curbside Recycling Services

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

ID #	Name of Curbside Service	County	Service Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Service will Continue Throughout Planning Period (Y/N)
SC1	AE Curbside Service-City of Findlay	Hancock	Curbside Pickup	Weekly	steel & aluminum beverage cans, Aluminum foils, corrugated cardboard, paper, glass bottles and jars, plastics #1 #2 #3 #5 and #7	Subscription Curbside	Y	Y
SC2	AE Curbside Service-Village of Arlington	Hancock	Curbside Pickup	Weekly		Subscription Curbside	Y	Y
SC3	AE Curbside Service-Village of Benton Ridge	Hancock	Curbside Pickup	Weekly		Subscription Curbside	Y	Y
SC4	AE Curbside Service-Village of Van Buren	Hancock	Curbside Pickup	Weekly		Subscription Curbside	Y	Y

Subscription curbside recycling is offered by AE Curbside Service. The program offers collection of commingled paper, cardboard, aluminum cans, steel cans, glass, and plastic containers. AE Curbside Service offers residential curbside recycling (weekly or biweekly collection), commercial recycling collection, and residential garbage hauling.

The focus of AE Curbside is curbside recycling; garbage hauling is offered as a supplement to the curbside recycling program. All residential customers of AE Curbside are provided an 18-gallon tote bin for their commingled recyclables and refuse is accepted in garbage bags, trash cans or 96-gallon container (provided for a fee). Commercial recycling customers receive similar tote bins for use in their office or facility. The interval of collection for commercial service varies and is determined based on the company's specific needs.

There are no anticipated changes during this planning *period*.

## 2. Drop-Off Recycling Locations

Table B-2a Inventory of Full-Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	Service Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Service will Continue Throughout Planning Period (Y/N)
FTU1	Findlay City, Blanchard Valley Co-op	Hancock SWMD	Hancock	Drop Off Recycling	24 hours a day, seven days a week	steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines & catalogs, plastic bottles & containers #1 #2 #3 #5 and #7	Y	Y
FTU2	Findlay City-Chamberlain Hill	Hancock SWMD	Hancock	Drop Off Recycling	24 hours a day, seven days a week		Y	Y
FTU3	Findlay City-Litter Landing	Hancock SWMD	Hancock	Drop Off Recycling	24 hours a day, seven days a week		Y	Y
FTU4	Liberty Township-Hancock County Educational Service Center	Hancock SWMD	Hancock	Drop Off Recycling	24 hours a day, seven days a week		Y	Y
FTU5	H&O Corporate Office, 4500 Fostoria Ave, Findlay	H&O Services	Hancock	Drop Off Recycling	Business hours		Y	Y
FTU6	H&O – Kroger (Fostoria)	H&O Services	Hancock	Drop Off Recycling	Business hours		Y	Y
FTU7	H&O – Red Hawk Run (Findlay)	H&O Services	Hancock	Drop Off Recycling	Business hours		Y	Y

In 2016, HCSWMD maintained four full-time urban drop off locations and continue to offer full-time drop off sites. The HCSWMD drop-off locations are available 24 hours a day, seven days a week. The recycling bins are routinely serviced by an outside contractor collecting the recyclables, processing and marketing the materials. The HCSWMD monitors these sites to assure that the areas are kept clean and to notify the contractor if the bins need to be emptied. Materials collected at the drop-off locations include: steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines & catalogs, plastic bottles, and containers #1 #2 #3 #5 and #7.

In addition to the HCSWMD drop off locations that were included in the 2016 Annual District Report, H&O Services, a local company, offered drop off service at three locations throughout Hancock County. H&O Services continues to offer drop off recycling at these three locations in Hancock County.

There are no anticipated changes through the planning period.

Table B-2b Inventory of Part-Time, Urban Drop-off Sites Available in the Reference Year

ID#	Name of Drop-off Site	Service Provider	County	Service Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards? (Y/N)	Service will Continue Throughout Planning Period (Y/N)
PTU1	Mobile Drop-Off Agency on Aging	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week	steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines & catalogs, plastic bottles & containers #1 #2 #3 #5 and #7	Y	Y
PTU2	Mobile Drop-Off First Presbyterian Church	Hancock SWMD	Hancock	Drop-Off	2nd Sunday of Each Month		Y	Y
PTU3	Mobile Drop-Off Trinity Lutheran Church	Hancock SWMD	Hancock	Drop-Off	Last Saturday of Each Month		Y	Y

In 2016, HCSWMD maintained three part-time urban drop off locations. The District continues to maintain part-time drop off locations in the Findlay area. The drop-off locations are available at varying times throughout the month. The recycling bins are routinely serviced by an outside contractor collecting the recyclables, processing and marketing the materials. The HCSWMD monitors these sites to assure that the areas are kept clean and to notify the contractor if the bins need to be emptied. Materials collected at the drop-off locations include: steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines and catalogs, plastic bottles, and containers #1 #2 #3 #5 and #7.

There are no anticipated changes through the planning period.

**Table B-2c Inventory of Full-Time, Rural Drop-off Sites Available in the Reference Year**

ID#	Name of Drop-off Site	Service Provider	County	Service Provided	Days and Hours Available to the Public	Materials Collected <sup>(1)</sup>	Drop-off Meets All Minimum Standards? (Y/N)	Service will Continue Throughout Planning Period (Y/N)
FTR1	Allen Township - Whirlpool Corporation	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week	steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines & catalogs, plastic bottles & containers #1 #2 #3 #5 and #7	Y	Y
FTR2	Allen Township - Hancock County Sanitary Landfill	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR3	Allen Township - Village of Van Buren	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR4	Amanda Township - Village of Vanlue	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR5	Biglick Township - Township Hall	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR6	Blanchard Township - Benton Ridge Village	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR7	Cass Township - Township Hall	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR8	Delaware Township - Riverdale School	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR9	Eagle Township - Camp Berry Boy Scout Reservation	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR10	Madison Township - Village of Arlington	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR11	Orange Township - Township House	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR12	Pleasant Township - Village of McComb	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR13	Portage Township - Deweyville Church	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR14	Portage Township - Township House	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR15	Union Township - Village of Mount Cory	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR16	Union Township - Village of Rawson	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR17	Van Buren Township - Village of Jenera	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR18	Washington Township - Village of Arcadia	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y
FTR19	Biglick Township - West Independence United Methodist Church	Hancock SWMD	Hancock	Drop-Off	24 hours a day, seven days a week		Y	Y

In 2016, HCSWMD maintained 19 full-time rural drop off locations. The District continues to maintain full-time rural drop off locations throughout Hancock County. The drop-off locations are available 24 hours a day, seven days a week. The recycling bins are routinely serviced by an outside contractor collecting the recyclables, processing and marketing the materials. The HCSWMD monitors these sites to assure that the areas are kept clean and to notify the contractor if the bins need to be emptied. Materials collected at the drop-off locations include: steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines and catalogs, plastic bottles, and containers #1 #2 #3 #5 and #7.

There are no anticipated changes through the planning period.

**Table B-2d Inventory of Part-Time, Rural Drop-off Sites Available in the Reference Year**

ID#	Name of Drop-off Site	Service Provider	County	Service Provided	Days and Hours Available to the Public	Materials Collected <sup>(1)</sup>	Drop-off Meets All Minimum Standards? (Y/N)	Service will Continue Throughout Planning Period (Y/N)
PTR1	Mobile Drop Off-Deweyville	Hancock SWMD	Hancock	Drop-off	24 hours a day, seven days a week	steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines & catalogs,	Y	Y
PTR2	Mobile Drop Off-Madison Township	Hancock SWMD	Hancock	Drop-off	24 hours a day, seven days a week	plastic bottles & containers #1 #2 #3 #5 and #7	Y	Y

In 2016, HCSWMD maintained two part-time rural drop off locations. The District continues to maintain part-time rural drop off locations throughout Hancock County. The drop-off locations are available 24 hours a day, seven days a week. The recycling bins are routinely serviced by an outside contractor collecting the recyclables, processing and marketing the materials. The HCSWMD monitors these sites to assure that the areas are kept clean and to notify the contractor if the bins need to be emptied. Materials collected at the drop-off locations include: steel & aluminum beverage cans, corrugated cardboard, newspapers, magazines and catalogs, plastic bottles, and containers #1 #2 #3 #5 and #7.

There are no anticipated changes through the planning period.

**3. Mixed Solid Waste Material Recovery Facilities**

There are currently no mixed solid waste material recovery facilities within the HCSWMD and there are none anticipated through the planning period.



B. Curbside Recycling and Trash Collection Service Providers

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

Name of Provider	County Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	Residential	Commercial	Industrial	Residential	Commercial	Industrial
AE CURBSIDE	Hancock	Y	Yes	Yes	Yes	Yes	Yes	
AMERICAN TRASH HAULING COMPANY	Hancock	Y	Yes	Yes	Yes			
APPLE DISPOSAL	Hancock	Y	Yes	Yes	Yes			
BIN THERE DUMP THAT	Hancock	Y	Yes	Yes	Yes			
BUTLER DISPOSAL	Hancock	Y	Yes	Yes	Yes			
C & A DISPOSAL	Hancock	Y	Yes	Yes	Yes			
CRUISE CITY HAULING	Hancock	Y	Yes	Yes	Yes			
CURT'S HAULING	Hancock	Y	Yes	Yes	Yes			
DAVE'S HAULING	Hancock	Y	Yes	Yes	Yes			
DURST ROLL OFF SERVICES	Hancock	Y	Yes	Yes	Yes			
FRUCHEY'S TRASH SERVICE LLC	Hancock	Y	Yes	Yes	Yes			
G.I.B.S. (CLOSED)	Hancock	Y	Yes	Yes	Yes			
GRIFFITH TRASH PICKUP SERVICES	Hancock	Y	Yes	Yes	Yes			
H & O SERVICES, LLC	Hancock	Y	Yes	Yes	Yes	Yes	Yes	
J & T HAULING	Hancock	Y	Yes	Yes	Yes			
J & N HALLERS LLC	Hancock	Y	Yes	Yes	Yes			
JC HAULING	Hancock	Y	Yes	Yes	Yes			
K C HAULING	Hancock	Y	Yes	Yes	Yes			
KOGLER REFUSE SERVICE INC	Hancock	Y	Yes	Yes	Yes			
LEWIS DISPOSAL LLC	Hancock	Y	Yes	Yes	Yes			
M & M HAULING	Hancock	Y	Yes	Yes	Yes			
MARVIN'S RUBBISH	Hancock	Y	Yes	Yes	Yes			
NAT TRANSPORTATION INC	Hancock	Y	Yes	Yes	Yes	Yes	Yes	
NIESE HAULING	Hancock	Y	Yes	Yes	Yes			
PATTERSON SANITATION	Hancock	Y	Yes	Yes	Yes			
R & S HAULING	Hancock	Y	Yes	Yes	Yes			
RB Reinhart Trash Hauling	Hancock	Y	Yes	Yes	Yes			
REPUBLIC SERVICES	Hancock	Y	Yes	Yes	Yes	Yes	Yes	
RITTIG RUBBISH	Hancock	Y	Yes	Yes	Yes			
S&K ROLLOFF SERVICE, LLC	Hancock	Y	Yes	Yes	Yes			
VANSANT CONCRETE	Hancock	Y	Yes	Yes	Yes			
VELA'S HAULING	Hancock	Y	Yes	Yes	Yes			
WASTE MANAGEMENT - LIMA	Hancock	Y	Yes	Yes	Yes	Yes	Yes	
WASTE MANAGEMENT OF OHIO, INC	Hancock	Y	Yes	Yes	Yes	Yes	Yes	

Hancock County SWMD relies on private haulers to collect the solid wastes generated by Hancock County residents and businesses. The City of Findlay licenses the haulers that provide this service in the city. The Hancock County Health Department registers the waste haulers serving Hancock County.

**C. Composting Facilities**

**Table B-5 Inventory of Composting Facilities Used in the Reference Year**

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
City of Findlay Broad Avenue	Class IV	Y	Findlay	0	4,887	4,887
Findlay Warehousing Company	Class IV	Y	Findlay	0	6,152	6,152
City of Fostoria	Class IV	Y	Fostoria	0	1,865	1,865
Hirzel Farms	Class II	Y	Pemberville	1,470	379	1,849

Currently there are three Class IV composting facilities and one Class II composting facility utilized by Hancock County. In the reference year, a total of 1,470 tons of food waste were collected and a total of 13,282 tons of yard waste were collected.

There are no anticipated changes through the planning period.

**D. Other Food Waste and Yard Waste Management Programs**

**Table B-6 Inventory of Other Food and Yard Waste Management Activities in the Reference Year**

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
Walmart/Kroger	Compost	Hancock County	456	0

In 2016, Kroger and Walmart reported that they diverted 456 tons of food waste from the landfill to be composted.

**E. Material Handling Facilities Used by the SWMD in the Reference Year**

There are no material handling facilities utilized within the HCSWMD and none are anticipated through the planning period

APPENDIX C  
POPULATION DATA



A. Reference Year Population

Source(s) of Information: Ohio Development Services Agency website

Table C-1a Reference Year Population Adjustments

	Hancock County
Before Adjustment	75,590
<i>Additions</i>	
<i>Subtractions</i>	
Fostoria	2,120
Bluffton	909
After Adjustment	72,561

Sample Calculations: 75,590 (Hancock County) – 2,120 (Fostoria) – 909 (Bluffton) = 72,561

Assumptions: There are two communities that are located partially within the District and partially in other solid waste management districts. Portions of the City of Fostoria and the Village of Bluffton are located in Hancock County; however, the majority of the populations of Fostoria is located in Seneca County and the majority of the population of Bluffton is located in Allen County. Thus, the population of HCSWMD has been adjusted to exclude the portions of the populations of Fostoria and Bluffton that are located outside of Hancock County.

Table C-1b Total Reference Year Population

Unadjusted Population	Adjusted Population
75,590	72,561

B. Population Projections

Table C-2 Population Projections

Year	Hancock County
2016	72,561
2017	72,181
2018	72,221
2019	72,261
2020	72,301
2021	72,359
2022	72,417
2023	72,475
2024	72,533
2025	72,591
2026	72,495
2027	72,399
2028	72,303
2029	72,207
2030	72,111
2031	72,017
2032	71,923
2033	71,829
2034	71,735

Source(s) of Information: Population estimates from Ohio Development Services Agency were used to calculate the population change for Hancock County during the planning period.

Sample Calculations: The default method described in the Appendix C general instructions was used to project the population for Hancock County during the planning period. Table C-3 below shows the estimated population for each five year period and the estimated change for the years between.

**Table C-3-**

Year	Annual Change persons/year	Hancock County
2015	75,130	72,101
2016	40	72,141
2017	40	72,181
2018	40	72,221
2019	40	72,261
2020	75,330	72,301
2021	58	72,359
2022	58	72,417
2023	58	72,475
2024	58	72,533
2025	75,620	72,591
2026	-96	72,495
2027	-96	72,399
2028	-96	72,303
2029	-96	72,207
2030	75,140	72,111
2031	-94	72,017
2032	-94	71,923
2033	-94	71,829
2034	-94	71,735
2035	74,670	71,641
2036	-236	74,434
2037	-236	74,198
2038	-236	73,962
2039	-236	73,726
2040	73,490	70,461
2041	-18	73,472
2042	-18	73,454
2043	-18	73,436
2044	-18	73,418
2045	73,400	70,371
	<b>Community Additions</b>	0
	<b>Community Subtractions</b>	3,029

APPENDIX D  
DISPOSAL DATA



A. Reference Year Waste Disposed

**Table D-1a Waste Disposed in Reference Year – Publicly-Available Landfills (Direct Haul)<sup>1</sup>**

Facility Name	Location		Waste Accepted from the SWMD			
	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Celina Sanitary Landfill	Mercer	Ohio	-	-	10	10
County Environmental of Wyandot	Wyandot	Ohio	128	823	216	1,167
Wood County Landfill	Wood	Ohio	4	-	-	4
Evergreen Recycling & Disposal	Wood	Ohio	130	39	29	198
Sunny Farms Landfill LLC	Seneca	Ohio	13	-	181	194
Suburban Landfill, Inc.	Perry	Ohio	-	0.22	-	0
Port Clinton Landfill, Inc.	Ottawa	Ohio	-	-	3	3
Hancock County Sanitary Landfill	Hancock	Ohio	75,938	10,273	19,085	105,296
Defiance County Sanitary Landfill	Defiance	Ohio	-	-	4	4
Arden Landfill	Washington	Pennsylvania	23	-	-	23
Indiana		Indiana	-	35	-	35
Total			76,235	11,170	19,528	106,934

<sup>1</sup> The facilities listed in Table D-1a and identified as able to accept waste from the SWMD (in Appendix M) will constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Source(s) of Information: Ohio EPA, 2016 Ohio Solid Waste Facility Data Report, Table 14.

There were eleven disposal facilities in 2016 that accepted direct haul waste from Hancock County. The Hancock County Sanitary Landfill accepted the majority of the direct hauled waste. Residential/Commercial waste made up over 70% of the direct hauled waste.

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

There are no captive landfills within the the District and none are anticipated in the future.

**Table D-1c Total Waste Disposed in Landfills (Direct Haul)**

Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total
76,235	11,170	19,528	106,934

**Table D-2: Waste Transferred in Reference Year1**

Facility Name	Location		Waste Received from the SWMD			
	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Waste Management of Ohio-Lima	Allen	Ohio	1	0	0	1
Total			1	0	0	1

<sup>1</sup> The facilities listed in Table D-2 and identified as able to accept waste from the SWMD (in Appendix M) will constitute those identified for purposes of Ohio Revised Code Section 3734.53(13)(a).

Source(s) of Information: Ohio EPA, 2016 Ohio Solid Waste Facility Data Report, Table 14.

There was one transfer facility in 2016 that accepted waste from Hancock County. The Waste Management Transfer Station in Lima reported the acceptance of one ton of residential waste from Hancock County.

**Table D-3: Waste Incinerated/Burned for Energy Recovery in Reference Year**

There are no incinerators or waste-to-energy facilities in Hancock County and no waste from Hancock County was sent to an incinerator during the reference year.

**Table D-4: Total Waste Disposed in Reference Year**

The table below indicates the total waste disposed of in the reference year for the District. There was no waste that was incinerated and only one ton that was transferred during the reference year.

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	76,235	11,170	19,528	106,934	100%
Transferred	1	0	0	0	0%
Incinerated	0	0	0	0	0%
<b>Total</b>	<b>76,235</b>	<b>11,170</b>	<b>19,528</b>	<b>106,934</b>	<b>100%</b>
<b>Percent of Total</b>	<b>71%</b>	<b>10%</b>	<b>18%</b>	<b>100%</b>	

Source(s) of Information: Ohio EPA, 2016 Ohio Solid Waste Facility Data Report, Table 14.

Ohio EPA's Format v4.0 instructs solid waste management districts to include excluded waste if it comprises more than 10 percent of the total waste disposed. The excluded waste generated in Hancock County is primarily C&DD and soils accepted at the Hancock County Landfill.

**B. Historical Waste Analysis**

The amount of solid waste disposed of from Hancock County has decreased between 2012 and 2016 (reference year).

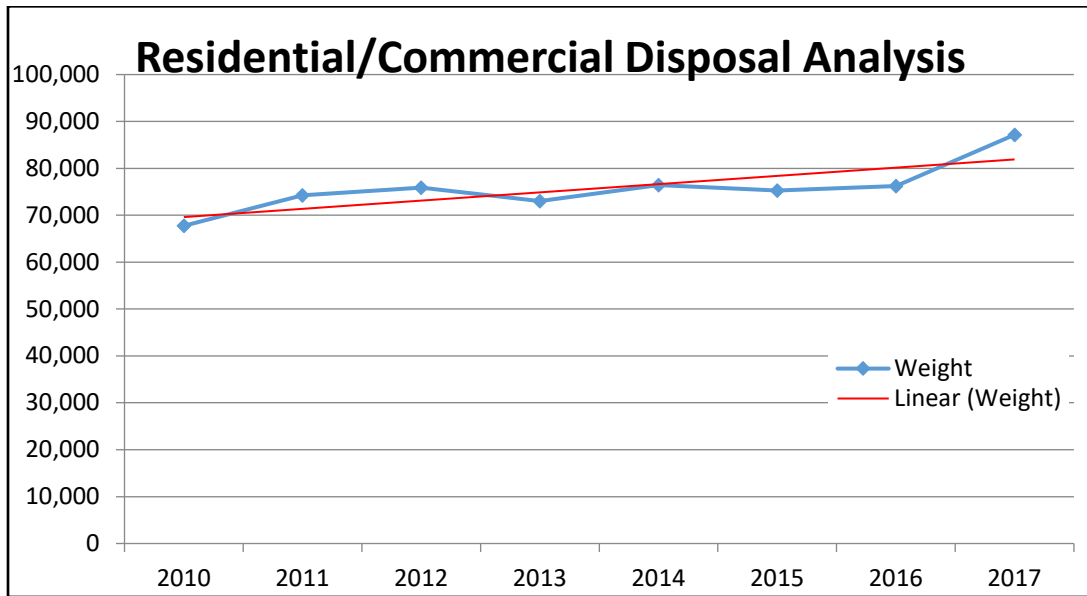
**Table D-5: Historical Disposal Data**

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2010	71,643	5.18	67,752	11,852	11,212	90,816
2011	71,887	5.66	74,217	13,126	24,220	111,563
2012	75,056	5.54	75,897	13,290	23,816	113,003
2013	75,130	5.33	73,040	8,748	19,924	101,712
2014	75,773	5.53	76,445	9,564	18,396	104,405
2015	75,753	5.45	75,307	10,751	24,809	110,867
2016	72,561	5.76	76,236	11,170	19,528	106,935
2017	73,187	6.53	87,159	15,244	74,284	176,687

Source(s) of Information: Ohio EPA, 2016 Ohio Solid Waste Facility Data Report, Table 14

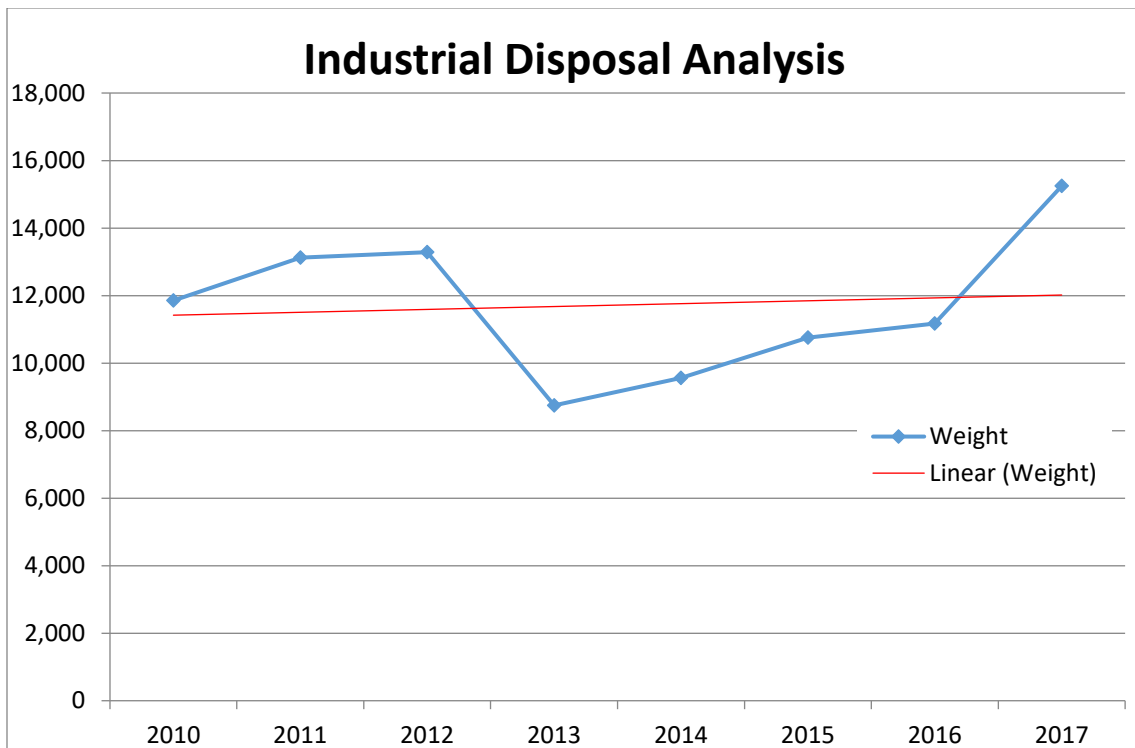


C. Residential/Commercial Waste



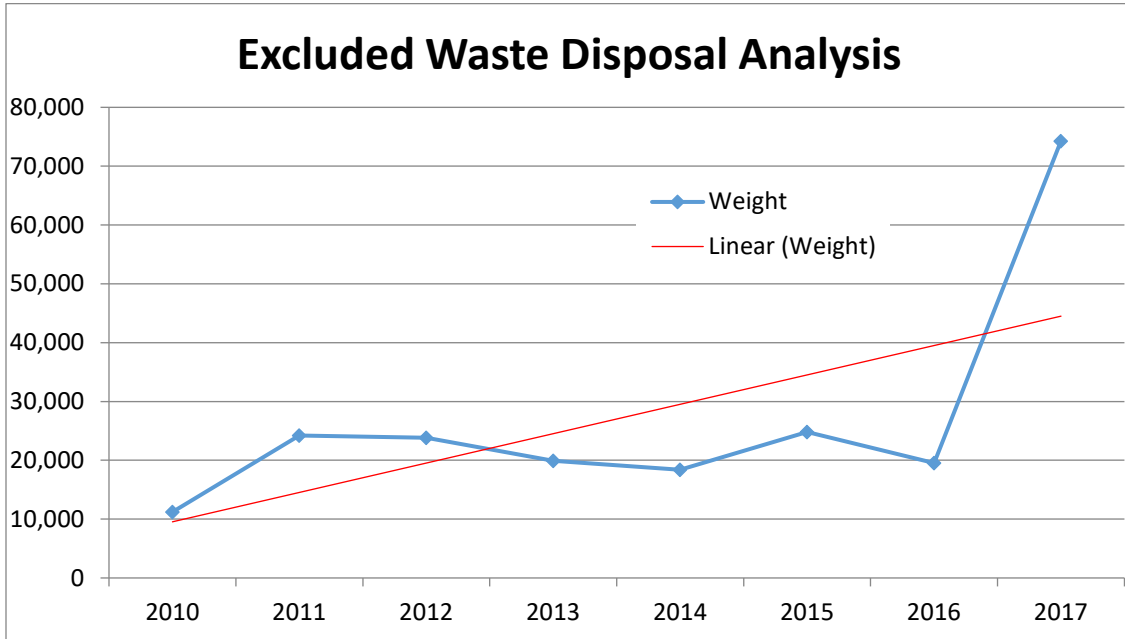
The annual amount of residential waste disposed from Hancock County has been fairly consistent since 2010. In 2017 there appears to be a slight spike in the disposal of residential/commercial waste. Overall, the trend line indicates an increase in the annual tons of waste disposed.

D. Industrial Waste



The amount of industrial waste disposed in Hancock County since 2010 has varied based on the economy. In 2013, there was a drop of nearly 35% in the amount of industrial waste being disposed. The rate gradually increased through 2016 and then jumped up approximately 35% in 2017. The overall trend line for the disposal of industrial waste in Hancock County shows a gradual increase.

D. Excluded Waste



The majority of the excluded waste in Hancock County is demolition debris and soils. From 2010 to 2016, the volume of excluded waste remained steady. In 2017, the City of Findlay began an aggressive program to demolish structures in the flood plain of the Blanchard River. This program is the cause for the sharp rise in excluded waste volume.

E. Disposal Projections

Table D-6 Projections for Waste to be Disposed and Transferred

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste
	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2016	76,236	11,170	19,528	106,935
2017	87,159	15,244	74,284	176,687
2018	74,081	16,114	74,284	164,479
2019	74,122	17,033	74,284	165,439
2020	74,163	18,004	74,284	166,451
2021	74,223	19,031	74,284	167,538
2022	74,282	20,117	20,272	114,671
2023	74,342	21,265	20,737	116,343

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste
	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2024	74,401	22,478	21,213	118,092
2025	74,460	23,760	21,700	119,920
2026	74,362	25,115	22,198	121,675
2027	74,264	25,115	22,708	122,087
2028	74,165	25,115	23,229	122,509
2029	74,067	25,115	23,762	122,944
2030	73,968	25,115	24,308	123,391
2031	73,872	25,115	24,866	123,853
2032	73,775	25,115	25,437	124,327
2033	73,679	25,115	26,020	124,814
2034	73,582	25,115	26,618	125,315

Source(s) of Information: Ohio EPA Workbook

The Waste to be transferred is assumed to be 0% of the total waste disposed from Hancock County. This assumption is based off of the reference year total tons of waste disposed and total tons of waste transferred.

The waste disposal projections are based on disposal data from 2010 to 2017. The additional years of data were easily accessible and used in this calculation to have a broader look at trends for waste disposal in Hancock County.

The population of the county through the review period has increased. The population through the projection period is anticipated to remain steady with a potential for a slight increase.

For the Residential/Commercial Waste the additional years of data increased the average annual percent change from 0.16% to 3.83% and the average per capita increased from 5.52 ppd to 5.62 ppd. The method chosen to project the amount of residential/commercial waste disposed through the planning period used the projected population and the average per capita from the review period. This resulted in an initial increase and then slight decrease following the predicted population trend. Overall, there is not much change predicted for the amount of waste disposed in the District.

For Industrial Solid Waste the additional years of data increased the average annual percent change from -2.13% to 5.70%. The additional data projects a more likely result for industrial solid waste disposal. Manufacturing in Hancock County has been increasing and will likely continue based on current trends. An increase in the amount of waste would also be anticipated. Although to assume 5.70% growth through the entire planning period is not realistic. Therefore, the industrial waste disposal will be held constant after the seventh year (2026) of the planning period.

For the excluded waste, the additional years of data increased the average annual percentage change to 54.90%. This large jump was primarily due to the City of Findlay's efforts to demolish structures in the flood plain of the Blanchard River. Findlay's project is anticipated to be on going for several years so the jump seen in 2017 was held constant through 2021. Assuming that the demolition projects are complete at that time, it is anticipated that the excluded waste disposal will return to a rate close to what was realized during

the review period prior to 2017. To predict the amount of excluded waste for 2022, the tons of excluded waste disposed from 2010 to 2016 were averaged. Then to predict the disposal rate through the rest of the planning period an average annual increase of 2.30% was assumed based on the review period disposals.

APPENDIX E  
RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA



A. Reference Year Recovery Data

The Appendix presents the reduction and recycling data for the residential and commercial sectors during the 2016 reference year. A historic analysis of the residential/commercial sector's recycling is included in this Appendix. Information included in this section as well as outside resources were used to calculate projections for the use of this planning period.

Table E-1 Commercial Survey Results

NAICS	Appliances/ "White Goods"	Electronics	Lead-Acid Batteries	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables (Mixed)	Yard Waste	
42					78	121	22	2,298	100			200				
44								1,500	205			200		100		
45																
48			36							120				44		
49																
51																
52																
53																
54																
55																
56												14,300				
61								500	150							
62																
71																
72																
81																
92																
<b>Unadjusted Total</b>	0	0	36	0	78	121	22	4,298	455	120	0	14,700	0	144	0	19,974
<b>Adjustments</b>																0
<b>Adjusted Total</b>	0	0	36	0	78	121	22	4,298	455	120	0	14,700	0	144	0	19,974

Source(s) of Information: Hancock County SWMD 2016 Annual District Report

Wood made up the largest portion of the recycled tons in 2016. Metals, cardboard and paper have been the easiest materials to recycle and market. This table incorporates data from the Hancock County drop off program as well as Litter Landing.

Table E-2 Data from Other Recycling Facilities

There was no data reported from other recycling facilities that was not previously reported.

**Table E-3 Data Reported to Ohio EPA by Commercial Businesses**

Ohio EPA Data Source	Glass	Plastic	Newspaper	Cardboard	Mixed Paper	Nonferrous	Ferrous	Wood	Food: Compost	Food: Other	Commingled	Other	
Walmart Recycling in Ohio	0	31	0	1,117	9	0	1	0	0	0	0	139	
Lowes Companies, Inc.	0	0	0	83	0	0	34	0	0	0	0	0	
Meijer Corporation	0	0	0	544	2	0	0	131	0	0	0	1	
Dollar General Corporation	0	0	0	83	0	0	0	0	0	0	0	0	
Big Lots Corporation	0	0	0	25	0	0	0	0	0	0	0	0	
Aldi Inc. Hinkley Division	0	1	0	113	0	0	0	0	0	0	0	0	
Kohls Corporate Office	0	10	0	111	0	0	0	0	0	0	0	0	
Rumpke Recycling - Columbus	4	12	28	5	34	1	3	0	0	0	0	0	
<b>Unadjusted Total</b>	<b>4</b>	<b>54</b>	<b>28</b>	<b>2,082</b>	<b>45</b>	<b>1</b>	<b>38</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>2,524</b>
<b>Adjustments</b>													<b>0</b>
<b>Adjusted Total</b>	<b>4</b>	<b>54</b>	<b>28</b>	<b>2,082</b>	<b>45</b>	<b>1</b>	<b>38</b>	<b>131</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>2,524</b>

Source(s) of Information: Ohio Material Recovery Facilities and commercial Recycling – 2016; from Ohio EPA Solid Waste Management Web Page

Based on the types of facilities reporting to the Ohio EPA, mostly retail stores, cardboard makes up the majority of the material recycled. This material is generated from packaging material used to ship and display products in the stores.

**Table: E-4 Other Recycling Programs/Other Sources of Data**

Other Programs or Sources of Data	Scrap Tires	Food	Yard Waste	Animal Ag & Other waste	Unadjusted Total	Adjustments	Adjusted Total
Curbside Recycling Services							0
Composting Facilities		1,926	13,282		15,208		15,208
Ohio EPA Scrap Tire Data	721				721		721
<b>Unadjusted Total</b>	<b>721</b>	<b>1,926</b>	<b>13,282</b>		<b>15,929</b>		<b>15,929</b>
<b>Adjustments</b>							
<b>Adjusted Total</b>	<b>721</b>	<b>1,926</b>	<b>13,282</b>		<b>15,929</b>		

Source(s) of Information: 2016 Ohio EPA Scrap Tire Report, 2016 Ohio EPA Compost Report, and information provided on 2016 commercial surveys.

**Table E-5 Residential/Commercial Material Recovered in Reference Year (2016)**

Material	Quantity (tons)
Appliances/ "White Goods"	0
Household Hazardous Waste	0
Used Motor Oil	0
Electronics	0
Scrap Tires	721
Dry Cell Batteries	0
Lead-Acid Batteries	36
Food	1,926
Glass	82
Ferrous Metals	159
Non-Ferrous Metals	24
Corrugated Cardboard	6,380
All Other Paper	528
Plastics	174
Textiles	0
Wood	14,831
Rubber	0
Commingled Recyclables (Mixed)	144
Yard Waste	13,282
Other (Aggregated)	140
<b>Total</b>	<b>38,428</b>

Source(s) of Information: Totals from Tables E-1 through E-4

Total tons recycled in reference year, 2016, listed by type of material.

**Table E-6 Quantities Recovered by Program/Source**

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	19,974
Data from Other Recycling Facilities	0
Ohio EPA Commercial Retail Data	2,524
Curbside Recycling Services	0
Composting Facilities	15,208
Other Food and Yard Waste Management Activities	0
Ohio EPA Scrap Tire Data	721
<b>Total</b>	<b>38,428</b>

Total tons recycled in reference year, 2016, listed by recycling program or information source.



B. Historical Recovery

Table E-7 Historical Residential/Commercial Recovery by Program/Source

Year	Commercial Survey	Ohio EPA Commercial Retail Data	Composting Facilities	Ohio EPA Scrap Tire Data	Totals
2011	33,515	2,132	6,180	1,121	42,948
2012	19,845	2,003	10,525	846	33,219
2013	25,108	936	5,205	836	32,085
2014	49,470	2,565	16,379	862	69,276
2015	30,490	2,364	8,757	1,101	42,712
<b>2016</b>	<b>19,974</b>	<b>2,524</b>	<b>15,208</b>	<b>721</b>	<b>38,428</b>
2017	23,513	3,008	7,426	265	34,211

Source(s) of Information: Ohio Material Recovery Facilities and commercial Recycling; from Ohio EPA Solid Waste Management Web Page; Hancock County SWMD Annual District Reports

The historic look back at the residential/commercial recycling numbers for the District show fairly steady trends in recycling numbers with occasional highs and lows reported in the historic data. The commercial surveys show the most variation from year to year. The average annual percentage change seen for the commercial survey is an increase of 5%. The commercial retail data from Ohio EPA is consistent for the most part in all years but 2013. The drop of over 50% of the recycling that year is likely due to poor reporting, because in 2014, the level returned to the pre 2013 numbers. The average annual percentage change seen for the commercial retail data (neglecting the drop in 2013) is an increase of 3%. The numbers reported by the compost facilities show similar swings to the commercial surveys. The average annual percentage change seen for the compost facilities is an increase of 3%. The scrap tire information reported to Ohio EPA shows four years of consistent data and two years with a spike and one year at a low. Neglecting the spikes and the low, it appears that the average annual percentage change for scrap tire collection in Hancock County is an increase of 1%.

The overall trend for recyclables in Hancock County is increasing by an average annual percentage of about 5%.

C. Residential/Commercial Recovery Projections

Table: E-8 Residential/Commercial Recovery Projections by Program/Source

Year	Commercial Survey	Ohio EPA Commercial Retail Data	Composting Facilities	Ohio EPA Scrap Tire Data	Totals
<b>2016</b>	<b>19,974</b>	<b>2,524</b>	<b>15,208</b>	<b>721</b>	<b>38,428</b>
2017	19,973	2,600	9,954	730	33,258
2018	19,972	2,678	9,954	740	33,344
2019	19,970	2,759	9,954	749	33,433
2020	19,969	2,842	9,954	759	33,524
2021	19,968	2,928	9,954	768	33,618
2022	19,967	3,016	9,954	778	33,715
2023	19,965	3,107	9,954	788	33,815
2024	19,964	3,200	9,954	798	33,917
2025	19,963	3,297	9,954	808	34,022

Year	Commercial Survey	Ohio EPA Commercial Retail Data	Composting Facilities	Ohio EPA Scrap Tire Data	Totals
2026	19,961	3,396	9,954	819	34,131
2027	19,961	3,396	9,954	819	34,131
2028	19,961	3,396	9,954	819	34,131
2029	19,961	3,396	9,954	819	34,131
2030	19,961	3,396	9,954	819	34,131
2031	19,961	3,396	9,954	819	34,131
2032	19,961	3,396	9,954	819	34,131
2033	19,961	3,396	9,954	819	34,131
2034	19,961	3,396	9,954	819	34,131

Source(s) of Information: 2012 through 2016 ADR Calculation Spreadsheets, 2012 through 2016 Ohio EPA MRF Reports, 2012 through 2016 District program and survey data, 2012 through 2016 Ohio EPA Compost Report, 2012 through 2016 Ohio EPA Scrap Tire Reports, and 2012 through 2016 ADR Review Forms

The commercial survey data has been a strong source of recyclable material for Hancock County. The annual percentage change through the historic review was 5.0%. Using this rate of change the projected tonnage from commercial survey recycling grows fairly significantly though the planning period. After year seven (2026) the rate is assumed to remain constant.

The report of commercial retail data from Ohio EPA shows an increasing trend though the historic review period. 2013 is considered to be an outlier as the tonnage dropped over 50% and then returned to prior levels in 2014. This jump was not typical of the other years and because of that was left out of the calculation to determine the average annual percentage change. Using the remaining years the average was determined to be 3%. After year seven (2026) the rate is assumed to remain constant.

During the historic review period, composting in Hancock County increased. The average annual percentage change was 3%. It is likely that this was due to swings in the collection of compostables and there is really little change expected for compostables during the planning period. After year seven (2026) the rate is assumed to remain constant.

Scrap tire collection in Hancock County is fairly consistent over the years. During the historic review period there was some fluctuation, but the amount of tires expected during the planning period will remain steady. The average annual percentage change for scrap tires during the review period was 1%. After year seven (2026) the rate is assumed to remain constant.

APPENDIX F  
INDUSTRIAL WASTE REDUCTION AND RECYCLING DATA



This Appendix presents the reduction and recycling data for the industrial sector in the 2016 reference year. A historic analysis of the industrial sector's recycling is included in this Appendix. Information included in this section as well as outside resources were used to calculate projections for the use of this planning period.

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

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

Table F-1, Industrial Survey Results, which presents the total tons recycled by material and by NAICS code.

Table F-2, *Data from Other Recycling Facilities*, which presents the total tons recycled at buybacks, scrap yards, processors, and material recovery facilities (MRFs). This table was not used in this plan. The survey return from these businesses has been very poor to none; therefore, there is no data to report in this table.

Table F-3, *Other Recycling Programs/Other Sources of Data*, which presents data from miscellaneous sources.

**Table F-1 Industrial Survey Results**

<u>NAICS</u>	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Wood	Commingled Recyclables (Mixed)	
22									
31		2,000	556						
32		6,644	9,001	35	10	10	95	30	
33	61	8,644	9,555	200		11	100	46	
<b>Unadjusted Total</b>	61	17,288	19,112	235	10	21	195	76	36,998
<b>Adjustments</b>									0
<b>Adjusted Total</b>	61	17,288	19,112	235	10	21	195	76	36,998

Source(s) of Information: 2016 Hancock County SWMD Annual District Report

**Table F-2 Data from Other Recycling Facilities**

There was no data to report in Table F-2, "Data from Other Recycling Facilities/Programs." Therefore, this table has been omitted.

The Hancock County SWMD annually works to identify and survey scrap yards, processors, and brokers that are located in Hancock County or known to accept materials generated in Hancock County. The Hancock County SWMD maintains a list of scrap yards, processors, and brokers that is regularly updated. The District annually adds new entities to this list 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 SIC codes using Reference USA, a business database. New additions to the surveying list are sent a cover letter and survey via mail and when possible, via e-mail. This is performed to gather the necessary information from the new company so they can be added to the District's survey effort the following year. Follow up requests are made via telephone and e-mail to entities that do not respond. Historically there is little response from these businesses.

**Table: F-3 Other Recycling Programs/Other Sources of Data**

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

**Table F-4 Industrial Material Recovered in Reference Year**

Material	Quantity (tons)
Food	0
Glass	61
Ferrous Metals	17,288
Non-Ferrous Metals	19,112

Material	Quantity (tons)
Corrugated Cardboard	235
All Other Paper	10
Plastics	21
Textiles	0
Wood	195
Commingled Recyclables (Mixed)	76
Ash	0
Non-Excluded Foundry Sand	0
Flue Gas Disulfurization	0
Other (Aggregated)	0
<b>Total</b>	<b>36,998</b>

Source(s) of Information: Ohio Material Recovery Facilities and commercial Recycling; from Ohio EPA Solid Waste Management Web Page; Hancock County SWMD Annual District Reports

**Table F-5 Quantities Recovered by Program/Source**

Program/Source of Industrial Recycling Data	Quantity (Tons)
Industrial survey	36,998
Data from other recycling facilities	0
<b>Total</b>	<b>36,998</b>

Source(s) of Information: Table F-1

## B. Historical Recovery

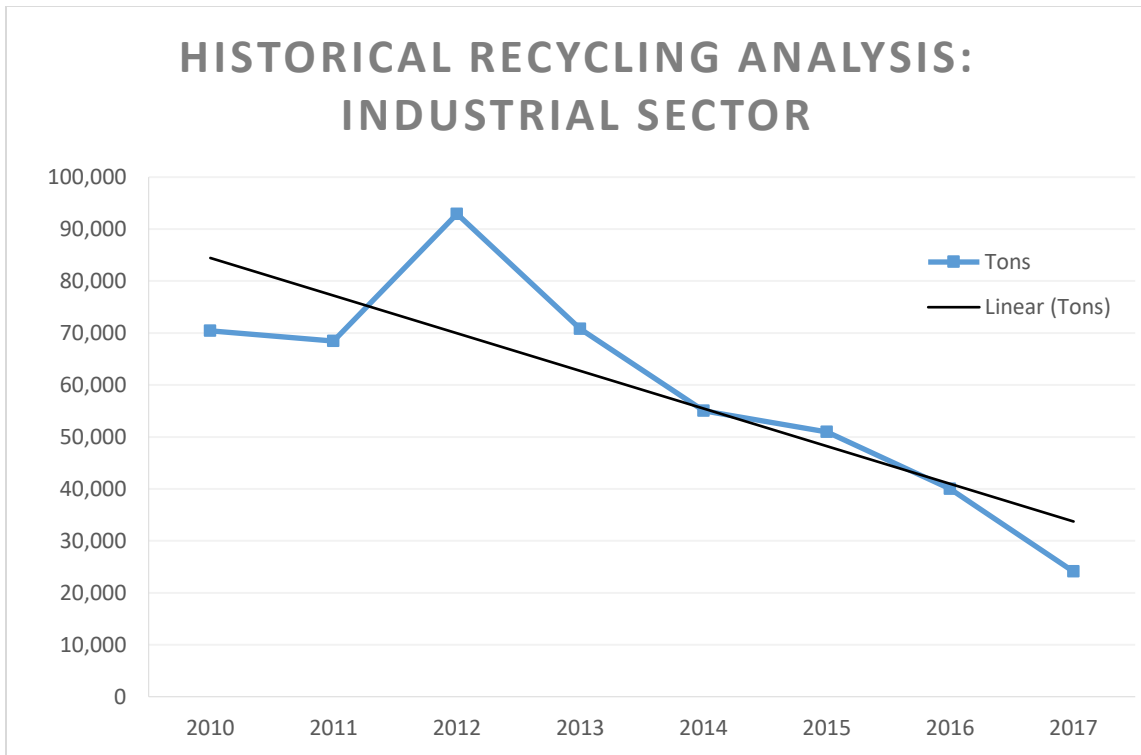
Total recovery includes recycling, composting, and waste reduction from incineration. The District's historical recovery for the industrial sector over an eight-year period spanning from 2010 through 2017 is presented in the following table.

**Table F-6 Historical Industrial Recovery by Program/Source**

Year	Tons	Annual Percentage Change	Annual Tonnage Change
2010	70,446		
2011	68,465	-3%	-1,981
2012	92,925	36%	24,460
2013	70,773	-24%	-22,152
2014	55,052	-22%	-15,721
2015	50,934	-7%	-4,118
<b>2016</b>	<b>40,003</b>	<b>-21%</b>	<b>-10,931</b>
2017	24,080	-40%	-15,923
2010 - 2017 Averages			
Average Annual Percent Change			-12%
Average Tons over 8 year Period			59,085
Average Annual Tonnage Change			-6,624

Looking back at the reported recovery of recyclables from the industrial sector, there is an overall decline noted during the historic review period. The highest reported recovery occurred in 2012 with 92,925 tons recovered. In 2017, the lowest recovery occurred with 24,080 tons being recycled. Since 2010, the average annual percentage change is a decrease of 12%.

If the historic review is limited to the period after the recession, 2010 forward, the current trend shows that the industrial sectors recovery efforts are increasing.



### C. Industrial Recovery Projections

It has become increasingly harder to quantify recycling efforts of the industrial sector through the annual surveys. In 2010 through 2013, the tonnage of recycling reported near or above 70,000 tons. The District believes that there are materials being recovered that are not captured through the current survey effort. The District intends to make a push to improve survey responses and recycling awareness through the planning period. It is expected that improved survey responses will better capture the recovery efforts in Hancock County.

To project the amounts recovered through the planning period the District used the Average Annual Percentage change from 2010 through 2016 (-7%). This rate of change was applied to Years 1 through 7, after that the amount recovered was held constant. The District feels that holding the recovery rate at year 7 rather than continuing the project a decrease is appropriate. As the District increases the survey efforts and reaches out to businesses previously not captured in surveys totals, the hope is that the industrial numbers will begin to rise. The following table presents the industrial sector recovery statistics and projections from 2016 to 2034.

Table: F-7 Industrial Recovery Projections by Program/Source

Year	Industrial Survey
2016	36,998
2017	24,080
2018	38,339
2019	35,273
<b>2020</b>	<b>32,453</b>
2021	29,858
2022	27,470
2023	25,273
2024	23,252
2025	21,393
2026	19,682
2027	19,682
2028	19,682
2029	19,682
2030	19,682
2031	19,682
2032	19,682
2033	19,682
2034	19,682



APPENDIX G  
WASTE GENERATION



**A. Historical Year Waste Generated**

The historical waste generation for the Hancock County SWMD (years 2011 through 2017) is shown in Table G-1 below. Generation has been calculated based upon the sum of reported disposal and recycling for each year. Between 2011 and 2017, per capita generation fluctuated between 14 ppd and 17.5 ppd. During this time period, the per capita generation rate for residential/commercial generation has ranged from a low of 7.6 pounds per person per day (PPD) in 2013 to a high of 10.5 PPD in 2014.

**Table G-1 Reference Year and Historical Waste Generated**

Year	Pop	Residential/ Commercial			Industrial		Excluded (tons)	Total (tons)	Per Capita Gen (ppd)	Annual % Change		
		Disposed (tons)	Recycled (tons)	Per Capita Gen (ppd)	Disposed (tons)	Recycled (tons)				Residential/ Commercial	Industrial	Excluded
2011	71,887	74,217	33,515	8.21	13,126	68,465	24,220	213,543	16.28	59%	-1%	116%
2012	75,056	75,897	19,845	6.99	13,290	92,925	23,816	225,773	16.48	-11%	30%	-2%
2013	75,130	73,040	25,108	7.16	8,748	70,773	19,924	197,593	14.41	3%	-25%	-16%
2014	75,773	76,445	49,470	9.11	9,564	55,052	18,396	208,927	15.11	28%	-19%	-8%
2015	75,753	75,307	30,490	7.65	10,751	50,934	24,809	192,291	13.91	-16%	-5%	35%
<b>2016</b>	<b>72,561</b>	<b>76,236</b>	<b>38,428</b>	<b>8.66</b>	<b>11,170</b>	<b>36,998</b>	<b>19,528</b>	<b>182,360</b>	<b>13.77</b>	8%	-17%	-21%
2017	73,187	87,159	28,816	8.68	15,244	24,080	74,284	229,583	17.19	1%	-23%	280%

Source(s) of Information: Ohio EPA Facility Data Reports  
Ohio EPA ADR Review Forms  
Hancock County SWMD Annual District Reports

Sample Calculations (2016):

Per capita generation rate =

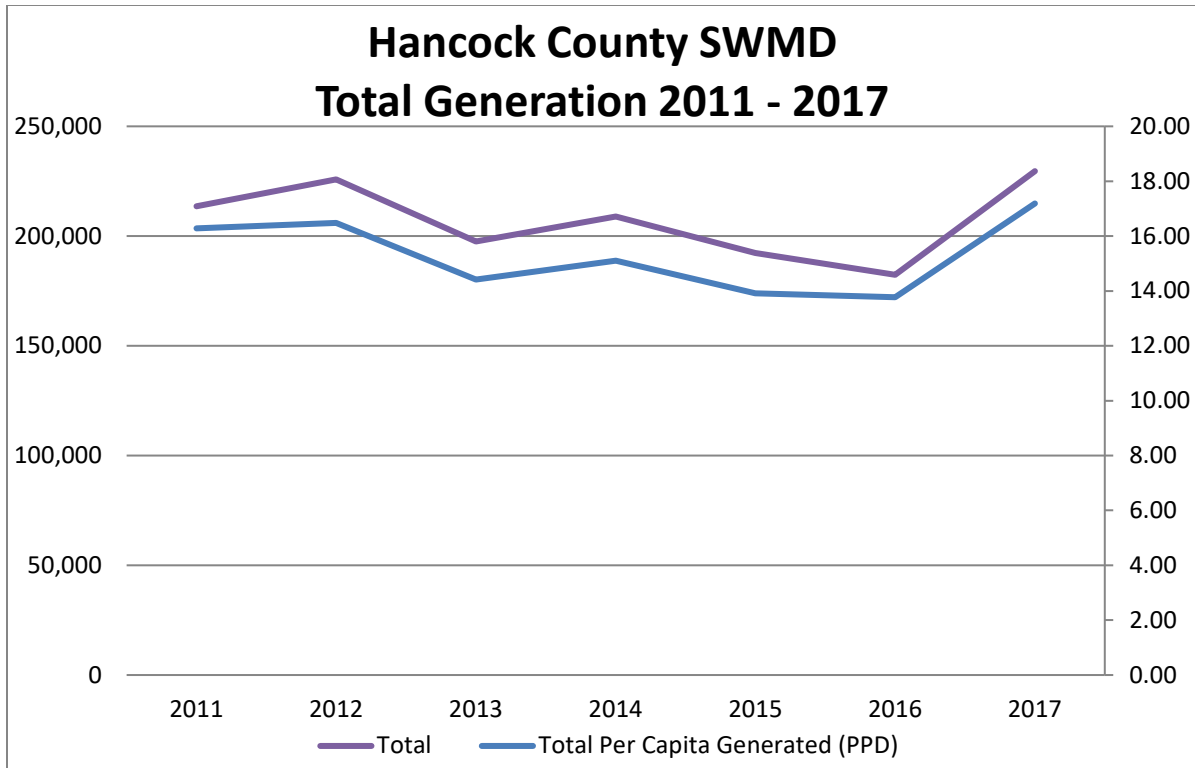
(tons generated/year) x (2000 lbs/ton) ÷ (365 days/year) x (population); (114,664 tons/year) x (2,000 lbs/ton) ÷ (365 days/year) x 72,561 people = 8.66 ppd

Annual percentage change =

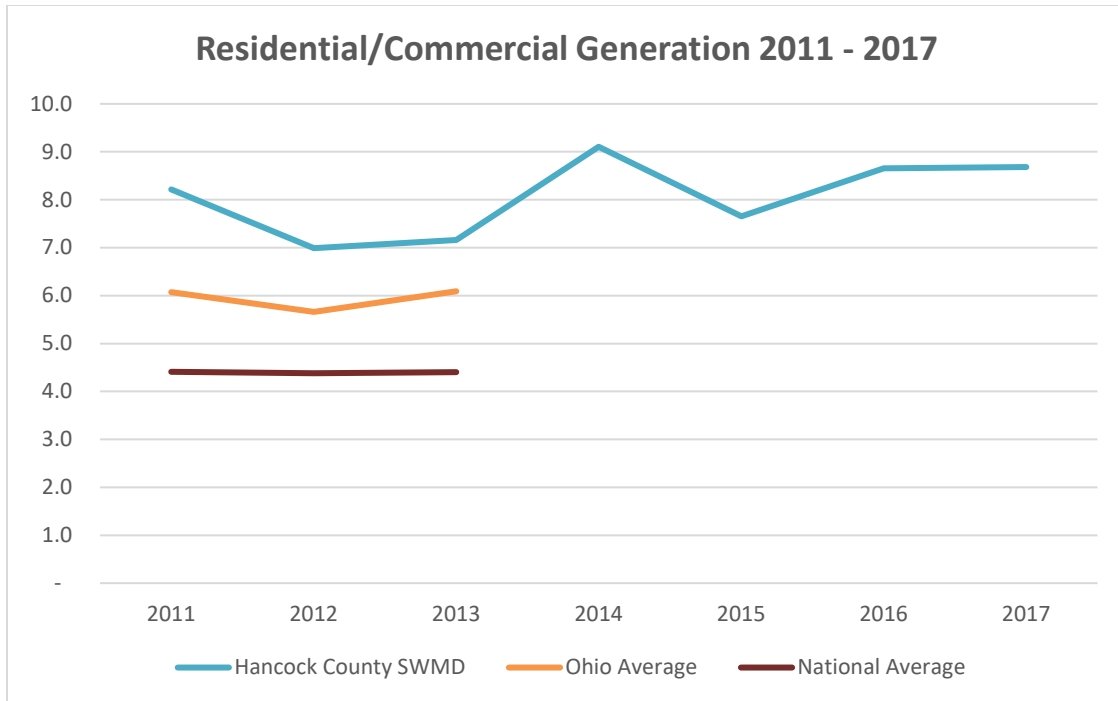
((new year – old year) ÷ old year) x 100%

((114,664 tons – 105,797 tons) ÷ 105,797 tons) x 100% = 8.0%

The Following figure shows a graphical representation of the Hancock County SWMD's waste generation from 2011 through 2017



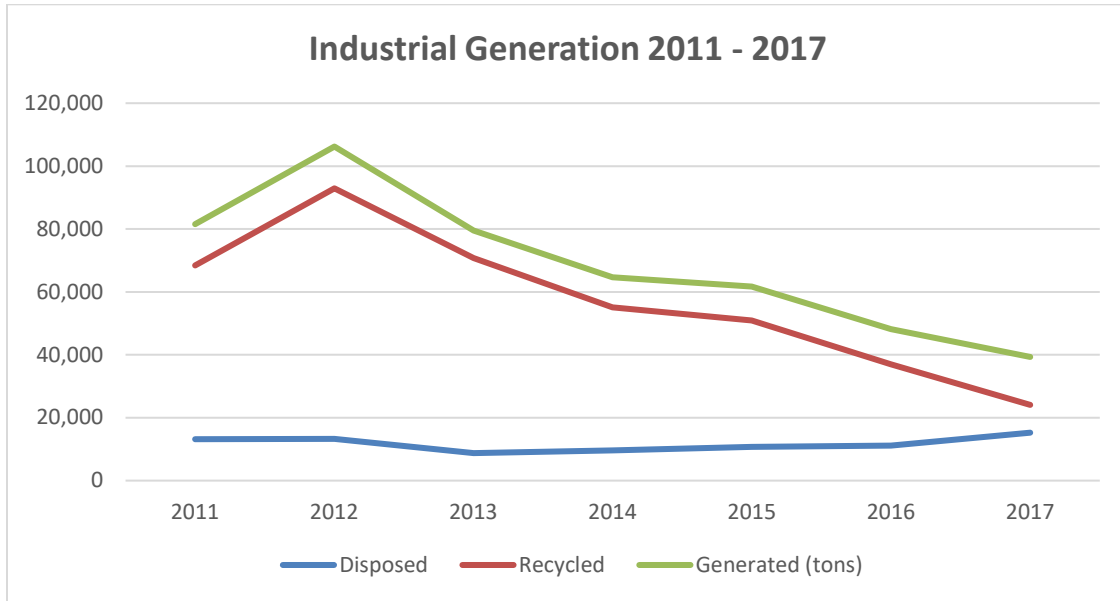
#### Residential/Commercial Waste



Hancock County and Ohio per capita generation rates trend higher than the national average throughout the historic review period. Hancock County's generation rate somewhat paralleled the Ohio rate until 2014. It is

not known what caused the spike in residential/commercial waste generation in 2014. The trend moving forward shows a significant decline in 2015 and then a more gradual increase for 2016 and 2017

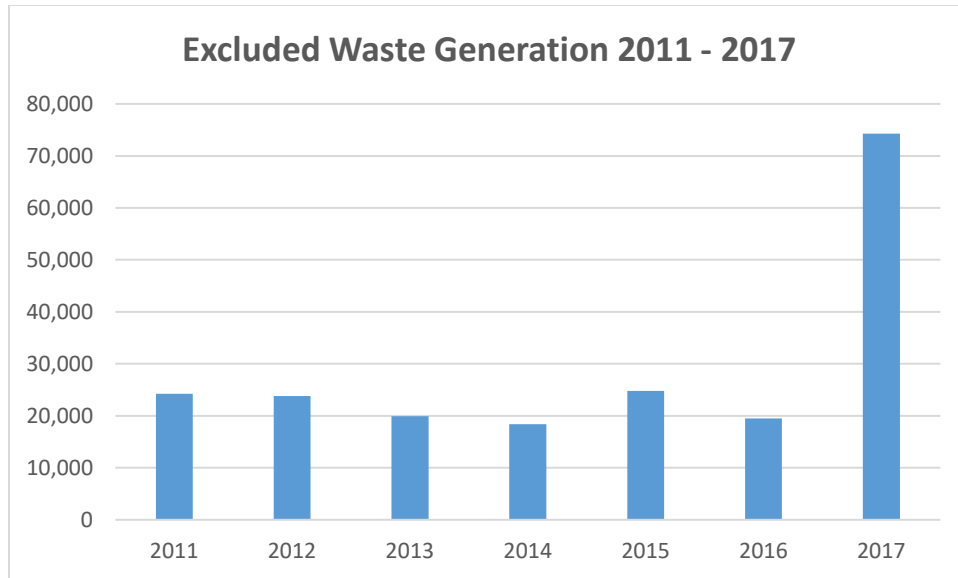
### Industrial Waste



Total industrial waste generation in Hancock County declined from 2012 to 2017. No specific economic cause for this decline has been identified. The total decline parallels the decline in industrial waste recycling. There could be a connection between this decline and the recycling numbers that are reported through the annual survey effort. Additionally Hancock County Industries may be generating less waste. Throughout the historic review period the recycling tonnage has been the greater percentage of industrial waste generated. Over the next five years of plan implementation, Hancock County SWMD will be looking to increase the opportunities for the industrial sector to recycle more of their materials as well as improve the response to the annual survey.

### Excluded Waste

Excluded waste was determined to be more than 10 percent of the total waste disposed in the reference year, and as a result, has been included in this analysis. The following figure indicates that the amount of excluded waste disposed from Hancock County has ranged from approximately just under 20,000 tons to approximately nearly 75,000 tons from 2011 to 2017. The majority of the excluded waste in Hancock County is demolition debris and soils. From 2011 to 2016, the volume of excluded waste remained steady. In 2017, the City of Findlay began an aggressive program to demolish structures in the flood plain of the Blanchard River. This program is the cause for the sharp rise in excluded waste volume.



## B. Generation Projections

Generation projections for the Hancock County SWMD have been developed in Appendices D, E, and F for disposal and recycling for the residential/commercial and the industrial sector. These projections which are presented in detail in Appendices D, E, and F, are summarized in Table G-2 below.

**Table G-2 Generation Projections**

Year	Pop	Residential/ Commercial			Industrial		Excluded Waste (tons)	Total (tons)	Annual Percentage Change			
		Disposal (tons)	Recycle (tons)	Per Capita Gen (ppd)	Disposal (tons)	Recycle (tons)			Residential/ Commercial	Industrial	Excluded	Total
<i>2016</i>	<i>72,561</i>	<i>76,236</i>	<i>38,428</i>	<i>8.66</i>	<i>11,170</i>	<i>36,998</i>	<i>19,528</i>	<i>182,360</i>	-----	-----	-----	-----
2017	72,181	87,159	33,258	9.14	15,244	24,080	74,284	234,025	5%	-18%	280%	28%
2018	72,221	74,081	33,344	8.15	16,114	38,339	74,284	236,162	-11%	38%	0%	1%
2019	72,261	74,122	33,433	8.16	17,033	35,273	74,284	234,145	0%	-4%	0%	-1%
2020	72,301	74,163	33,524	8.16	18,004	32,453	74,284	232,428	0%	-4%	0%	-1%
2021	72,359	74,223	33,618	8.17	19,031	29,858	74,284	231,014	0%	-3%	0%	-1%
2022	72,417	74,282	33,715	8.17	20,117	27,470	20,272	175,856	0%	-3%	-73%	-24%
2023	72,475	74,342	33,815	8.18	21,265	25,273	20,737	175,431	0%	-2%	2%	0%
2024	72,533	74,401	33,917	8.18	22,478	23,252	21,213	175,261	0%	-2%	2%	0%
2025	72,591	74,460	34,022	8.19	23,760	21,393	21,700	175,336	0%	-1%	2%	0%
2026	72,495	74,362	34,131	8.20	25,115	19,682	22,198	175,488	0%	-1%	2%	0%
2027	72,399	74,264	34,131	8.20	25,115	19,682	22,708	175,900	0%	0%	2%	0%
2028	72,303	74,165	34,131	8.21	25,115	19,682	23,229	176,322	0%	0%	2%	0%

Year	Pop	Residential/ Commercial			Industrial		Excluded Waste (tons)	Total (tons)	Annual Percentage Change			
		Disposal (tons)	Recycle (tons)	Per Capita Gen (ppd)	Disposal (tons)	Recycle (tons)			Residential/ Commercial	Industrial	Excluded	Total
2029	72,207	74,067	34,131	8.21	25,115	19,682	23,762	176,757	0%	0%	2%	0%
2030	72,111	73,968	34,131	8.21	25,115	19,682	24,308	177,204	0%	0%	2%	0%
2031	72,017	73,872	34,131	8.22	25,115	19,682	24,866	177,666	0%	0%	2%	0%
2032	71,923	73,775	34,131	8.22	25,115	19,682	25,437	178,140	0%	0%	2%	0%
2033	71,829	73,679	34,131	8.22	25,115	19,682	26,020	178,627	0%	0%	2%	0%
2034	71,735	73,582	34,131	8.23	25,115	19,682	26,618	179,128	0%	0%	2%	0%

APPENDIX H  
STRATEGIC EVALUATION



Appendix H is divided into fourteen separate sections to address each of the analyses described in Format 4.0. In general, the intent is to describe existing programs and discuss additional analysis that do not necessarily relate to existing programs. Existing programs have been evaluated qualitatively in terms of the suggestions included in Format 4.0 and identified strengths and weaknesses are summarized. For programs with available data, quantitative analysis is also included.

## **A. Residential Recycling Infrastructure Analysis**

The amount of solid waste reduced through source reduction, recycling, incineration, and composting for the residential/commercial sector in 2016 was 38,428 tons, as presented in Appendix E. All quantities presented in Appendix E were derived from quantities as reported through commercial and recycler surveys as well as District data on special collections.

### **1. Curbside Recycling**

Subscription curbside recycling is offered in Findlay, Arlington, Benton Ridge and Van Buren by AE Curbside Service. The program offers collection of commingled paper, cardboard, aluminum cans, steel cans, glass, and plastic containers. AE Curbside Service offers residential curbside recycling (weekly or biweekly collection), commercial recycling collection, and residential garbage hauling.

The focus of AE Curbside is curbside recycling; garbage hauling is offered as a supplement to the curbside recycling program. All residential customers of AE Curbside are provided an 18-gallon tote bin for their commingled recyclables and refuse is accepted in garbage bags, trash cans or 96-gallon container (provided for a fee). Commercial recycling customers receive similar tote bins for use in their office or facility. The interval of collection for commercial service varies and is determined based on the company's specific needs. The materials collected through the subscription curbside service were paper including mixed, office, news, magazines, brown paper, cardboard, and paper board; plastic bottles number 1 through 7; aluminum and steel food and beverage cans; and glass bottles all colors.

#### **Challenges to implementing curbside programs:**

- The area is served by many private haulers who share the market base; it is likely that contracting service in the larger municipalities will result in some smaller companies losing a substantial percentage of their customers. The loss of jobs is a concern to these communities.
- Resistance from residents accustomed to choosing their own hauler – Changing from individual subscriptions to a community-wide franchise is not an easy transition and has historically been very controversial when it happens. However, there is substantial evidence that once the transition is made to community-wide, non-subscription waste collection with curbside recycling, programs are popular with residents and result in substantial increases in the amount recycled. The per household fee for community-wide contracted waste collection with recycling included can be about the same as what residents were paying for waste only collection due to economies derived from competitive bidding and compact service areas.

In spite of past interest by several municipalities in curbside recycling and the District's assistance in researching ways to implement non-subscription curbside, none of the County's communities have successfully implemented a non-subscription curbside program. Private haulers that offered subscription curbside in the past either have gone out of business or have curtailed their efforts to extend curbside recycling to new customers.



Hancock County SWMD believes that curbside recycling, particularly when partnered with volume based waste collection rates, is the most effective method of reducing residential waste disposal. The District has continued to discuss curbside informally with municipal governments and has offered to provide information and technical assistance to any municipality or local hauler that expresses interest. However, the District has not been able to budget funds to provide any substantial assistance with the start-up or maintenance of curbside programs. Expanding curbside programs would have the greatest impact on reducing residential waste disposal in Hancock County.

## **2. Drop-Off Recycling**

### **Permanent Drop-Off Recycling Units**

In 2016, the District operated 17 permanent drop-off recycling locations plus Litter Landing to provide District residents with recycling opportunities. The units at each of these locations are permanent, modular units and are available 24 hours a day, seven days a week. Corrugated cardboard, newspaper, magazines, aluminum and steel cans, plastics and glass bottles and jars are collected at each unit. The units are serviced by staff from Litter Landing and the recyclable materials are taken to Litter Landing for processing. Each permanent drop off is serviced at least twice a week or more often as necessary. Availability of the permanent recycling units is advertised through newsletters and brochures, on the District website, and at the District booth at special events.

*Strengths of the program:* The permanent recycling units provide residents with additional opportunities to recycle and are an integral part of the District's implementation of State Plan Goal #1, the "access goal," within the District.

*Weaknesses of the program:* The collection from the permanent recycling location is a labor intensive process and significant expansion of the program is somewhat limited by the processing constraints at Litter Landing.

### **Mobile Drop-Off Recycling Units**

The District provides service to a network of three rural locations in villages/townships in the District and two urban locations in the City of Findlay. Roll off boxes are available at each site at a regularly scheduled time once or twice a month. Cardboard, paper, magazines, aluminum and steel cans, plastic containers, and glass are collected at all sites. The roll offs are serviced by staff from Litter Landing and the recyclable materials collected are taken to Litter Landing for processing.

*Strengths of the program:* The program provides residents with additional opportunities to recycle and are an integral part of the District's implementation of State Plan Goal #1, the "access goal," within the District.

*Weaknesses of the program:* Much like the permanent recycling units, maintaining the locations is a very labor intensive process. Additionally, the demand for the program has historically exceeded the availability.

### **Drop-off Recycling Bins Provided by Hancock County SWMD**

The Hancock County SWMD currently provides 18 full-service drop-off recycling locations and 5 part time drop-off locations throughout Hancock County. As of June 2020, bins are situated at the following locations:

Findlay City – Jacobs Primary

Findlay City – Owens Community College  
Findlay City – Chamberlain Hill  
Findlay City – Litter Landing  
Findlay City – University of Findlay (College Street)  
Findlay City – University of Findlay (Frazer Street)  
Findlay City – St. Michael's School/Church  
Allen Township – Village of Van Buren  
Amanda Township – Village of Vanlue  
Biglick Township – Township Hall  
Biglick Township – West Independence United Methodist Church  
Blanchard Township – Benton Ridge Village  
Delaware Township – Riverdale School  
Jackson Township – Township House  
Liberty Township – Hancock County Educational Service Center  
Madison Township – Village of Arlington  
Portage Township – Township House  
Union Township – Rawson Community Park  
Mobile Drop Off – McComb  
Mobile Drop Off – Mount Cory  
Mobile Drop-Off – Mt. Blanchard  
Mobile Drop-Off – First Presbyterian Church  
Mobile Drop-Off – Trinity Lutheran Church

The District maintains large compartmented roll-off recycling containers at these locations and processes the materials at the Litter Landing facility. For convenience, the containers are placed on public property near township or village facilities like township garages and village parks. It is up to the individual townships and villages to determine the location for the drop-off containers. A list of the drop-offs, including additional details about the location of the facilities, is included in Appendix B. With the exception of the mobile facilities, the drop-off locations are available to the general public 24 hours per day, 7 days a week. The schedule for the mobile facilities is maintained on the District's webpage.

The Hancock County SWMD monitors the drop-off container sites to keep the sites clean and to ensure the containers are emptied when full. Additionally, the District relies on the villages and townships to informally monitor the use of the containers to discourage illegal dumping.

The District promotes use of the containers through the District's public education and awareness programs. The sites are listed on the District's webpage and in District publications. Educational presentations intentionally address the program and direct the audiences to sites that are convenient for that group of people.

The materials that are currently being collected are #1 and #2 plastic, newspaper, magazines, phone books, paper grocery bags, cereal and snack boxes, flattened cardboard, clean pizza boxes, aluminum cans, steel cans tin cans corrugated cardboard and cartons for juice, soy milk, broth, cream, etc.

Throughout the review period, Hancock County SWMD has not had issues with contaminated loads or open dumping at the drop off locations. The Hancock County residents that use these facilities consistently follow the posted signs and keep the areas neat. The District has and will continue to educate the citizens of Hancock County on the appropriate materials to recycle to ensure the continued success of the program.

Because this program provides access to recycling throughout Hancock County, the District believes it is important to continue the operation of the program at its current level, and if there is increased community interest and available budget, additional locations will be considered.

### **3. Recycling through private haulers, and private scrap recyclers**

Hancock County is served by a number of waste haulers and private scrap recycling industries which are located both in and out of Hancock County. Several waste haulers, not already mentioned by name in this section of the Plan, provide recycling services for commercial and industrial customers (See Appendix B). Most scrap recyclers specialize in certain types of materials—metals, paper, or plastic. Some serve primarily residential and small commercial customers and others specialize in industrial materials. For the most part, the scrap yards in Hancock County have not responded to recycling surveys. The industrial recycling reported in this Plan is from surveys completed by manufacturers. Any reported recycling of residential/commercial materials through private haulers and scrap yards in Hancock County is listed in Appendix B.

Additional effort to reach out to the scrap yards may be necessary through the coming planning period.

### **4. Material Recovery Processing Facilities**

Recycling cannot be accomplished without facilities that sort, process, and market the recyclables that are collected. Scrap yards provide these services for materials that are relatively homogeneous. Commingled recyclables are usually separated and then processed at a materials recovery facility. Materials that are collected through the District's Drop-off program are processed at the District's Litter Landing. Additionally, H&O Recycling collects and processes materials they collect in Hancock County. Some materials like electronics and tires may be managed by other processors.

#### **Litter Landing**

Litter Landing is the material recovery facility (MRF) owned by the Hancock County Board of Commissioners located in the City of Findlay. The facility is operated by the District and consists of processing and donation centers. There are four vertical balers, one horizontal baler, a can sorter and two glass crushers at the facility that are used to process incoming material. All material that is collected through community-based programs, such as the drop-off recycling locations, is brought to Litter Landing for processing. Material from individual residents and commercial and industrial businesses is also accepted and processed at the facility.

Materials that are collected and processed at Litter Landing are shipped to at least ten major vendors located in Ohio and Indiana. The District maintains a brochure that lists all of the materials that are accepted at Litter Landing, how the materials should be prepared prior to dropping them off, and the hours that the donation center is open to the public. This information is also available on the District website. Tours of Litter Landing are available to groups and organizations upon request.

*Responsible entities:* The District provides the funding for this activity and District staff plan, promote, and oversee its implementation.

*Service area that benefits:* Litter Landing is available to all residents and businesses in Hancock County.

*Strengths of the program:* Litter Landing provides for the collection of a wide range of materials from residential and commercial sources.

*Weaknesses of the program:* There is significantly more demand than the facility can accommodate. The current processing and storage capacity are maximized and the layout is not amenable to significant expansion, especially to allow proper access for large trucks from industry and commercial businesses. Additionally, Litter Landing is expensive to operate.

## **5. Yard Waste Management**

The Hancock County SWMD does not operate any yard waste or compost facilities. Some communities within the district operate compost facilities for their residents. The composting facilities that accept yard waste generated in Hancock County are listed in Appendix B.

### **Don't Bag It – Backyard Composting Program**

This program is focused on (1) encouraging residents to leave grass clippings on their lawns instead of bagging the clippings for disposal and (2) promoting backyard composting as a management method for yard waste and other biodegradable materials. It is primarily a public education and awareness program that is carried out through promotional opportunities (community events and presentations) and a brochure that is maintained by the District. The program is promoted through presentations to community adult organizations and the brochure is made available at special events and upon request at the District office. In addition to these District activities, the Ohio State University Extension Hancock County Office offers workshops on backyard composting through their Master Gardeners program.

*Responsible entities:* The District provides the funding for this strategy and District staff is responsible for its promotion.

*Service area that benefits:* This program is directed to all residents of Hancock County.

*Strengths of the program:* This program targets one of the materials comprising the largest percentage of the solid waste stream.

*Weaknesses of the program:* Because it is educational in nature, no specific quantities of material reduced or recycled can be attributed to the program.

### **Christmas Tree Recycling**

This program is offered from December 26 through mid-January to residents of Hancock County. There are drop-off locations established around the County where residents can take their used Christmas trees. Within the City of Findlay, the City collects the trees from residents and transports them to the designated drop-off locations. Collected trees are either chipped for use as mulch or are used to create wildlife habitat.

*Responsible entities:* The District provides the funding for advertising the event and the cost of hauling; District staff plan and oversee its implementation. The City of Findlay provides collection service to residents of the City. Chipping service is provided as a donation by the Hancock-Wood Electric Company.

*Service area that benefits:* This program is available to all residents of Hancock County.

*Strengths of the program:* The program provides a management alternative for a bulky and difficult to manage waste stream.

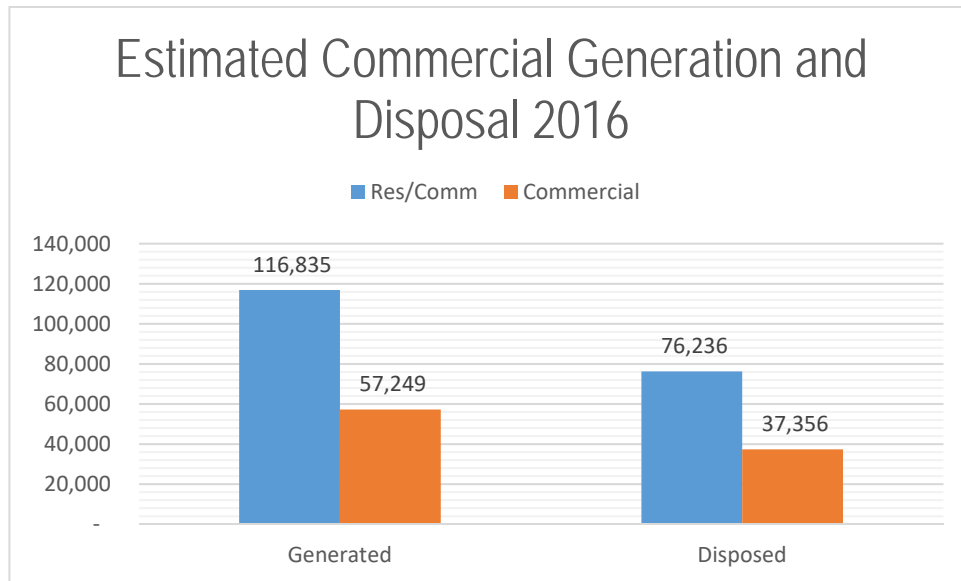
*Weaknesses of the program:* It has historically been difficult to obtain an accurate count of trees collected and calculate a quantifiable weight of material managed through the program.

## PROGRAM SUMMARY

- Many recycling opportunities exist for the residents of Hancock County. The drop off programs offered by the Hancock County SWMD provide broad coverage of the county. As opportunities arise to expand this program, the District will continue to evaluate existing and new locations to determine the best sites for material collection.
- The addition of curbside recycling to other communities would likely increase the collection of recyclables. But these programs have proven difficult to implement.

### B. Commercial/Institutional Sector Analysis

The Hancock County SWMD 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, a study conducted for the U.S. Environmental Protection Agency which was published in July 2013 estimated that disposed tonnage from commercial sources ranged from 38 to 59 percent of the total residential/commercial disposal, with an average of 49 percent. (See "MSW Residential/Commercial Percentage Allocation – Data Availability", U.S. Environmental Protection Agency, Office of Resource Conservation and Recovery, July 2013) Applying this average percentage to the total Hancock County residential/commercial disposal and generation tonnage results in an estimated 57,250 tons of commercial waste generated and an estimated 38,800 tons of commercial waste disposed in 2016.



The general types of materials generated as commercial waste are paper/paperboard, metals, and plastics. Comparing residential to commercial, the commercial sector will typically produce more of these wastes than the residential sector. Other waste materials generated are food and yard waste. Arguably, these compostable materials are not recovered at the level of highest potential. Plastics, wood and textiles are also disposed at a rate that suggests additional recovery from the commercial sector is possible.

Hancock County includes several large commercial businesses and institutions which could be the focus of greater recycling. The following table lists several companies and institutions.

**Large Commercial/Institutional Employers**

Company Name	Type
Blanchard Valley Health System	Health Care
Hearthside Food Solutions	Food Science & Agriculture
Lowes Distribution Center	Logistics & Distribution
Kohl's Distribution Center	Logistics & Distribution
ADP Company	Information Services

The Hancock County SWMD's Litter Landing, is open to residents and businesses within Hancock County. This facility is discussed in this Appendix. In summary, the facility accepts the following materials from residents and businesses:

- |               |                                |             |
|---------------|--------------------------------|-------------|
| Aluminum cans | Steel/tin cans                 | Paper       |
| Cardboard     | Plastics #1, #2, #3, #5 and #7 | Electronics |
| Appliances    |                                |             |

**Commercial, Governmental, and Organizational Recycling**

In addition to accepting recyclables at Litter Landing, the District assists area commercial businesses, governmental offices, and other organizations with setting up in-house recycling programs and helps those entities find markets or other outlets for the recyclable materials collected. The ultimate aim of the program is to minimize final waste disposal for participating entities. To achieve this goal, the District provides technical assistance and directs participating entities to existing recycling outlets. In some cases, staff from Litter Landing will pick up recyclables and deliver them to Litter Landing.

*Responsible entities:* The District provides the funding for this activity and District staff oversees its implementation and provide technical assistance as requested.

*Service area that benefits:* This program benefits all commercial, governmental, and organizational entities within Hancock County.

*Strengths of the program:* Litter Landing and the recyclable pick up service are highly utilized by commercial businesses and other organizations and contribute a significant portion of the recyclables processed at Litter Landing.

*Weaknesses of the program:* Outside of the pick-up done by Litter Landing staff, it is very difficult to obtain quantities of materials recovered from commercial businesses and other organizations. The District believes the amount of material actually being recovered is greater than what is being reported.

**PROGRAM SUMMARY**

The commercial businesses and institutions in Hancock County are served by the Hancock County SWMD, and other private companies located in Hancock County. Current recycling data indicate that this sector is participating in recycling activities, but a poor response to the district survey may imply that there is additional recycling taking place that is not being tracked. Hancock County SWMD believes that there is an opportunity to improve the districts recycling activity tracking.

### C. Industrial Sector Analysis

In 2016, Hancock County industries recycled nearly 37,000 tons of waste, while disposing of 11,170 tons. The tons of industrial waste disposed and recycled, including the types of materials recycled, are discussed in some detail in Section 7, Diversion Analysis.

Hancock County is home to many manufacturers several of which are listed in the following table.

Company Name	Type
Marathon Petroleum Co., LLC	Automotive
Cooper Tire & Rubber Co.	Advanced Manufacturing
Nissin Brake Ohio Inc.	Automotive
Sanoh America	Automotive
Ball Metal Beverage Packing	Advanced Manufacturing
Whirlpool Corporation	Advanced Manufacturing

Although waste reduction programs are being implemented by many industries as part of over-all programs to be efficient and competitive, waste reduction is often difficult to quantify. The survey responses for waste reduction in Hancock County have been poor. Increased outreach to the industries in the County is a goal for this planning period. With additional communication, the District hopes to improve the reporting for the industrial sector so that more accurate numbers can be achieved.

Industry waste reduction and recycling programs are extremely varied depending upon the type and size of the industry, the waste stream it generates, and the availability of haulers and recyclers to assist the industry in the collection and marketing of materials. In general, the same types of programs and assistance are offered to commercial businesses and to industrial waste generators.

The Hancock County SWMD is prepared to provide the following assistance to industries:

- Identify and disseminate information on recycling opportunities and service providers.
- Provide assistance to local businesses in identifying opportunities for grants or low-interest loans from federal and state sources to fund pollution prevention.
- Provide education and technical assistance including guidelines and methodology for performing waste audits and communicate the availability of this type of assistance to business and industry.
- Promote participation in OMM, the Ohio Materials Marketplace.

District staff answer questions, usually by phone, from businesses about how and where to recycle. The District uses the annual industrial waste and recycling survey to contact manufacturers. The survey includes a box to check for requesting additional information on recycling and waste reduction so that the District can identify industries that may want assistance.

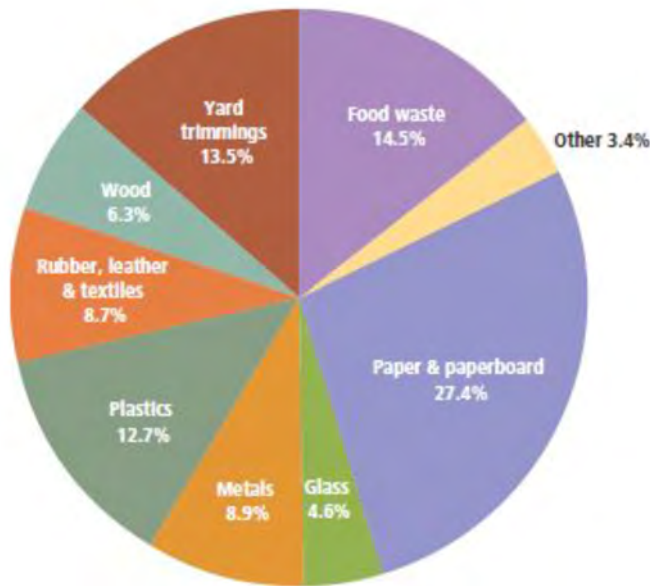
### PROGRAM SUMMARY

The industries located in Hancock County are served by the Hancock County SWMD, and other private companies located in Hancock County. Current recycling data indicate that this sector is participating in recycling activities, but a poor response to the district survey may imply that there is additional recycling taking place that is not being tracked. Hancock County SWMD believes that there is an opportunity to improve the District's recycling activity tracking, and will plan to focus on the companies identified above as the largest industrial employers in Hancock County.

**D. Residential/Commercial Waste Composition Analysis**

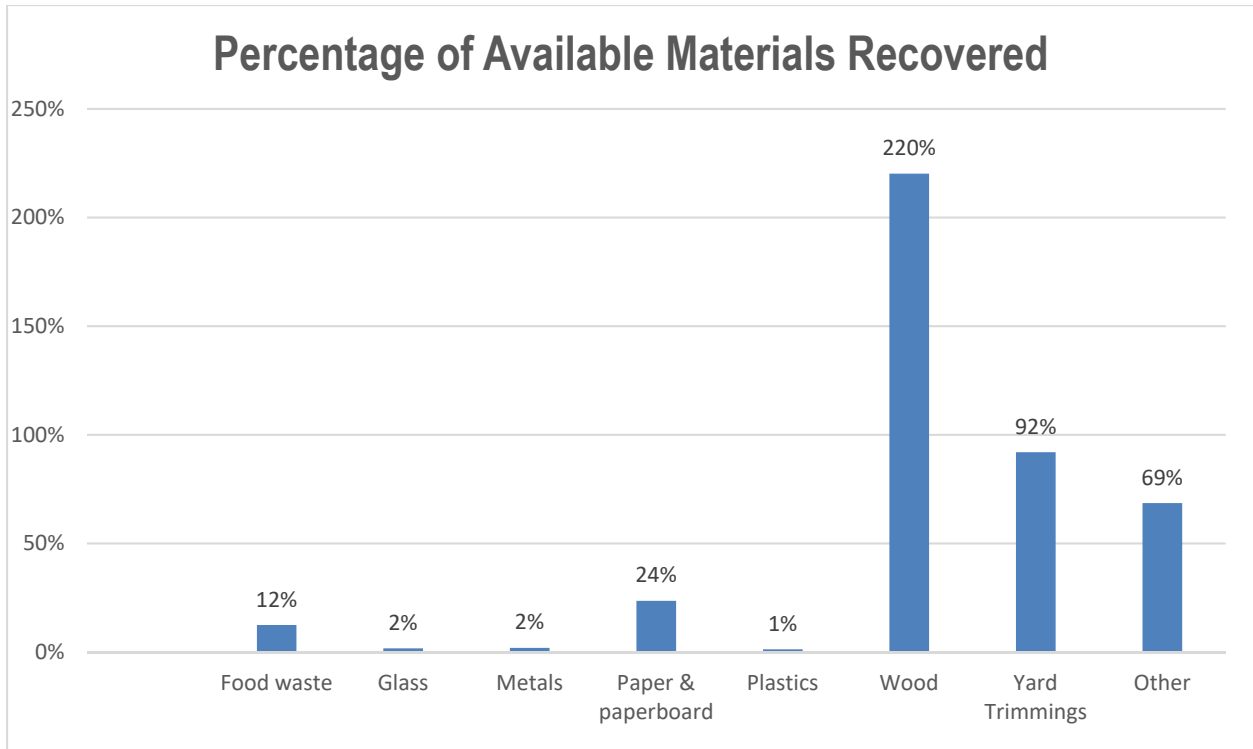
According to U.S. EPA, paper (which includes cardboard), food, yard waste, and plastics are the categories comprising the highest percentage of the residential/ commercial waste stream before any recycling takes place (see following figure).

**Total MSW Generation by Material – 2012**



In 2016, the Hancock County SWMD recovered more than 6900 tons of fiber (i.e., cardboard and all other paper), 721 tons of scrap tires, and 13,000 tons of yard waste. Small amounts of plastics and food were recovered for recycling or composting. Applying the national waste composition percentages to total residential/commercial sector generation provides estimates of the total tonnage potentially available for recovery in Hancock County (These estimates likely overestimate the tonnages which could reasonably be recovered from the residential/commercial waste stream due to contamination and other factors). The following figure shows the percentage of materials recovered in 2016 from data collected by the District.





Roughly 92 percent of the available yard waste, 24 percent of available paper and cardboard, and 12 percent of available food waste were recovered from the waste stream in 2016, while very small percentages of available plastics, glass and metal were recovered.

The wood wastes recovered are represented by a recovery rate over 200%. This is likely a result of the large commercial distribution centers located in Hancock County (Lowe's, Home Depot, Kohl's, etc.) and the pallet wastes generated. These businesses increase the wood waste generation in Hancock County above the national average.

#### **E. Economic Incentive Analysis**

The Hancock County SWMD currently does not fund any economic incentive-based programs.

Given the rural nature of the District and the overall budget of the, the Hancock County SWMD does not feel it is in a position to create economic incentive programs. The District does acknowledge that it can continue to offer technical assistance to support economic incentive programs especially in the residential/commercial sector.

#### **F. Restricted and Difficult to Manage Waste Streams Analysis**

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

##### **Scrap Tires – Tire Collection Days & Landfill Collection**

At the Tire collection day held in 2018, 1,563 tires were collected. This event is typically held once a

year during the summer. In addition, tires are accepted year-round at the Hancock County Sanitary Landfill and are transported to scrap tire processors. The cost for tire disposal at the landfill includes the regular fees plus a scrap tire surcharge.

Only non-commercial generators are permitted to bring tires to the Tire Collection Days. Although residents are not charged to participate, each participant must provide proof of their residency in Hancock County. Furthermore, each participant is limited to four tires, each vehicle is limited to eight tires, and all tires must be 17 inches or less in diameter and be off the rim. Cooper Tire & Rubber co-sponsors the event, providing labor and collection trailers. Cooper Tire & Rubber also transports the collected tires to a scrap tire processor. As with all of the collection programs, the Tire Collection Days are promoted via news releases, advertisements in the *Findlay Courier*, the District's booth at special events, the District website and various on-line community calendars.

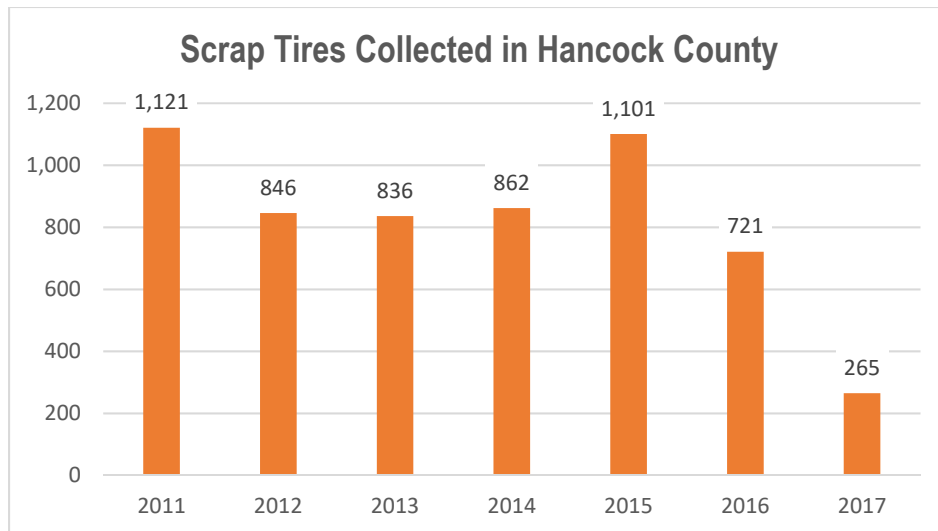
**Responsible entities:** The District provides funding for the processing of the tires collected at the Tire Collection Days and also provides advertising for the events. District staff plan and oversee implementation of the events. Cooper Tire & Rubber provide labor, trailers, and hauling services. Community volunteers also provide labor. Collection at the landfill is overseen by staff of the Hancock County Sanitary Landfill.

**Service area that benefits:** Tire Collection Days and the landfill are open to all Hancock County residents.

**Strengths of the program:** The Tire Collection Days and the ongoing collection at the landfill provide much needed outlets for a waste stream that is difficult to manage through other means.

**Weaknesses of the program:** While the landfill collection does accept truck and tractor tires for a fee, these larger tires are not accepted at the Tire Collection Days. The inclusion of truck and tractor tires at the Tire Collection Day would increase participation and the tonnage of tires collected.

The total tons of scrap tires recovered from the Hancock County SWMD from 2011 to 2017 as reported to Ohio EPA is shown in the following figure.



#### Household Hazardous Waste – Litter Landing HHW & Paint Collection (2010)

Household hazardous wastes (HHW) are those wastes produced in our households that are hazardous in nature, but are not regulated as hazardous waste under federal and state law. A few examples of HHW are pesticides, pool chemicals, drain cleaners, degreasers, and solvents. In the Plan under which the Hancock County SWMD is currently operating a comprehensive HHW collection is an optional program based on the availability of funds. The District has been successful at maintaining the program and anticipates that it will continue into the planning period covered by this update. Currently the collection is held on Mondays from early April through August. Items collected included latex paint, oil based paint, aluminum paint, varnishes and stains, paint thinner, aerosols, cleaners, pesticides, flammable solids, acids, bases, oxidizers, mercury, propane cylinders, fluorescent bulbs and antifreeze/motor oil.

CFL bulbs and rechargeable batteries can be dropped off at collection boxes located in Lowes and Home Depot stores.

There is no charge to participate, however participants are required to provide proof of residence in Hancock County. Labor and collection services are provided by a contractor. Promotion of the event is achieved via news releases, advertisements in the Findlay Courier, information provided at the District's booth at special events, and various on-line community calendars.

*Responsible entities:* The District provides the funding for the program and District staff oversee its implementation. Labor for the collection day is provided by Litter Landing staff and a hazardous waste contractor.

*Service area that benefits:* This program is available to all residents of Hancock County.

*Type of material reduced/recycled:* Household hazardous wastes, such as paint, paint thinners, antifreeze, fuels, and mercury, are the materials targeted by this program.

*Strengths of the program:* This collection event is very popular with District residents and provides a safe management option for one of the more dangerous portions of the residential/commercial waste stream.

*Weaknesses of the program:* The program is relatively expensive to provide.

**Difficult to manage wastes** (*addresses Goal #2 of the State Solid Waste Management Plan*)

Lead acid batteries, HHW, and yard waste are specifically addressed in the State Solid Waste Management Plan because they are banned from landfills (tires, lead acid batteries, and segregated yard waste), or may increase the hazards of landfilling (HHW). In addition to these materials, there are other materials that pose disposal problems. Appliances and electronic components are bulky and may contain hazardous components.

- **Lead acid batteries**

At the present time, the private enterprise system for collecting batteries seems to be working smoothly. Virtually all area automotive supply stores and repair shops accept old batteries in exchange when new batteries are purchased and many use a deposit system. Several area scrap recyclers buy batteries.

- **Appliances**

Large appliances are accepted year-round at the Hancock County Sanitary Landfill as well as Litter Landing and then transported to scrap metal processors. The cost for appliances at the landfill includes the regular fees plus a white goods surcharge.

*Responsible entities:* Collection at the landfill is overseen by staff of the Hancock County Sanitary Landfill. Collection at Litter landing is overseen by Litter Landing staff.

*Service area that benefits:* This program is available to all residents of Hancock County.

*Strengths of the program:* This program provides a management alternative for a bulky and difficult to manage waste stream. In addition, as the collection is performed at the landfill, and the material collected is sold at market value, there are no District costs associated with the program.

*Weaknesses of the program:* Although the landfill accepts appliances year round for a fee, this program does not provide residents with a low cost option for managing appliances.

- **Electronics**

The District accepts electronics at Litter Landing for District residents. This provides a management alternative for electronics, such as computer monitors, computers, and cell phones.

*Responsible entities:* The District provides the funding for the event and District staff plan and oversee its implementation. Labor for the collection day is provided by a contractor.

*Service area that benefits:* This program is available to all residents of Hancock County.

*Strengths of the program:* This collection is very popular with District residents and provides a safe management option for this portion of the residential/commercial waste stream.

*Weaknesses of the program:* There are costs to ensure these materials are managed appropriately.

## G. Diversion Analysis

The amounts of waste which were disposed or diverted from disposal through recycling from 2011 to 2016 are shown in the table below. Diversion in the residential/commercial sector has ranged from nearly 20,000 tons to 49,000 tons. Recycling in the industrial sector has ranged from 37,000 tons to 93,000 tons and appears to be declining in the recent years.

Year	Pop	Residential/ Commercial		Industrial		Excluded	Total	Per Capita Gen (ppd)
		Disposed	Recycled	Disposed	Recycled			
2011	71,887	74,217	33,515	13,126	68,465	24,220	213,543	17.00
2012	75,056	75,897	19,845	13,290	92,925	23,816	225,773	17.46
2013	75,130	73,040	25,108	8,748	70,773	19,924	197,593	14.92
2014	75,773	76,445	49,470	9,564	55,052	18,396	208,927	16.54
2015	75,753	75,307	30,490	10,751	50,934	24,809	192,291	14.79
<b>2016</b>	<b>72,561</b>	<b>76,236</b>	<b>38,428</b>	<b>11,170</b>	<b>36,998</b>	<b>19,528</b>	<b>182,360</b>	<b>14.16</b>

### Residential/Commercial Sector

The Hancock County SWMD residential/commercial recycling (or diversion) rate during the past 6 years has varied between 30 and 48 percent (see the following table). The per capita diversion rate as measured in terms of pounds per person per day (PPD) has mirrored these variations as well.

**Residential/Commercial Diversion Rates: 2012-2016**

Year	Diversion Rate	
	Percent	Per Capita (PPD)
2011	31%	2.55
2012	21%	1.45
2013	26%	1.83
2014	39%	3.58
2015	29%	2.21
2016	34%	2.90

The Hancock County SWMD experienced an increase in residential/commercial recycling tonnage in 2014. In 2015, there was a drop in the residential commercial recycling but it came back up again in 2016. During the same time frame the disposal tonnages have remained steady with only a one or two thousand ton swing each year. This data set contained too few data points to determine a statistically significant relationship between recycling and disposal.

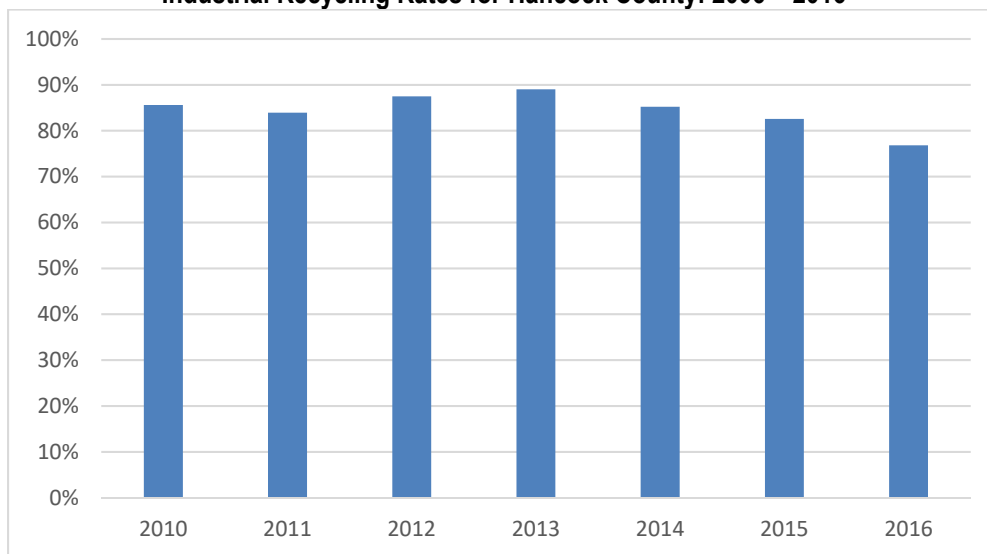
The current Plan projected 33,540 tons of residential/commercial recycling (including composting) for 2016. The residential/commercial sector rates projected in the current plan for 2016 were 33 percent and 2.52 PPD. The actual percentage and per capita diversion rates are close to the projected values. The actual residential/commercial sector recycling rate for 2016 was 34% and the per capita, PPD was 2.90.

The Hancock County SWMD has met Goal #2, which requires a minimum diversion rate of 25 percent for residential/commercial sector generated waste.

**Industrial Sector**

The industrial recycling rates in the district for 2010 through 2016 are shown in the following figure. The Hancock County SWMD has achieved an industrial recycling rate above the 66 percent goal in the *State Solid Waste Management Plan* in each of these years.

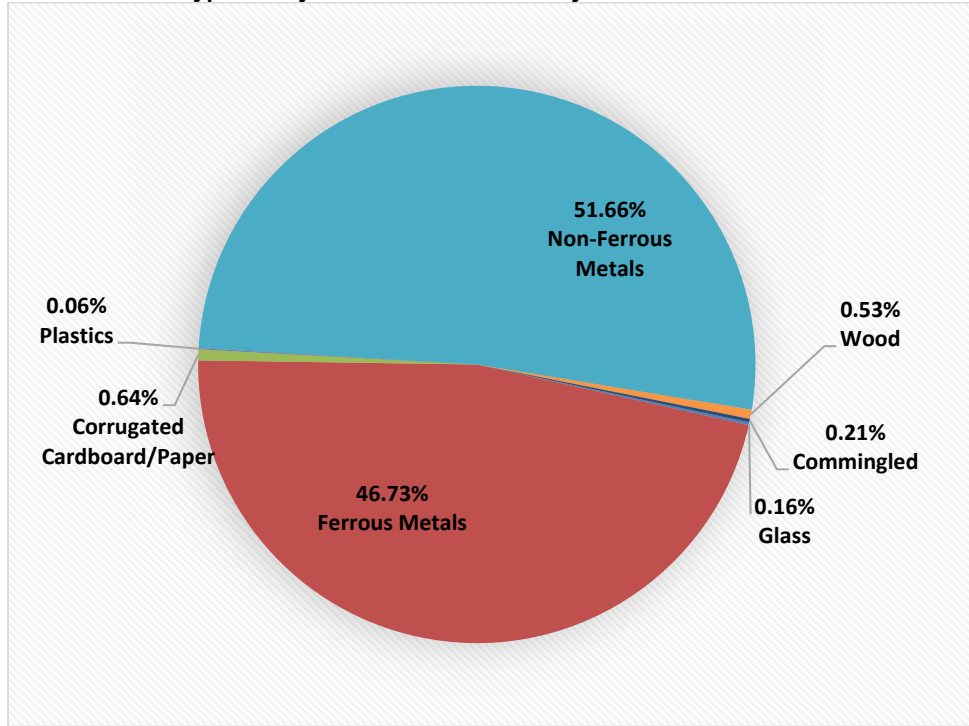
**Industrial Recycling Rates for Hancock County: 2006 – 2016**



Compared to the current Plan which projected 69,202 tons of industrial recycling for 2016, the actual amount diverted in the reference year was 36,998 tons. The current plan also projected an industrial recycling rate of 86% for 2016, which is higher than the actual 2016 recycling rate of 77%.

As shown in the following figure, ferrous and non-ferrous metals represent the material types recycled in greatest amounts in Hancock County for the industrial sector.

**Industrial Material Types Recycled in Hancock County: 2016**



#### H. Special Program Needs Analysis

Format v4.0 defines Section 8 as programs which are specifically funded under the authority granted in Ohio Revised Code Section 3734.57(G)(3) through (9). These program areas of allowable uses for SWMD funds collected under ORC Section 3734.57 are as follows:

- Section 3734.57(G)(3). Boards of Health, Solid Waste Enforcement
- Section 3734.57(G)(4). Counties, Road/Facility Maintenance
- Section 3734.57(G)(5). Boards of Health, Water Well Sampling
- Section 3734.57(G)(6). Out-of-state Waste Inspection
- Section 3734.57(G)(7). Enforcement of Anti-littering
- Section 3734.57(G)(8). Boards of Health, Training & Certification
- Section 3734.57(G)(9). Cities and Townships, Road maintenance, public services, etc.

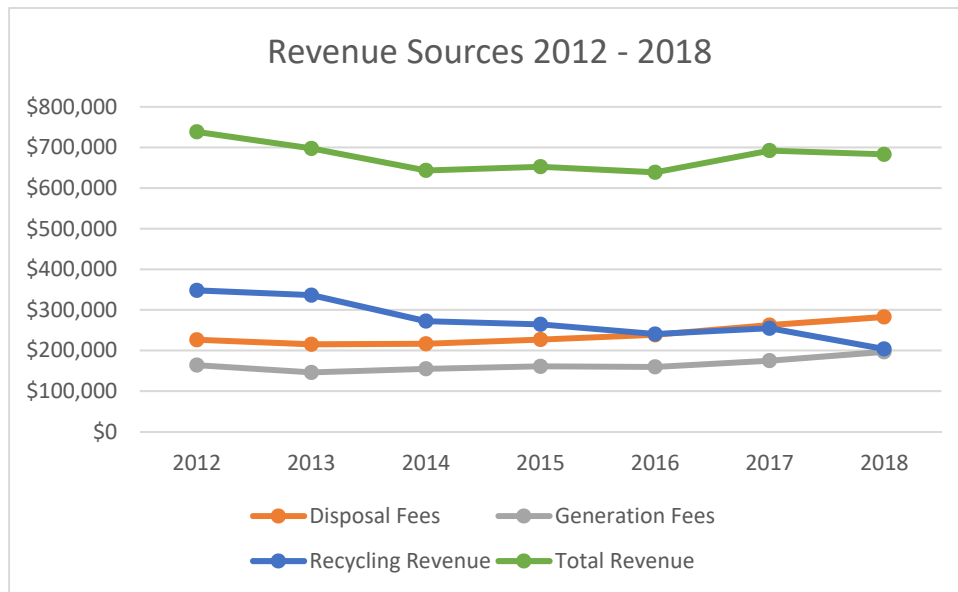
The Hancock County SWMD did not fund any of these special programs between 2012 and 2016. It is not anticipated that they will fund them in the coming planning period.

#### I. Financial Analysis

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

## 1. Revenues

As shown in the figure below, money received from the county's generation and disposal fees has been a consistent and steady source of revenue for the Hancock County SWMD. On average, these two sources generated approximately \$272,000 per year during the historic review period (2012 – 2016). In 2012, the revenue generated from recycling was nearly 50% of the District's budget. Since that time, the Recycling Revenue has been dropping and it is likely to continue to drop as long as the recycling markets are down. As the recycling revenue has dropped, several large projects in the county have been started that have generated and will generate large quantities of waste that will be disposed of in the Hancock County Landfill. These increases in waste generation have off set the fall in recycling revenue.



The current solid waste plan projected revenue of approximately \$776,500 would be collected in 2016. The actual amount collected was \$638,839, approximately \$137,500 less than projected. While the actual revenue collected in the district has been less than the previous plan predicted, it has been sufficient to implement the solid waste plan.

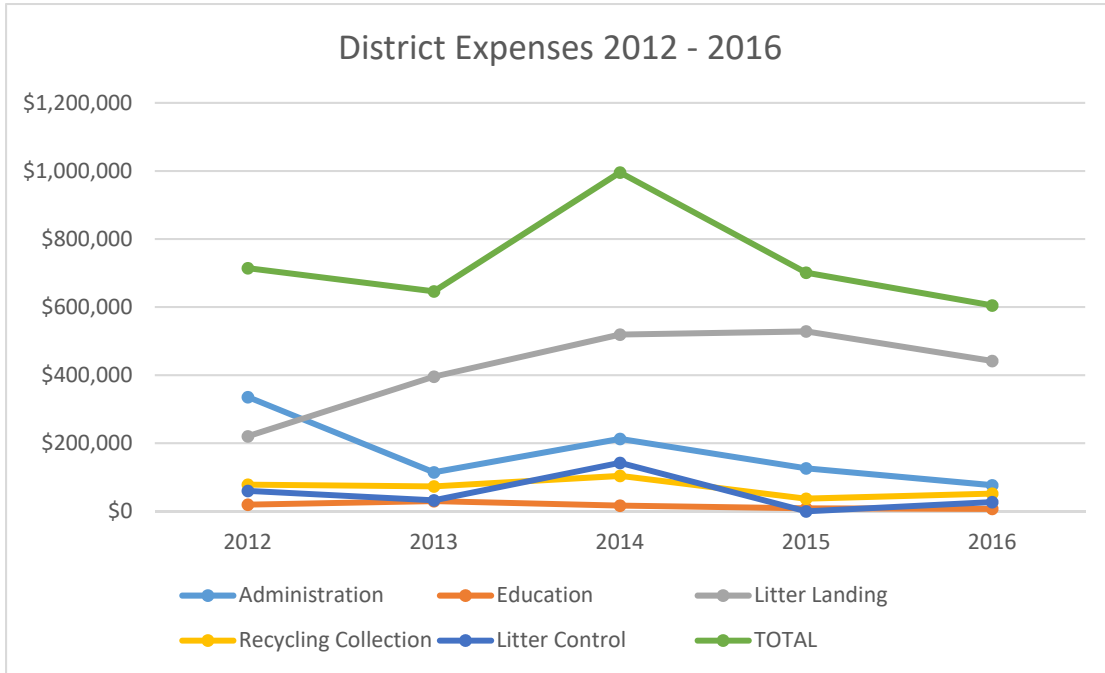
The District's revenue sources appear to be stable and should continue to provide sufficient money for operations. The solid waste facilities providing the disposal and generation fee revenue are expected to continue operating and receiving Hancock County waste into the foreseeable future.

## 2. Expenditures

The major expense category for the District reported to Ohio EPA since 2012 has been the operations at Litter Landing and the collection of recyclables from the drop off locations as shown in the following figure. All of the materials collected by the county are processed at Litter Landing so the cost of drop-off locations are combined with the Litter Landing operation costs. Of the District's \$605,000 in expenditures in 2016, 82% was spent on Litter Landing and the drop-off programs. Because recycling is the main focus for the District, it would be expected that the majority of their budget is spent on these programs.

The total expenditures for the District have ranged from 605,000 in 2016 to \$995,700 in 2014 with the average expenditures over the five year period being \$732,500. The total expenditure projected for Litter

Landing and recycling collection in the current plan was \$686,700 for the year 2016. This is \$192,700 above the actual cost for the program in 2016. Some of this difference can be attributed to budget concerns and the deferral of some activities through the years. For example, the household hazardous waste collection day was discontinued because the monthly collection at Litter Landing was providing the same service.

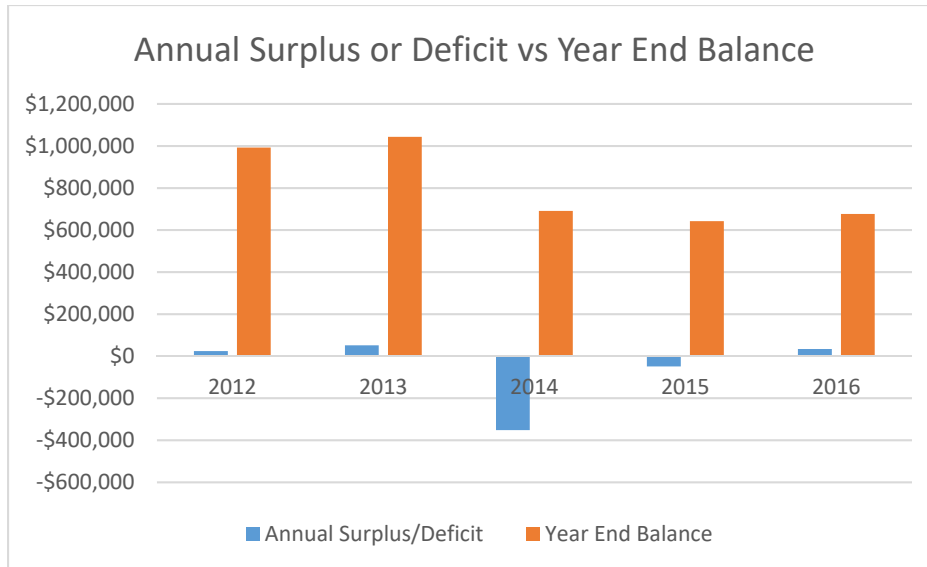


### 3. Balances

Expenditures have exceeded revenues in two of the last five years; with the annual deficit reaching \$352,000 in 2014 (see following figure). However, the District has maintained a positive year-end balance, although the District balance has decreased from more than \$991,000 in 2012 to \$676,000 in 2016.

The current Plan projected a carry-over or year-end balance for 2016 of approximately \$618,776. The actual balance for the 2016 carry-over was \$676,318.





**J. Regional Analysis**

The Hancock County Solid Waste Management District is a member of the Hancock Area Chamber of Commerce, the Ohio Association of Litter Prevention and Recycling Professionals, the Solid Waste Association of North America, and Keep America Beautiful. Many of these groups provide training and updates to the District. The District is also a member of the Organization of Solid Waste District in Ohio (OSWDO), and attends the quarterly meetings held with the Ohio EPA as well as their annual meeting when possible.

Additionally the Hancock County SWMD regularly interacts with other surrounding SWMDs to benchmark and compare program effectiveness. To the extent practical, Hancock County SWMD has combined efforts with other SWMDs to provide improved services to both communities.

**K. Population Analysis**

Population projections for this *Plan Update* were developed using documents published by the Ohio Development Services Agency. The District does not believe there is any reason to expect significant changes in the Hancock County population on an annual basis other than what is predicted by Ohio Development Services Agency. The projections for the planning period developed as a part of Appendix C show annual increases from 2015 to 2025. ODSA then predicts a decreasing population in Hancock County with annual population declines from 18 to 236 people.

**L. Data Collection Analysis**

The Hancock County SWMD collects data each year from entities located both within Hancock County and outside the county. Disposal data is reported to the District by solid waste facilities located in Ohio that collect and remit the generation and disposal fees.

Each year the District also conducts a survey to obtain recycling data, composting data, and hauling information as a part of preparing the annual district report to be submitted to Ohio EPA.

In 2016, the District mailed survey forms to 113 manufacturing industries, and 226 were sent to commercial/institutional entities.

Follow-up phone calls are made as needed to businesses and municipalities. For example, a follow-up would be made in the case of an incomplete survey which was returned, or information included on the survey which was questionable (i.e., a very large quantity or an amount which was very different from a survey returned from the same respondent in a previous survey).

The response rate for the paper survey in 2016 was approximately 12%.

It has become increasingly difficult to get survey responses returned. In 2019 a total of 233 surveys were sent (both industrial and commercial) but only 33 were returned. During the planning period, the District intends to push for better survey responses and reach out to businesses that have gone unsurveyed in the past.

The District also uses data from Litter Landing, and Ohio EPA's scrap tire, MRF, and compost facility reports.

#### **M. Education/Outreach Analysis**

District staff are responsible for providing education and awareness to District residents. Education and awareness activities are available to all demographic groups within the District. Preschoolers are visited at daycare facilities and informed of what materials can be recycled and the importance of not littering. Third graders are visited every year and are taught about the importance of recycling and the effects recycling can have on natural resources and landfills; these visits include an in-class presentation and hands-on recycling activity. Adults are reached through such groups as rotary clubs, youth advisor trainings, and religious organizations and are provided with information on a variety of recycling topics upon request. The District also has a booth available at several local annual events such as the Hancock County Fair. The District also provides bottle bins at these events to provide a recycling outlet for plastic, glass and aluminum beverage containers.

*Responsible entities:* The District provides the funding for this activity and District staff plan, promote, and oversee its implementation.

*Service area that benefits:* This program is directed to all residents of Hancock County.

*Amount and type of material reduced/recycled:* This program generally does not target particular materials for reduction/recycling nor are measurable quantities of material associated with the program. Recyclables collected at public events are taken to Litter Landing for processing; the quantity is included in the total amount reported for Litter Landing.

*Strengths of the program:* District staff reach a wide variety of audiences through their education and awareness efforts.

*Weaknesses of the program:* Because it is an educational program, no specific quantities of material reduced or recycled can be attributed to the program.

#### **N. Recyclable Material Processing Capacity Analysis**

For each year of the planning period, the District is projected to recover between 47,000 and 56,500 tons of residential/commercial material through the District's drop-off recycling program, special events, recycling programs instituted by commercial generators, and private recyclers and brokers. An additional 21,400 to

33,100 tons of industrial materials are projected to be recovered annually via recycling programs instituted by the industrial sector.

Processing of recyclables will require adequate processing capacity in recycling facilities. Specifically Litter Landing operated by the Hancock County SWMD, H&O Services, LLC and A&E Curbside process the majority of the recyclable materials generated in Hancock County. Quantifying the recycling capacity of the District is hard to determine but based on the current activities with these facilities it appears that there is ample capacity for recycling and diversion. That being said Hancock County SWMD is always looking to encourage sustainable expansion of recycling infrastructure. More research is being planned for upcoming years to better understand the capacity, network, and opportunity for collaboration with the recycling facilities in and around Hancock County. These types of conversations and relationships help to improve data collection and enhanced management of the Hancock County waste stream.

33,100 tons of industrial materials are projected to be recovered annually via recycling programs instituted by the industrial sector.

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APPENDIX I  
ACTIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS



This Appendix contains two major sections with subsections included within each one. Section A includes a comprehensive list of the possible action items (or programs to be implemented) which the District or some other entity within Hancock County could undertake during the planning period. The list is based upon the conclusions drawn from the program evaluations, and is intended to encompass all possible areas of focus. The list does not necessarily represent the programs or initiatives which the District will commit to implementing during the subsequent planning period.

The second subsection of Section A presents a prioritization of the list referenced above in order to show the most important issues which need to be addressed by the District. The steps taken to prioritize the list are discussed in this subsection.

Section B of this Appendix utilizes the results of the analyses described in Section A and presents the programs and/or initiatives which will be implemented by the District (or within the District) during the subsequent planning period. Both existing programs which will be continued as well as new programs are described in Section B.

**A. Actions and Priorities**

**1. List of Possible Actions**

The list of possible actions or programs identified through the evaluations presented in Appendix H is shown in the following table. The list is organized according to the program categories included in the Format v4.0 under Appendix I for Section B.

Program Category	Action or Program Name	Comments
<b><i>Residential Recycling Infrastructure</i></b>		
Curbside Recycling Services	Continue existing programs	
	Facilitate implementation of non-subscription curbside collection in villages and townships	
	Facilitate the formation of collection consortiums	
Drop-off Recycling: Publicly- Available Sites	Continue existing program	Expand or contract sites as needed based on performance and other factors
	Minimize contamination and littering	Signage, participant engagement, enforcement
<b><i>Commercial/Institutional Sector Reduction/Recycling</i></b>		
Drop-off Recycling	Continue existing program	
Education/Awareness	Continue existing program	
<b><i>Industrial Sector Reduction/Recycling</i></b>		
Recycling Center Access	Continue existing program	
Waste Assessments and Audits	Continue existing program	
<b><i>Restricted/Difficult to Manage Wastes</i></b>		
Scrap Tires	Continue existing program	
	Explore ways of reducing collection event costs	
	Encourage residents to turn in old tires at dealers	

Program Category	Action or Program Name	Comments
HHW	Explore collection options for HHW materials not accepted locally	
Lead Acid Batteries	Continue existing program	
E-Waste	Continue existing program	
	Watch for sustainable options for collection of TVs	TV are currently difficult and expensive to manage. District is always on the lookout for a viable management method.
	Evaluate cost containment options	
Appliances	Continue existing program	
Household Batteries	Continue existing program	
Bulk Items	Continue existing program	
<b><i>Outreach, Education, Awareness, and Technical Assistance</i></b>		
Covered in Appendix L	See table below	
<b><i>Funding</i></b>		
Funding	Continue existing funding sources	
Grants	Promote community development grant to communities and institutions	Promote grants to communities and target specific needs for projects grant covers
	Promote market development grant to businesses	
<b><i>Economic Incentives</i></b>		
Technical Assistance	Continue existing program	Focus on residential sector
<b><i>Facilities</i></b>		
Recyclables Processing	Continue existing program	
<b><i>Data Collection</i></b>		
Data Collection	Contact set number of businesses annually	Could be through phone call or face-to-face meeting. Involve chamber of commerce to determine roadblocks or success options

The following table summarizes the potential actions to be considered based on the analysis conducted in Appendix L.

### List of Possible District Actions or Programs for Education and Outreach

Existing Programs	Potential Actions
District Website	Track the number of visits to the website.
District Website	Minimize the website's "down time" by fixing pages that are under construction as quickly as possible.
Presentations	Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.
Presentations	Begin tracking the number of individuals reached by each presentation and the name of each school so the District can identify the number of students and schools reached each year.
Presentations	Request that educators or group leaders complete a feedback form after a presentation has been completed.
Presentations	If available, track recycling tonnage from schools with recycling programs to estimate if there is a correlation between presentations given and waste diverted.
Adopt-a-Road	Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt-a-Road program.
Adopt-a-Road	Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.
Educational Displays	Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.
Educational Displays	Begin tracking or estimating the total publications that are distributed at each event each year, the total number of events attended, and/or increased traffic to the District's website following an event.
Contests	Hold contest in the county schools (possible poster, t-shirt, etc.)
Business/Industrial Sector Waste Audits	Increase number of businesses that participate in waste audits by identifying top generators in Hancock County from annual ADR survey results and reach out to businesses directly to inquire about interest in receiving an audit.
Business/Industrial Sector Waste Audits	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.
Business/Industrial Sector Waste Audits	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.



## 2. Prioritizing Actions

The District reviewed the information presented above, and prioritized the list focusing on the actions which were determined to be most important and those which would require less difficulty in implementing. The step-by-step process which the District used to prioritize the list was as follows:

- The ranking consisted of recommendations through a consultant who assigned a value of between 1 and 5 to each initiative with 5 being the highest priority and 1 being the least. These recommendations were reviewed by each member of the District
- The priority ranking defined whether the District felt an initiative or program would be implemented under the following criteria:
  - Ranking of 1 – No implementation
  - Ranking of 2 – No implementation
  - Ranking of 3 – Possible implementation with direction from Policy Committee
  - Ranking of 4 – Implement
  - Ranking of 5 - Implement
- The results from the above step were then prioritized
- The list of prioritized possible actions was presented to the Policy Committee with focusing on the initiatives or programs ranked as a 3 from the criteria above.
- The Policy Committee was then asked to assist the District to decide if the initiatives ranked as a 3 should or should not be implemented in the new Plan Update.
- The Policy Committee was also asked to confirm that all initiative ranked as a 4 or 5 should be implemented as recommended by the District and that initiatives ranked 1 or 2 should not be implemented as recommended.
- The results of this prioritization process and the programs/initiatives developed or continued are detailed in Chapter 5 of this Plan Update. The following table summarizes the District's and Policy Committee's priorities for implementation of the possible list of actions by program:

Program Category	Action or Program Name	District Priority	Policy Committee Decision
<b><i>Residential Recycling Infrastructure</i></b>			
Curbside Recycling Services	Continue existing programs	3	Implement
	Facilitate implementation of non-subscription curbside collection in villages and townships	3	Implement for communities that are interested
	Facilitate the formation of collection consortiums	3	Implement for communities that are interested
Drop-off Recycling: Publicly-Available Sites	Continue existing program	5	Implement
	Minimize contamination and littering	3	Do not implement at this time. Re-evaluate and implement in the future if contamination and littering become a concern.
<b><i>Commercial/Institutional Sector Reduction/Recycling</i></b>			
Drop-off Recycling	Continue existing program	4	Implement

Program Category	Action or Program Name	District Priority	Policy Committee Decision
Education/Awareness	Continue existing program	5	Implement
<b>Industrial Sector Reduction/Recycling</b>			
Recycling Center Access	Continue existing program	4	Implement
Waste Assessments and Audits	Continue existing program	5	Implement
<b>Restricted/Difficult to Manage Wastes</b>			
Scrap Tires	Continue existing program	4	Implement
	Explore ways of reducing collection event costs	4	Implement
	Encourage residents to turn in old tires at dealers	4	Implement
HHW	Continue existing program	4	Implement
	Explore collection options for HHW materials not accepted locally	4	Implement
Lead Acid Batteries	Continue existing program	5	Implement
E-Waste	Continue existing program	5	Implement
	Watch for sustainable options for collection of TVs	3	Implement
	Evaluate cost containment options	4	Implement
Appliances	Continue existing program	5	Implement
Household Batteries	Continue existing program	3	Implement
Bulk Items	Continue existing program	3	Implement
<b>Outreach, Education, Awareness, and Technical Assistance</b>			
Covered in Appendix L	See table below		
<b>Funding</b>			
Funding	Continue existing funding sources	5	Implement
Grants	Promote community development grant to communities and institutions	4	Implement
	Promote market development grant to businesses	4	Implement
<b>Economic Incentives</b>			
Technical Assistance	Continue existing program	4	Implement
<b>Facilities</b>			
Recyclables Processing	Continue existing program	4	Implement
<b>Data Collection</b>			
Data Collection	Contact set number of businesses annually	4	Implement

The following table summarizes the District's and Policy Committee's priorities for implementation of the possible list of actions by program for education and outreach:

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
District Website	Track the number of visits to the website.	5	Implement
District Website	Minimize the website's "down time" by fixing pages that are under construction as quickly as possible.	3	When necessary
Presentations	Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.	4	Implement
Presentations	Begin tracking the number of individuals reached by each presentation and the name of each school so the District can identify the number of students and schools reached each year.	4	Implement
Presentations	Request that educators or group leaders complete a feedback form after a presentation has been completed.	4	Implement
Presentations	If available, track recycling tonnage from schools with recycling programs to estimate if there is a correlation between presentations given and waste diverted.	4	Implement
Adopt-a-Road	Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt-a-Road program.	3	Implement
Adopt-a-Road	Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.	3	Implement
Educational Displays	Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.	5	Implement
Educational Displays	Begin tracking or estimating the total publications that are distributed at each event each year, the total number of events attended, and/or increased traffic to the District's website following an event.	5	Implement
Contests	Hold poster contest in the county schools for billboards or calendars	3	Implement
Business/Industrial Sector Waste Audits	Increase number of businesses that participate in waste audits by identifying top generators in Hancock County from annual ADR survey results and reach out to businesses directly to inquire about interest in receiving an audit.	4	Implement
Business/Industrial Sector Waste Audits	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.	4	Implement
Business/Industrial Sector Waste Audits	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.	4	Implement

**B. Programs**

This section utilizes the results of Section A above and lists:

- Each existing program that the District will continue.
- Each new program that the District will implement during the planning period.

Descriptions for continuing existing programs are referenced in Appendices H and L, while new programs or changes to existing programs are fully described in the table below.

Program	Description	OEPA ID	Start Date	End Date	Goal(s)
<b>Residential Recycling Infrastructure</b>					
<b>Curbside Recycling Services</b>	Subscription Curbside Recycling	Findlay	Ongoing	Ongoing	1,2,7
		Arlington			
		Benton Ridge			
		Van Buren			
Technical Assistance	Encourage implementation of non-subscription curbside collection in villages and townships	As communities show interest	1,2,7		
Technical Assistance	Encourage the formation of collection consortiums as appropriate	As communities show interest	3,4		
<b>Drop-off Recycling</b>	Full Time Urban	50 North Senior Center (Findlay)	Ongoing	Ongoing	1,2,7
		Chamberlain Hill (Findlay)	Ongoing	Ongoing	1,2,7
		Litter Landing (Findlay)	Ongoing	Ongoing	1,2,7
		Hancock County Education Service Center (Liberty Township)	Ongoing	Ongoing	1,2,7
		H&O Services (Findlay)	Ongoing	Ongoing	1,2,7
		H&O Services – Kroger (Fostoria)	Ongoing	Ongoing	1,2,7
		H&O Services – Red Hawk Run (Findlay)()	Ongoing	Ongoing	1,2,7
	Part-Time Urban	First Presbyterian Church (Findlay)	Ongoing	Ongoing	1,2,7
		Trinity Lutheran Church (Findlay)	Ongoing	Ongoing	1,2,7
	Full-Time Rural	Allen Township - Village of Van Buren	Ongoing	Ongoing	1,2,7
		Amanda Township - Village of Vanlue	Ongoing	Ongoing	1,2,7
		Biglick Township - Township Hall	Ongoing	Ongoing	1,2,7
		Blanchard Township - Benton Ridge Village	Ongoing	Ongoing	1,2,7
		Delaware Township - Riverdale School	Ongoing	Ongoing	1,2,7
		Delaware Twp - Village of Mount Blanchard	Ongoing	Ongoing	1,2,7
		Pleasant Township - Village of McComb	Ongoing	Ongoing	1,2,7
		Portage Township - Township House	Ongoing	Ongoing	1,2,7
		Union Township - Village of Mount Cory	Ongoing	Ongoing	1,2,7
		Union Township - Village of Rawson	Ongoing	Ongoing	1,2,7
Jackson Township - Township Hall		Ongoing	Ongoing	1,2,7	

Program	Description	OEPA ID	Start Date	End Date	Goal(s)
	Biglick Township - West Independence United Methodist Church		Ongoing	Ongoing	1,2,7
Part-Time Rural	Mobile Drop Off-Deweyville		Ongoing	Ongoing	1,2,7
	Mobile Drop Off-Madison Township		Ongoing	Ongoing	1,2,7
	Add, remove or adjust sites as needed		2020	2034	1,2,7
	Minimize contamination and littering through additional education and signage		2020	2034	N/A
<b>Commercial/Institutional Sector Reduction and Recycling Programs</b>					
	Hancock County SWMD government and institution collection route.		Ongoing	Ongoing	1,2,7
	Add, remove or adjust sites as needed		2020	2034	2,7
<b>Industrial Sector Reduction and Recycling Programs</b>					
<b>Litter Landing</b>	Commercial and industrial sector entities will continue to have access to the Recycling Center.		Ongoing	Ongoing	3,4
<b>Waste Audits and Assessments</b>	Continue providing business/industrial sector waste audits and assessments		2020	2034	3,4
	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.		2020	2034	3,4
	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.		2020	2034	3,4
<b>Restricted/Difficult to Manage Wastes</b>					
<b>Household Hazardous Waste</b>	Continue to accept HHW at Litter Landing		Ongoing	Ongoing	3,4
	Education program for HHW, electronics, and lead-acid batteries		Ongoing	Ongoing	3,4
	Limited HHW and "difficult to manage waste" events.		Ongoing	Ongoing	2,5,7
<b>Scrap Tires</b>	Tire Collection Day		Ongoing	Ongoing	2,5,7
	Year-round tire collection at Hancock County Landfill		Ongoing	Ongoing	2,5,7
	Encourage residents to turn in old tires at dealers		2020	2034	3,4
<b>Electronics</b>	Litter Landing Electronics collection		Ongoing	Ongoing	5,7
	Evaluate cost containment options		2020	2034	5,7
<b>Lead-Acid Batteries</b>	Lead-acid battery collection at local retail and Litter Landing		Ongoing	Ongoing	2,5,7
<b>Appliances</b>	Appliance collection at Litter Landing; Hancock County Landfill		Ongoing	Ongoing	2,5,7
<b>Yard Waste</b>	Composting and "don't bag it" education provided by Hancock County SWMD staff and programs		Ongoing	Ongoing	5
<b>Outreach, Education, Awareness, and Technical Assistance</b>					
<b>Web Page</b>	District website		Ongoing	Ongoing	3,4

Program	Description	OEPA ID	Start Date	End Date	Goal(s)
	Track the number of visits to the website.		2020	2034	3,4
	Minimize the website's "down time" by fixing pages that are under construction as quickly as possible.		Website experiences little "down time" repairs made as necessary		3,4
	Include the Recycling Guide online as a downloadable, printable PDF.		Ongoing	Ongoing	3,4
<b>Presentations</b>	Environmental education provided by District staff		2001	Ongoing	3,4
	Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.		2020	2034	3,4
	Begin tracking number of individuals attending each presentation and name of each school so the District can identify number of students and schools reached each year.		2020	2034	3,4
	Request that educators or group leaders complete a feedback form after a presentation has been completed.		2020	2034	3,4
	In-service training for teachers and youth leaders		Ongoing	Ongoing	3,4
	Resource library for teachers and youth leaders		Ongoing	Ongoing	3,4
	Grade appropriate classroom presentations in environmental classroom or in schools		Ongoing	Ongoing	3,4
<b>Adopt-a-Road program</b>	Continue to operate Adopt-a-Road program		Ongoing	Ongoing	3,4
	Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt- a-Road program.		2020	2034	3,4
	Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.		2020	2034	3,4
<b>Educational Displays</b>	Continue hosting education displays at fairgrounds and community events		1995	Ongoing	3,4
	Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.		2020	2034	3,4
	Comprehensive resource guide		Ongoing	Ongoing	3,4,5
	Marketing plan updated annually including at minimum a) Materials to be used for public information/education, b) educational displays/exhibits, c) advertising/public service announcements and d) special promotional events/activities.		Ongoing	Ongoing	3,4
	Annually provide one public outreach activity that engages local elected officials and other community leaders designed to increase recycling opportunities for communities		Ongoing	Ongoing	3,4
<b>Contests</b>	Gage interest in a contest in Hancock County Schools		2020	2021	3,4

Program	Description	OEPA ID	Start Date	End Date	Goal(s)
	If schools/teachers are interested implement the contest. Possible poster, t-shirt, etc.		2021	as long as interest	3,4
<i>Tours</i>	The District will continue to host tours at solid waste and recycling facilities.		Ongoing	Ongoing	3,4
<b>Funding/Grants</b>					
<i>Funding</i>	Continue existing funding sources		Ongoing	Ongoing	
	Health Department funding		Ongoing	Ongoing	
<i>Grants</i>	Promote community development grant to communities and institutions		Ongoing	2032	Varies
	Promote market development grant to businesses		Ongoing	Ongoing	3,4
<b>Economic Incentives</b>					
<i>Technical Assistance</i>	Guidelines and methodology for performing waste audits		Ongoing	Ongoing	3,4
	Communicate recycling opportunities, goals and marketing information to industrial, commercial and residential sectors		Ongoing	Ongoing	3,4
<b>Data Collection</b>					
<i>Data Reporting Program</i>	Annual Surveying	District sends surveys to commercial and industrial businesses annually.	Ongoing	Ongoing	9
	Survey Follow-Up	Contact set number of businesses annually	2020	2034	9

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING  
GOAL 1





This Appendix presents the District's assessment of the opportunity to recycle within Hancock County in association with the requirements of Goal 1.

**A. Residential Sector Opportunity to Recycle**

The following table presents the curbside recycling opportunities in the reference year and year 5 and 10 of the planning period, as well as the population credit received for each location.

**Table J-1a Opportunity to Recycle: Curbside Programs**

ID #	Hancock County	2016		2024		2029	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
<i>Subscription curbside</i>							
SC1	AE Curbside Service-City of Findlay	41,321	10,330	41,305	10,326	41,119	10,280
SC2	AE Curbside Service-Village of Arlington	1,450	363	1,449	362	1,443	361
SC3	AE Curbside Service-Village of Benton Ridge	295	74	295	74	294	73
SC4	AE Curbside Service-Village of Van Buren	420	105	420	105	418	104

Source(s) of Information: Ohio Development Services Agency, 2017 Population Estimates by County, City, Village, and Township, May 2018

All curbside programs operating during the reference year are expected to continue. The following figure presents the estimated population with access to curbside recycling programs.

Year	Population Data	Hancock County
2016	Total County	72,561
	Credit	10,872
	% Access	15%
2024	Total County	72,533
	Credit	10867
	% Access	15%
2029	Total County	72,207
	Credit	10818
	% Access	15%

The following table presents the drop-off recycling opportunities in the reference year and year 5 and 10 of the planning period, as well as the population credit received for each location.

ID #	Hancock County	2016		2024		2029	
	Name of Community (City, Village, Township)	Community Population	Population Credit	Community Population	Population Credit	Community Population	Population Credit
<i>Full-time, urban drop-off</i>							
FTU1	Findlay - Chamberlain Hill	41,321	5,000	41,305	5000	41,119	5000
FTU2	Findlay - Litter Landing	41,321	5,000	41,305	5000	41,119	5000
FTU3	Findlay - 50 North Senior Center	41,321	5,000	41,305	5000	41,119	5000
FTU4	Findlay - H&O Corporate Office, 4500 Fostoria Ave	41,321	5,000	41,305	5000	41,119	5000
FTU5	Fostoria - H&O Kroger	41,321	5,000	41,305	5000	41,119	5000
FTU6	Findlay - H&O Red Hawk Run	41,321	5,000	41,305	5000	41,119	5000
FTU7	Liberty Township - Hancock County Educational Service Center	7,170	-	7,167	-	7,135	-
<i>Part-time, urban drop-off</i>							
PTU1	First Presbyterian Church - Findlay	41,321	2,500	41,305	2500	41,119	2500
PTU2	Trinity Lutheran Church - Findlay	41,321	2,500	41,305	2500	41,119	2500
<i>Full-time, rural drop-off</i>							
FTR1	Allen Township - Village of Van Buren	2,622	2,500	2,621	2500	2,609	2500
FTR2	Biglick Township, Township Hall	1,096	2,500	1,096	2500	1,091	2500
FTR3	Blanchard Township - Benton Ridge	1,112	2,500	1,112	2500	1,107	2500
FTR4	Jackson Township, Township Hall	1,079	2,500	1,079	2500	1,074	2500
FTR5	Portage Township, Township House	703	2,500	703	2500	700	2500
FTR6	Union Township - Rawson	1,761	2,500	1,760	2500	1,752	2500
FTR7	Biglick Twp - West Independence United Methodist Church	13,256	2,500	13,251	2500	13,191	2500
FTR8	Amanda Township - Vanlue	1,024	2,500	1,024	2500	1,019	2500
FTR9	Delaware Twp - Riverdale School	1,304	1,304	1,303	1,303	1,298	1,298
FTR10	Delaware Twp - Mount Blanchard	1,304	-	1,303	-	1,298	-
FTR11	Pleasant Township - McComb	2,453	2,500	2,452	2500	2,441	2500
FTR12	Union Township - Mount Cory	1,761	2,500	1,760	2500	1,752	2500

Source(s) of Information: Ohio Development Services Agency, 2017 Population Estimates by County, City, Village, and Township, May 2018

The following figure presents the estimated population with access to drop-off recycling programs.

Year	Population Data	Hancock County
2016	Total County	72,561
	Credit	70,000
	% Access	96%
2024	Total County	72,533
	Credit	70,000
	% Access	97%
2029	Total County	72,207
	Credit	70,000
	% Access	97%

The following figure presents the estimated population with access to curbside and drop-off recycling programs in the reference year. Using Ohio EPA's method to estimate access, 100% of Hancock County residents had access to recycling programs.

Year	Population Data	Hancock County
2016	Total County	72,561
	Credit for	
	Curbside	10,872
	Drop off	70,000
	Total	80,872
	% Access	111%

Tables J-2 and J-3 are not applicable to the Hancock County SWMD and have been omitted.

**B. Commercial Sector Opportunity to Recycle**

**Table J-4 Demonstration of Commercial Opportunity to Recycle**

Service Provider	Type of Recycling Service Provided	Al	Cc	St	Mp	Pl
Hancock County						
Litter Landing	Drop-Off / Limited pick-up	X	X	X	X	X
H&O Services	Drop-off/Pick-up	X	X	X	X	X
AE Curbside Recycling Service	Pick-up	X	X	X	X	X

*Al = Aluminum, Cc = corrugated cardboard, St = steel cans, Mp = mixed paper, Pl = plastics, W = wooden pallets and packaging*

Table J-4, "Infrastructure Demonstration for the Commercial Sector," presents some of the drop-offs, buy backs, scrap yards and haulers that provide recycling opportunities to the commercial/institutional sector. The number of recycling opportunities within Hancock County offered by these entities for at least five materials designated for the commercial sector to demonstrate compliance with Goal 1 are as follows:

- Aluminum: 3
- Cardboard: 3
- Steel cans: 3
- Mixed paper: 3
- Plastics: 3

**C. Demonstration of Meeting Other Requirements for Achieving Goal 1**

**1. Residential/Commercial Waste Reduction and Recycling Rate**

In the 2016 reference year, the District's residential/commercial sector achieved a 35% recycling rate, which exceeds the 25% requirement to achieve Goal 1. The waste recycling rate for the residential/commercial sector is projected to exceed the 25% requirement throughout the planning period based on anticipated volumes of recycling and disposal.

2. Industrial Waste Reduction and Recycling Rate

In the 2016 reference year, the Hancock County industrial sector achieved a 78% waste reduction and recycling rate, which was greater than the 66% requirement to achieve Goal 1. The projections through the planning period currently show the industrial reduction and recycling rate decreasing. However, the Hancock County SWMD believes that the intended effort to collect additional survey responses will boost the industrial reduction and recycling rate higher and show a more consistent trend through the planning period.

3. Encouraging Participation

The District will encourage residents and commercial generators to participate in available recycling infrastructure using a variety of outreach, education, and incentive programs, including the following:

- Educational Displays at Community Events: The Hancock County SWMD disseminates information on the programs and opportunities to recycle throughout Hancock County.
- Website: The District regularly updates its website. The District will implement new initiatives to improve the website, such as improving the branding and presentation, and developing user metrics to evaluate the use of the site and make informed decisions regarding its future improvements.
- Environmental Education: The District employs staff to perform presentations to students, manage school recycling programs, activities, and contests.
- Facility Tours: The District hosts tours of the recycling center and landfill. Tours actively engage participants and encourage recycling and waste reduction.

Appendices I and L include detailed information about each program.

WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING

APPENDIX K

GOAL 2



The Hancock County SWMD has chosen to demonstrate compliance with Goal 1 of the *State Plan*. In accordance with V4.0 the District is providing this comparison of the reference year (2016) recycling rates to the projected rate for 2016 in the current plan.

In the current plan the residential/commercial recycling rate for 2016 was projected to be 33.9%. The actual rate as described in the reference year calculations was 33%.

**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)
<b>2016</b>	<b>72,561</b>	<b>38,428</b>	<b>76,236</b>	<b>114,664</b>	<b>33.51%</b>	<b>2.90</b>
2017	72,181	33,258	87,159	120,417	27.62%	2.52
2018	72,221	33,344	74,081	107,425	31.04%	2.53
2019	72,261	33,433	74,122	107,555	31.08%	2.54
2020	72,301	33,524	74,163	107,687	31.13%	2.54
2021	72,359	33,618	74,223	107,841	31.17%	2.55
2022	72,417	33,715	74,282	107,997	31.22%	2.55
2023	72,475	33,815	74,342	108,156	31.26%	2.56
2024	72,533	33,917	74,401	108,318	31.31%	2.56
2025	72,591	34,022	74,460	108,483	31.36%	2.57
2026	72,495	34,131	74,362	108,493	31.46%	2.58
2027	72,399	34,131	74,264	108,394	31.49%	2.58
2028	72,303	34,131	74,165	108,296	31.52%	2.59
2029	72,207	34,131	74,067	108,197	31.54%	2.59
2030	72,111	34,131	73,968	108,099	31.57%	2.59
2031	72,017	34,131	73,872	108,002	31.60%	2.60
2032	71,923	34,131	73,775	107,906	31.63%	2.60
2033	71,829	34,131	73,679	107,810	31.66%	2.60
2034	71,735	34,131	73,582	107,713	31.69%	2.61

The programs implemented by the District have been successful to date at achieving the necessary 25% recycling rate.

In the current plan the waste reduction and recycling rate for the industrial sector for 2016 was projected to be 88%. The actual rate as described in the reference year calculations was 77%.

**Table K-2 Annual Rate of Waste Reduction: Industrial Solid Waste**

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
<i>2016</i>	<i>36,998</i>	<i>11,170</i>	<i>48,168</i>	<i>77%</i>
2017	24,080	15,244	39,324	61%
2018	38,339	16,114	54,453	70%
2019	35,273	17,033	52,306	67%
2020	32,453	18,004	50,457	64%
2021	29,858	19,031	48,889	61%
2022	27,470	20,117	47,587	58%
2023	25,273	21,265	46,538	54%
2024	23,252	22,478	45,730	51%
2025	21,393	23,760	45,153	47%
2026	19,682	25,115	44,797	44%
2027	19,682	25,115	44,797	44%
2028	19,682	25,115	44,797	44%
2029	19,682	25,115	44,797	44%
2030	19,682	25,115	44,797	44%
2031	19,682	25,115	44,797	44%
2032	19,682	25,115	44,797	44%
2033	19,682	25,115	44,797	44%
2034	19,682	25,115	44,797	44%

At the time of the last plan update, recovery from the 2008 recession was underway. There were increases in manufacturing and new business coming to Hancock County. As the recovery leveled off, there were several years of low recycling volumes reported. The District believes that the recycling rates during those years were higher than reported, but due to poor responses from the District's survey, the numbers appear to be low. Throughout this coming planning period, the Hancock County SWMD intends to focus more on survey response and communicating the importance of participation so that accurate data can be reported.

Table K-3 shows the total WRRs projected throughout the planning period. The overall Waste Reduction and Recycling rate is projected to remain constant with slight variation from 46% at the reference year to 35% by the end of the planning period.

**Table K-3 Annual Rate of Waste Reduction: Total Solid Waste**

<b>Year</b>	<b>Waste Reduced and Recycled (tons)</b>	<b>Waste Disposed (tons)</b>	<b>Waste Generated (tons)</b>	<b>Waste Reduction and Recycling Rate (percent)</b>
<i>2016</i>	<i>75,426</i>	<i>87,407</i>	<i>162,833</i>	<i>46.32%</i>
2017	57,338	102,403	159,741	35.89%
2018	71,683	90,195	161,878	44.28%
2019	68,706	91,155	159,861	42.98%
2020	65,977	92,167	158,144	41.72%
2021	63,476	93,254	156,730	40.50%
2022	61,185	94,399	155,584	39.33%
2023	59,088	95,606	154,694	38.20%
2024	57,169	96,879	154,048	37.11%
2025	55,415	98,220	153,636	36.07%
2026	53,813	99,477	153,290	35.11%
2027	53,813	99,379	153,192	35.13%
2028	53,813	99,280	153,093	35.15%
2029	53,813	99,182	152,995	35.17%
2030	53,813	99,083	152,896	35.20%
2031	53,813	98,987	152,800	35.22%
2032	53,813	98,890	152,703	35.24%
2033	53,813	98,794	152,607	35.26%
2034	53,813	98,698	152,511	35.28%



**APPENDIX L**  
**MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND  
GENERAL EDUCATION REQUIREMENTS**



This Appendix discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following is a summary of each goal, as presented in Ohio EPA's Plan Format v4.0:

### **Goal 3: Waste Reduction and Recycling Rates**

The SWMD shall provide the following required programs:

- A website
- A comprehensive resource List
- An inventory of available infrastructure
- A speaker or presenter

### **Goal 4: Outreach and Education - Outreach Plan and General Requirements**

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

#### **A. Minimum Required Education Programs**

In accordance with Goal 3 of the *2009 State Plan*, the Hancock County SWMD 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.

#### **Web Page**

##### **Description**

The District's comprehensive website, [www.hancockenvironment.com](http://www.hancockenvironment.com), is updated regularly.

The main page provides the District's contact information and a link to the District's Solid Waste Management Plan. There are also links to recycling activity information and the District's calendar of events.

##### **Website Advertisement Strategy**

The Hancock County SWMD advertises the availability of its website using a variety of mechanisms:

- The web address is included in the District staff's e-mail signatures.
- The District's partners and supporters include links to the District's website on their websites and social media posts.
- The District's website is displayed on many promotional items that are distributed at local special events and community activities.

##### **Website Updating Strategy**

Updates are typically completed on an as-needed basis. Examples of routine updates include adding upcoming events to the calendar and adding new ADRs when completed.

##### **Person(s) Responsible for Maintaining Website**

District staff are responsible for maintaining the website.

## **Infrastructure Inventory**

### **Description**

The District's Solid Waste Management Plan includes an infrastructure inventory. Moving forward, the District may create a stand-alone document containing Hancock County's solid waste and recycling infrastructure inventory that can be posted on the website. The infrastructure inventory will consist of at least the following:

- Solid waste management and disposal infrastructure, including:
  - Landfill facilities
  - Transfer facilities
  - Scrap tire facilities
  - Incinerators/waste-to-energy facilities
- Waste reduction and recycling infrastructure, including:
  - Curbside recycling services
  - PAYT trash collection services
  - Drop-off recycling locations (both privately and publicly owned/operated)
  - Composting facilities
  - Yard waste collection programs
  - Recycling centers
  - Material recovery facilities and other facilities for processing recyclable materials

A portion of the information to be included in the inventory is currently included in the Recycler's List, such as details about curbside programs, drop-off recycling sites, yard waste composting, and recycling centers. Appendix B of this *Plan Update* also includes much of the information that will be included in the infrastructure inventory.

### **Access to Inventory**

The inventory will be made available on the District's website. Printed copies of the inventory will not be distributed at public events or other establishments since the majority of information which is relevant to residents and businesses is already included in the Recycler's List.

### **Inventory Updating Strategy**

The infrastructure inventory will be updated annually. Most information to be included in the inventory has historically (and is currently) collected during the Annual District Report preparation process. Information in the inventory such as the operational status of facilities and their addresses and contact information will be revised as necessary.

## **Resource Guide**

### **Description**

Each year and as changes occur, the District updates the Recycling Guide, which is a comprehensive List identifying recycling opportunities for residents and businesses. The Guide includes:

- Locations that accept glass recycling, yard waste recycling, and unwanted/unused medications.
- Contact information for questions regarding recycling.
- Acceptable materials list and how to prepare recyclables in Hancock County.
- List of permanent drop-offs by community and schedule of regularly held recycling drives.
- Litter Landing location and hours of operation.
- Where to recycle special materials or items such as batteries, scrap metal, household appliances, tires, electronics, and televisions

- Information about business and industry recycling opportunities and programs.

**Access to Recycling Guide**

The Recycling Guide information can be accessed electronically on the District’s website. As part of the planning period activities, the District may work to condense and improve the Recycling Guide.

**Recycling Guide Updating Strategy**

District staff review the Recycling Guide annually to confirm whether existing information/listings need updated and add new recycling resources for residents and businesses when they are identified.

All identified recyclers on the list are contacted annually to confirm continued participation and to update information.

To solicit the public’s assistance with keeping the Guide as current as possible, future Guides may include a message such as “If you know about a recycling opportunity that is not listed in this guide, or encounter any errors in the listings, please contact the Hancock County Solid Waste Management District.”

**Speaker/Presenter**

**Description**

During the reference year, the District employed staff to perform education and outreach activities.

**Environmental Education Specialist’s Duties**

District staff conduct in-school and civic group presentations, plan and manage recycling facility tours, and participate in special community events. An additional program being considered for the planning period may be recycling contests for students in the Hancock County Schools.

**B. Outreach and Marketing Plan**

**1. Evaluation of Existing Programs and Outstanding Needs**

The following table presents the District’s existing education and outreach programs and each program’s target audience.

During the reference year, the District had programs that addressed the five target audiences. The District’ infrastructure is mature, so the existing programs are appropriate given the available recycling opportunities.

Existing Program	Target Audience				
	Residents	Schools	Industries	Institutional & Commercial Businesses	Communities & Elected Officials
Website	✓	✓	✓	✓	✓
Presentations	✓	✓	✓	✓	✓
Adopt-a-Road	✓	✓		✓	
Educational Displays	✓	✓	✓	✓	✓
Business/Industrial Sector Waste Audits		✓	✓	✓	
<b>Total Programs per Group</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>3</b>

## **Existing Program Evaluation**

### **Hancock County Solid Waste Management District website**

The District's website, [www.hancockenvironment.com](http://www.hancockenvironment.com), serves as a clearinghouse of information on District activities and programs and is a significant promotional tool for the District. Topics offered on the website include:

- A comprehensive recycling guide, including information on the permanent and mobile recycling units and details for upcoming collection events;
- Information on litter, including details on the Adopt-a-Road program, Spring Clean Up Day, and Keep America Beautiful;
- A complete guide to Litter Landing, including location, hours of operation, materials accepted and preparation guidelines, and information on community tours and volunteer opportunities;
- Information regarding the Hancock County Sanitary Landfill, including location, hours of operation, and prices;
- Links to other key recycling and solid waste organizations and websites;
- Contact information and a listing of District staff, Policy Committee, and County Commissioners.

The website is updated as needed throughout the year to provide current information on District programs and events, particularly the special collection events. The website link is provided in District literature and at special events.

*Responsible entities:* The District provides the funding for this activity and District staff plan, promote, and oversee its implementation.

*Service area that benefits:* This program is directed to all residents of Hancock County.

*Strengths of the program:* The website reaches a wide variety of audiences and provides easy access to information regarding District programs and activities.

*Weaknesses of the program:* The website must be frequently updated in order to provide current information to District residents. In addition, no specific quantities of material reduced or recycled can be attributed to the program.

## **Presentations**

District staff are responsible for providing education and awareness to District residents. Education and awareness activities are available to all demographic groups within the District. Preschoolers are visited at daycare facilities and informed of what materials can be recycled and the importance of not littering. Third graders are visited every year and are taught about the importance of recycling and the effects recycling can have on natural resources and landfills; these visits include an in-class presentation and hands-on recycling activity. Adults are reached through such groups as rotary clubs, youth advisor trainings, and religious groups and are provided with information on a variety of recycling topics upon request. The District also has a booth available at several local annual events such as the Hancock County Fair. The District also provides bottle bins at these events to provide a recycling outlet for plastic, glass and aluminum beverage containers.

*Responsible entities:* The District provides the funding for this activity and District staff plan, promote, and oversee its implementation.

*Service area that benefits:* This program is directed to all residents of Hancock County.

*Strengths of the program:* District staff reach a wide variety of audiences through their education and awareness efforts.

*Weaknesses of the program:* Because it is an educational program, no specific quantities of material reduced or recycled can be attributed to the program.

**Measuring Effectiveness:** Historically, the District has not measured the effectiveness of presentations. Potential methods of measurable success may include increasing the number of individuals reached and requesting that educators or group leaders complete a feedback form after a presentation has been completed. Additionally, recycling tonnage from schools with recycling programs can be estimated to identify if there is a correlation between presentations given and waste diverted.

### **Adopt-a-Road**

This program provides residents, schools, non-profit groups, and other organizations with the opportunity to play an active role in their community.

*Strengths of the program:* The program engages community groups, reduces litter, and raises public awareness about littering.

**Challenges:** Program participation continues to be a challenge. Many groups that have stopped participating in the program cited limited time availability and increased safety and liability concerns for younger volunteers.

**Measuring Effectiveness:** Historically, the District has measured effectiveness of the program by the number of groups that participate, the number of volunteers and the number of hours volunteered. In addition, the District could track the number of bags collected.

### **Educational Displays**

The District hosts displays at community events such as the Hancock County Fair. Displays highlight Hancock County SWMD activities and information on recycling, reducing/reusing and composting is presented on a rotating basis. A District employee is available to answer questions and talk to residents. Providing information directly to residents achieves the District raises awareness amongst residents about which materials can be recycled and nearby locations that accept recyclables. The District is targeting the correct audience given this goal.

**Strengths:** Increases awareness of recycling opportunities by providing recycling information to the public. Reaching out to residents at events provides opportunities to reach segments of the population that might not otherwise be reached, either due to being unaware of the District's presence and website or because they lack access to the internet. Providing information directly to residents creates an opportunity for the public to meet District staff, ask questions, and give feedback about the District's services.

**Challenges:** None.

**Measuring Effectiveness:** Historically, the District has not measured the effectiveness of participating in community events. Possible measures include tracking the total publications that

are distributed each year, the total number of events attended, and/or increased traffic to the District's website.

### **Business/Industrial Sector Waste Audits**

The District provides waste audits to commercial and industrial entities upon request. A representative from the District performs a site visit, review site operations, and performs a waste audit to determine what materials can be recycling or reduced. After the audit is completed, the District provides the entity with recommendations on materials to be recycled, how to prepare and store materials, and pickup/delivery options. Audits can be scheduled by contacting the District. The program is promoted on the Hancock County SWMD website.

**Strengths:** The program provides entities with individualized assessments identifying opportunities to further reduce waste, increase environmental sustainability, and improve cost savings. The program provides an economic incentive to businesses, organizations, and industries while also achieving the waste reduction goals of the District.

**Challenges:** Increasing program promotion and the quantity of requests for audits.

**Measuring Effectiveness:** The District historically measured the success of this program in terms of the number of assessments, tons identified for diversion, and cost savings identified. Improving the measures by which the District tracks this program's effectiveness could involve following up with companies who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis. Further technical assistance may be needed for companies to reap the full benefits of participating in the program.

## **2. Conclusions**

The following conclusions were identified as a result of the Phase I analysis of existing programs and outstanding needs:

- The District needs to establish quantifiable measures of effectiveness for existing programs.

## **3. Outreach Priority**

### **Increase Annual Survey Responses by 25%**

Annual survey responses have been dropping over the last several years. Without adequate data, the District cannot appropriately evaluate the effectiveness of the programs that are being implemented.

In order to increase the survey results and improve the data that is reported annually to Ohio EPA and ultimately used to prepare the five year plan updates, the District plans to initiate a campaign to improve communication with Hancock County's industrial commercial and business sectors. The hope of this campaign would be improved survey responses and increased recycling awareness in within Hancock County.

Steps to be implemented to improve communication follow:

- Proactive visits to the largest employers in Hancock County. These visits will focus on services the Hancock County SWMD offers that may be of interest to the business, and creating a relationship that will hopefully increase the responses to the annual surveys.

- Follow up phone calls to prompt survey responses. These calls will be reactive to the businesses that do not reply to the annual surveys. The District will be focusing on trying to get a survey response from these businesses, but also trying to determine if there is a better way to reach out and request this information in the future.

The goal for this outreach is to increase the survey responses, but there will also be added benefits such as increasing awareness of available services with area businesses and building relationships that will hopefully lead to potential teaming opportunities for future programs.

#### 4. *List of Actions*

The following table presents each existing program and the actions the District could implement during the planning period to address the aforementioned conclusions.

Existing Programs		Potential Actions
District Website		Track the number of visits to the website.
District Website		Minimize the website's "down time" by fixing pages that are under construction as quickly as possible.
Presentations		Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.
Presentations		Begin tracking the number of individuals reached by each presentation and the name of each school so the District can identify the number of students and schools reached each year.
Presentations		Request that educators or group leaders complete a feedback form after a presentation has been completed.
Presentations		If available, track recycling tonnage from schools with recycling programs to estimate if there is a correlation between presentations given and waste diverted.
Adopt-a-Road		Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt-a-Road program.
Adopt-a-Road		Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.
Educational Displays		Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.
Educational Displays		Begin tracking or estimating the total publications that are distributed at each event each year, the total number of events attended, and/or increased traffic to the District's website following an event.
Business/Industrial Waste Audits	Sector	Increase number of businesses that participate in waste audits by identifying top generators in Hancock County from annual ADR survey results and reach out to businesses directly to inquire about interest in receiving an audit.
Business/Industrial Waste Audits	Sector	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.
Business/Industrial Waste Audits	Sector	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.



5. **Priorities**

The District reviewed the information presented above, and prioritized the list focusing on the actions which were determined to be most important and those which would require less difficulty in implementing. The step-by-step process which the District used to prioritize the list was as follows:

- The ranking consisted of recommendations through a consultant who assigned a value of between 1 and 5 to each initiative with 5 being the highest priority and 1 being the least. These recommendations were reviewed by each member of the District
- The priority ranking defined whether the District felt an initiative or program would be implemented under the following criteria:
  - Ranking of 1 – No implementation
  - Ranking of 2 – No implementation
  - Ranking of 3 – Possible implementation with direction from Policy Committee
  - Ranking of 4 – Implement
  - Ranking of 5 - Implement
- The results from the above step were then prioritized
- The list of prioritized possible actions was presented to the Policy Committee with focusing on the initiatives or programs ranked as a 3 from the criteria above.
- The Policy Committee was then asked to assist the District to decide if the initiatives ranked as a 3 should or should not be implemented in the new Plan Update.
- The Policy Committee was also asked to confirm that all initiative ranked as a 4 or 5 should be implemented as recommended by the District and that initiatives ranked 1 or 2 should not be implemented as recommended.
- The results of this prioritization process and the programs/initiatives developed or continued are detailed in Chapter 5 of this Plan Update.

The following table summarizes the District’s and Policy Committee’s priorities for implementation of the possible list of actions by program:

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
District Website	Track the number of visits to the website.	4	Implement
District Website	Minimize the website’s “down time” by fixing pages that are under construction as quickly as possible.	4	When necessary
Presentations	Promote availability of presentations to non-school groups (civic groups) using a variety of means, such as posting on the District website and employing the support of related organizations to promote presentations to members, such as the Chamber of Commerce.	4	Implement
Presentations	Begin tracking the number of individuals reached by each presentation and the name of each school so the District can identify the number of students and schools reached each year.	4	Implement
Presentations	Request that educators or group leaders complete a feedback form after a presentation has been completed.	4	Implement
Presentations	If available, track recycling tonnage from schools with recycling programs to estimate if there is a correlation between presentations given and waste diverted.	3	Do not implement at this time

Existing Programs	Potential Actions	District Priority	Policy Committee Decision
Adopt-a-Road	Identify groups that have a volunteer requirement or organizations that typically perform community service and target these groups to receive information about the District's Adopt-a-Road program.	3	Implement
Adopt-a-Road	Begin tracking additional program statistics, such as the number of bags collected, weight of bags collected, and/or number of hours volunteered.	3	Implement
Educational Display at Fairgrounds and Community Events	Ensure promotional items display the District's contact information and that flyers for each target audience are available at the display.	5	Implement
Educational Display at Fairgrounds and Community Events	Begin tracking or estimating the total publications that are distributed at each event each year, the total number of events attended, and/or increased traffic to the District's website following an event.	5	Implement
Business/Industrial Sector Waste Audits	Increase number of businesses that participate in waste audits by identifying top generators in the District from annual ADR survey results and reach out to businesses directly to inquire about interest in receiving an audit.	4	Implement
Business/Industrial Sector Waste Audits	Follow up with entities who participated in an assessment to identify whether the companies were able to implement changes to realize the waste reduction and cost savings identified in their analysis.	4	Implement
Business/Industrial Sector Waste Audits	Request feedback from establishments that participated in an audit to identify how the District can further serve this audience more effectively.	5	Implement

APPENDIX M  
WASTE MANAGEMENT CAPACITY ANALYSIS



**A. Access to Publicly-Available Landfill Facilities**

In the reference year of 2016, nearly 100 percent of Hancock County waste, which was disposed, went to the Hancock County Landfill. The Hancock County Landfill had an estimated 33.8 years of remaining capacity, as of the end of 2017 (see Table M-1).

**Table M-1 Remaining Operating Life of Publicly-Available Landfills**

Facility	Location	Years of Remaining Capacity
Hancock County Landfill	Hancock County	33.8
American Landfill, Inc.	Stark County	65.0
Celina Sanitary Landfill	Mercer County	7.4
County Environmental of Wyandot	Wyandot County	122.7
Defiance County Sanitary Landfill	Defiance County	56.8
Evergreen Recycling & Disposal	Wood County	42.0
Sunny Farms Landfill LLC	Seneca County	12.2
Suburban Landfill, Inc.	Perry County	51.6
Port Clinton Landfill, Inc.	Ottawa County	73.3
Wood County Landfill	Wood County	6.6

Source(s) of Information: Ohio EPA Facility Data Report 2017

The Format v4.0 states that Districts should have access to disposal capacity for a minimum of the first eight (8) years of the planning period. Hancock County Landfill has enough capacity to provide adequate disposal for the Hancock County Solid Waste Management District throughout the planning period. Based upon this information the District has concluded that adequate landfill capacity exists through year 2034 and no further analysis to demonstrate available capacity is necessary.

**B. Access to Captive Landfill Facilities**

There are no captive landfills in Hancock County.

**C. Incinerators and Energy Recovery Facilities**

There are no incinerators or energy recovery facilities in Hancock County.

APPENDIX N  
EVALUATING GREENHOUSE GAS EMISSIONS



Greenhouse Gas (GHG) emissions associated with the solid waste management activities were estimated for the District using the U.S. Environmental Protection Agency's Waste Reduction Model (WARM). The WARM was applied to reference year (2016) data and data projected for the sixth year of the planning period (2025). Only residential/commercial waste category was utilized in the WARM. Sources of waste and recyclables have been combined as necessary in order 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 categories:

- Commercial Survey
- Ohio EPA Commercial Retail Data
- Hancock County SWMD Drop-off and Litter Landing

**Table N-1 Inputs for WARM: 2016 and 2025**

Waste Category	2016 Reference Year			2025		
	Recycled	Landfilled	Composted	Recycled	Landfilled	Composted
Yard Trimmings	*	*	17,379	*	*	22,446
Mixed recyclables	22,498	*	*	33,247	*	*
Scrap Tires	721	*	*	787	*	*
Mixed Waste	*	76,236	*	*	74,460	*

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 42,768 metric tons of carbon dioxide equivalents (MTCO<sub>2</sub>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 2016, and is termed the alternative scenario. The alternative scenario results in a net generation of -29,715 MTCO<sub>2</sub>E

**Table N-2 Greenhouse Gas Emissions Summary for the Reference Year Data**  
**GHG Emissions from Baseline Waste Management (MTCO<sub>2</sub>E):** 2,483

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total MTCO <sub>2</sub> E
Yard Trimmings	NA	17,379	-	-	(5,074)
Mixed Recyclables	-	22,498	-	NA	(41,145)
Mixed MSW	NA	76,236	-	NA	11,674
Tires	-	721	-	NA	28

**GHG Emissions from Alternative Waste Management Scenario**  
**(MTCO<sub>2</sub>E):** (54,326)

Material	Tons Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total MTCO <sub>2</sub> E	Change (Alt - Base) MTCO <sub>2</sub> E
Yard Trimmings	NA	NA	-	-	17,379	(2,136)	2,938
Mixed Recyclables	NA	22,498	-	-	NA	(63,586)	(59,441)
Mixed MSW	NA	NA	76,236	-	NA	11,674	0
Tires	-	721	-	-	NA	(279)	(307)

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 GHG reductions are 56,810 MTCO<sub>2</sub>E.

**Table N-3. Net GHG Reductions for 2014: Alternative vs. Baseline Scenarios**

Waste Category	Difference Between Scenarios in MTCO <sub>2</sub> E (Baseline - Alternative)
Yard Trimmings	2,938
Mixed recyclables	-59,441
Scrap Tires	-307
Mixed Waste	0
Net Totals	-56,810

The majority of the waste sent for disposal from Hancock County during the reference year was received by the Hancock County Landfill which operates a gas recovery system. The gas collected by this facility was processed and used for energy recovery. The results shown in Table N-3 reflect these inputs which were included in the WARM.

The analysis described above has also been conducted for year six of the planning period, or year 2025. The following table shows that the net GHG reductions in 2025 by recycling are more than 84,377 MTCO<sub>2</sub>E.

**Table N-4. Net GHG Reductions for 2023: Alternative vs. Baseline Scenarios**

Waste Category	Difference Between Scenarios in MTCO <sub>2</sub> E (Baseline - Alternative)
Yard Trimmings	3,795
Mixed recyclables	-87,838
Scrap Tires	-334
Mixed Waste	0
Net Totals	-84,377

The WARM results shown in this analysis reflect landfill disposal in facilities which include a landfill gas recovery system. It is worth noting that the alternative scenario results for 2025 show that GHG emissions reductions would decrease nearly 80,000 MTCO<sub>2</sub>E, were Hancock County waste sent to landfills without a gas recovery system since the greenhouse gases generated from landfill disposal would be released directly into the atmosphere.

APPENDIX O  
FINANCIAL PLAN





This Appendix summarizes the Hancock County SWMD's funding mechanisms, projected revenues and expenses for the planning period of 2020-2034. The District has prepared the budget section of this Plan Update to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

*The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.*

The budget tables prepared for this *Plan Update* demonstrate that the District has the financial funding throughout the planning period to implement the planned programs and initiatives. Nothing contained in these budget projections should be construed as a binding commitment by the District to spend a specific amount of money on a particular strategy, facility, program and/or activity. The Board, with the advice and assistance of the District Coordinator, 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 District Coordinator's recommendations and the content of this Plan Update.

#### A. Funding Mechanisms and Revenue Generated

There are several funding mechanisms available to Solid Waste Management Districts in Ohio. The purpose of this Section is to explain the revenue production mechanisms that the District will use, to list the expected costs of the programs that the District will implement during the planning period, and to demonstrate that the District can fund the requirements of this Plan for the entire fifteen year planning period.

##### 1. Disposal Fee

In 2016, one of the District's funding mechanisms was a disposal fee that was structured as follows:

- waste that was generated within the District and disposed at a sanitary landfill located within the District was assessed \$1.50 per ton;
- waste that was generated outside the District but within the State of Ohio and disposed of at a sanitary landfill located within the District was assessed \$3:00 per ton; and
- waste that was generated outside the State of Ohio and disposed at a sanitary landfill located within the District was assessed \$1.50 per ton

Table O-1 presents the District's disposal fee schedule, along with the projected revenue to be collected. The revenue reported for 2012 through 2018 is the actual amounts collected in those years. The amount projected for 2019 is the average of the revenue collected from 2012 to 2016. The amount projected from 2019 forward is based on a calculated annual average percentage change of 3% each year.

**Table O-1 Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))**

Year	Disposal Fee Schedule (\$/ton)			Revenue (\$)			Total Disposal Fee Revenue (\$)
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2012	\$1.50	\$3.00	\$1.50	\$145,231	\$81,144	\$0	\$226,375

2013	\$1.50	\$3.00	\$1.50	\$142,860	\$72,444	\$0	\$215,304
2014	\$1.50	\$3.00	\$1.50	\$151,176	\$65,372	\$0	\$216,548
2015	\$1.50	\$3.00	\$1.50	\$156,474	\$70,545	\$0	\$227,019
<b>2016</b>	<b>\$1.50</b>	<b>\$3.00</b>	<b>\$1.50</b>	<b>\$157,964</b>	<b>\$80,641</b>	<b>\$0</b>	<b>\$238,605</b>
2017	\$1.50	\$3.00	\$1.50	\$173,013	\$89,612	\$0	\$262,625
2018	\$1.50	\$3.00	\$1.50	\$194,272	\$88,319	\$0	\$282,591
2019	\$1.50	\$3.00	\$1.50	\$150,741	\$78,297	\$0	\$229,038
2020	\$1.50	\$3.00	\$2.00	\$153,756	\$79,862	\$0	\$233,618
2021	\$1.50	\$3.00	\$1.50	\$156,831	\$81,460	\$0	\$238,291
2022	\$1.50	\$3.00	\$1.50	\$159,968	\$83,089	\$0	\$243,057
2023	\$1.50	\$3.00	\$1.50	\$163,167	\$84,751	\$0	\$247,918
2024	\$1.50	\$3.00	\$1.50	\$166,430	\$86,446	\$0	\$252,876
2025	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2026	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2027	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2028	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2029	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2030	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2031	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2032	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2033	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934
2034	\$1.50	\$3.00	\$1.50	\$169,759	\$88,175	\$0	\$257,934

Source(s) of Information: The Annual Revenue and expenditure report submitted by Hancock County SWMD to Ohio EPA

## 2. Generation Fee

*In 2012, the District was also funded by a generation fee of \$1.50 per ton collected on all solid waste generated within the District and disposed within the State of Ohio. Table O-2 presents the District's generation fee schedule along with the amounts of revenue that are projected to be collected throughout the planning period. The revenue reported for 2012 through 2018 is the actual amount collected in those years. The amount projected for 2019 is the average of the revenue collected from 2012 to 2016. The amount projected from 2019 forward is based on a calculated annual average percentage change of 2% each year.*

**Table O-2 Generation Fee Schedule and Revenue**

Year	Generation Fee Schedule (\$ per ton)	Total Revenue from Generation Fee (\$)
2012	\$1.50	\$163,926
2013	\$1.50	\$146,074
2014	\$1.50	\$154,819
2015	\$1.50	\$161,064
<b>2016</b>	<b>\$1.50</b>	<b>\$159,590</b>
2017	\$1.50	\$174,871

Year	Generation Fee Schedule (\$ per ton)	Total Revenue from Generation Fee (\$)
2018	\$1.50	\$196,735
2019	\$1.50	\$157,095
2020	\$1.50	\$160,236
2021	\$1.50	\$163,441
2022	\$1.50	\$166,710
2023	\$1.50	\$170,044
2024	\$1.50	\$173,445
2025	\$1.50	\$176,914
2026	\$1.50	\$176,914
2027	\$1.50	\$176,914
2028	\$1.50	\$176,914
2029	\$1.50	\$176,914
2030	\$1.50	\$176,914
2031	\$1.50	\$176,914
2032	\$1.50	\$176,914
2033	\$1.50	\$176,914
2034	\$1.50	\$176,914

Source(s) of Information: The Annual Revenue and expenditure report submitted by Hancock County SWMD to Ohio EPA

### 3. Designation Fees

**Table O-3 Designation Fee Schedule and Revenue**

The District does not receive revenue from disposal fees; therefore, Table O-3 has been omitted.

### 4. Debt/Loans

The Hancock County SWMD has not incurred any loans nor does the District have any specific plans to borrow during the planning period. However, the Board of Directors is authorized to secure loans in order to finance the purchase of facilities or equipment necessary to implement this plan. Table O-4 "Debt" has been omitted.

### 5. Other Sources of District Revenue

**Grants:** During the planning period the district was awarded several small grants (under \$3,000each) for special purposes like litter clean-up and tire recycling. Since the District cannot predict if grants will be available, grants are not included in the budget for the planning period. The District may, however, apply for and utilize grant funds for any of the programs and activities that are included in this plan or for any other purpose related to waste reduction, recycling, composting, or waste management.

**Sale of recyclables:** The District receives revenue from the sale of materials that are collected in the Hancock County SWMD drop-off recycling bins and at Litter Landing in Findlay. The revenue from these programs will vary depending on the market price for recyclable materials. The revenue

reported for 2012 through 2018 is the actual amounts collected in those years. The amount entered for 2019 is based on the average of the revenue earned in 2012 through 2018. The District projects an increase in material collected in each year of the planning period. As such, the revenue would be projected to grow as the amount of material collected increases. However, current market conditions are experiencing a decline in the prices paid for recyclables. The average annual percentage change through the historic review was a decrease of 5.7% year to year. To estimate the recycling revenue through the planning period, the average revenue from 2012 to 2018 was used to estimate the revenue earned in 2019, \$238,780, and then decreased by 5.7% through the planning period. This average over time is likely to fluctuate and will be re-evaluated with the next plan update.

**Batteries /Copper Sold:** This category includes revenue from the sale of batteries and copper that is collected at the Hancock County Landfill or Litter Landing. The amount of revenue generally realized from these sources is not consistent or predictable. Therefore, it has not been included in the budget for the planning period.

**Table O-5 Other Sources of Revenue**

Year	Recycling revenue	Total Other Revenue
2012	\$348,072	\$348,072
2013	\$328,204	\$336,298
2014	\$268,976	\$272,220
2015	\$261,484	\$264,448
<b>2016</b>	<b>\$238,780</b>	\$240,645
2017	\$254,822	\$254,822
2018	\$203,756	\$203,756
2019	\$272,014	\$272,014
2020	\$256,509	\$256,509
2021	\$241,888	\$241,888
2022	\$228,100	\$228,100
2023	\$215,099	\$215,099
2024	\$202,838	\$202,838
2025	\$191,276	\$191,276
2026	\$180,373	\$180,373
2027	\$170,092	\$170,092
2028	\$160,397	\$160,397
2029	\$151,254	\$151,254
2030	\$142,633	\$142,633
2031	\$134,503	\$134,503
2032	\$126,836	\$126,836
2033	\$119,606	\$119,606
2034	\$112,789	\$112,789

Source(s) of Information: The Annual Revenue and expenditure report submitted by Hancock County SWMD to Ohio EPA

## 6 Summary of District Revenues

The total revenue, comprised of disposal fees, generation fees and other revenue, was \$638,839 during the reference year. Revenue in the first year of the planning period (2020) is projected to be \$674,776. Revenue is projected to increase annually to \$808,616 in 2034. The following table presents a summary of the Districts actual and projected total revenue from 2012 to 2034.

**Table O-6 Total Revenue**

Year	Disposal Fees	Generation Fees	Recycling Revenue	Total Revenue
2012	\$226,375	\$163,926	\$348,072	\$738,372
2013	\$215,304	\$146,074	\$336,298	\$697,676
2014	\$216,548	\$154,819	\$272,220	\$643,586
2015	\$227,019	\$161,064	\$264,448	\$652,531
<b>2016</b>	\$238,605	\$159,590	<b>\$240,645</b>	<b>\$638,839</b>
2017	\$262,625	\$174,871	\$254,822	\$692,318
2018	\$282,591	\$196,735	\$203,756	\$683,083
2019	\$229,038	\$157,095	\$272,014	\$658,146
2020	\$233,618	\$160,236	\$256,509	\$650,364
2021	\$238,291	\$163,441	\$241,888	\$643,620
2022	\$243,057	\$166,710	\$228,100	\$637,867
2023	\$247,918	\$170,044	\$215,099	\$633,060
2024	\$252,876	\$173,445	\$202,838	\$629,159
2025	\$257,934	\$176,914	\$191,276	\$626,124
2026	\$257,934	\$176,914	\$180,373	\$615,221
2027	\$257,934	\$176,914	\$170,092	\$604,940
2028	\$257,934	\$176,914	\$160,397	\$595,244
2029	\$257,934	\$176,914	\$151,254	\$586,102
2030	\$257,934	\$176,914	\$142,633	\$577,480
2031	\$257,934	\$176,914	\$134,503	\$569,350
2032	\$257,934	\$176,914	\$126,836	\$561,684
2033	\$257,934	\$176,914	\$119,606	\$554,454
2034	\$257,934	\$176,914	\$112,789	\$547,636

Source(s) of Information: The Annual Revenue and expenditure report submitted by Hancock County SWMD to Ohio EPA

### B. Cost of Implementing Plan

#### 1. Expenses

The entries in Table O-7 are the projected annual costs of implementing the programs, activities, and strategies that the District will provide during the planning period. The amounts that are presented are projections that are based on actual expenditures made in 2012 through 2018.

**Table O-7 Expenses**

Category/Program	2012	2013	2014	2015	2016	2017	2018
<b>1. Plan Monitoring/Prep.</b>	\$87,430	\$26,924	\$0	\$0	\$0	\$0	\$0
a. Plan Preparation		\$26,924					
b. Plan Monitoring	\$87,430						
<b>2. Plan Implementation</b>	\$626,924	\$619,302	\$995,759	\$701,271	\$605,035	\$398,001	\$606,596
a. District Administration	\$248,350	\$87,763	\$212,884	\$126,591	\$76,742	\$12,042	\$41,994
b. Litter Landing	\$220,557	\$395,624	\$519,488	\$528,545	\$441,680	\$262,621	\$522,004
c. Special Collections	\$78,249	\$71,354	\$66,292	\$36,232	\$50,835	\$44,650	\$18,918
d. Education/Awareness	\$19,447	\$29,878	\$16,699	\$8,928	\$7,259	\$4,123	\$1,711
<b>3. Health Dept. Enforcement</b>	\$0	\$25,000	\$0	\$0	\$25,000	\$0	\$0
<i>Hancock Public Health</i>		\$25,000			\$25,000		
<b>4. County Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>5. Well Testing</b>							
<b>6. Out-of-State Waste Inspection</b>							
<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8. Heath Department Training</b>							
<b>9. Municipal/Township Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>***Total Expenses***</b>	\$714,354	\$671,226	\$995,759	\$701,271	\$630,035	\$398,001	\$606,596

Category/Program	2019	2020	2021	2022	2023	2024
<b>1. Plan Monitoring/Prep.</b>	\$45,500	\$5,583	\$5,666	\$5,751	\$5,837	\$45,925
a. Plan Preparation	\$40,000					\$40,000
b. Plan Monitoring	\$5,500	\$5,583	\$5,666	\$5,751	\$5,837	\$5,925
<b>2. Plan Implementation</b>	\$569,000	\$577,535	\$588,482	\$599,638	\$611,009	\$622,598
a. District Administration	\$44,000	\$44,660	\$45,330	\$46,010	\$46,700	\$47,400
b. Litter Landing	\$450,000	\$456,750	\$465,885	\$475,203	\$484,707	\$494,401
c. Special Collections	\$50,000	\$50,750	\$51,511	\$52,284	\$53,068	\$53,864
d. Education/Awareness	\$25,000	\$25,375	\$25,756	\$26,142	\$26,534	\$26,932
<b>3. Health Dept. Enforcement</b>	\$25,000	\$0	\$0	\$25,000	\$0	\$0
<i>Hancock Public Health</i>	\$25,000			\$25,000		
<b>4. County Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>5. Well Testing</b>						
<b>6. Out-of-State Waste Inspection</b>						
<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>8. Heath Department Training</b>						
<b>9. Municipal/Township Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>***Total Expenses***</b>	\$639,500	\$583,118	\$594,148	\$630,390	\$616,847	\$668,523

Category/Program	2025	2026	2027	2028	2029	2030
<b>1. Plan Monitoring/Prep.</b>	\$6,014	\$6,104	\$6,196	\$6,289	\$46,383	\$6,479
a. Plan Preparation					\$40,000	
b. Plan Monitoring	\$6,014	\$6,104	\$6,196	\$6,289	\$6,383	\$6,479
<b>2. Plan Implementation</b>	\$634,409	\$646,446	\$658,715	\$671,219	\$683,963	\$696,952
a. District Administration	\$48,112	\$48,833	\$49,566	\$50,309	\$51,064	\$51,830
b. Litter Landing	\$504,289	\$514,375	\$524,662	\$535,155	\$545,859	\$556,776
c. Special Collections	\$54,672	\$55,492	\$56,325	\$57,169	\$58,027	\$58,897
d. Education/Awareness	\$27,336	\$27,746	\$28,162	\$28,585	\$29,014	\$29,449
<b>3. Health Dept. Enforcement</b>	\$25,000	\$0	\$0	\$25,000	\$0	\$0
<i>Hancock Public Health</i>	\$25,000			\$25,000		
<b>4. County Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>5. Well Testing</b>						
<b>6. Out-of-State Waste Inspection</b>						
<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>8. Heath Department Training</b>						
<b>9. Municipal/Township Assistance</b>	\$0	\$0	\$0	\$0	\$0	\$0
<b>***Total Expenses***</b>	<b>\$665,423</b>	<b>\$652,550</b>	<b>\$664,911</b>	<b>\$702,507</b>	<b>\$730,346</b>	<b>\$703,430</b>

Category/Program	2031	2032	2033	2034
<b>1. Plan Monitoring/Prep.</b>	\$6,576	\$6,675	\$6,775	\$46,876
a. Plan Preparation				\$40,000
b. Plan Monitoring	\$6,576	\$6,675	\$6,775	\$6,876
<b>2. Plan Implementation</b>	\$710,190	\$723,682	\$737,434	\$751,450
a. District Administration	\$52,607	\$53,396	\$54,197	\$55,010
b. Litter Landing	\$567,911	\$579,269	\$590,855	\$602,672
c. Special Collections	\$59,781	\$60,678	\$61,588	\$62,512
d. Education/Awareness	\$29,890	\$30,339	\$30,794	\$31,256
<b>3. Health Dept. Enforcement</b>	\$25,000	\$0	\$0	\$25,000
<i>Hancock Public Health</i>	\$25,000			\$25,000
<b>4. County Assistance</b>	\$0	\$0	\$0	\$0
<b>5. Well Testing</b>				
<b>6. Out-of-State Waste Inspection</b>				
<b>7. Open Dump, Litter Law Enforcement</b>	\$0	\$0	\$0	\$0
<b>8. Heath Department Training</b>				
<b>9. Municipal/Township Assistance</b>	\$0	\$0	\$0	\$0
<b>***Total Expenses***</b>	<b>\$741,766</b>	<b>\$730,357</b>	<b>\$744,208</b>	<b>\$823,326</b>

## 2. Explanation of Expenses

Table O-7 includes actual expenses from 2012 to 2018, a projected cost for 2019, and anticipated expenses and projected expenditures from 2020 to 2034. Line items explained below are numbered according to the corresponding line item number in the Table O-7. 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 Monitoring/Prep.**

Budget includes estimated expenses related to retaining a consultant for assistance with plan preparation for each 5-year update that will occur during the planning period and the preparation of the Annual District Report.

**2 Plan Implementation**

**2.a District Administration**

This expense includes the salaries and benefits of full-time employees, the District Executive Director and the Administrative Assistant; utilities; office equipment and supplies; telephone, mailing, mileage, staff training and miscellaneous expenses directly required for the administration of District programs. Also included are consulting contracts for planning, legal fees and other professional service that may be needed by the District.

**2.b Litter Landing**

The costs to maintain and operate Litter Landing are based upon actual costs incurred in 2012 through 2016. These costs have been projected to increase at two percent throughout the planning period. The costs shown include the management of the District's drop-off recycling locations throughout Hancock County. The District does not anticipate any significant increase in the cost of labor to operate Litter Landing as it continues to utilize volunteer and community service labor to offset this cost. The District will be evaluating the operations at Litter Landing through the planning period with the intention of implementing cost saving improvements and efficiencies.

**2.c Special Collections**

This line item includes collections offered by the District on a less frequent but routine basis. These collections are planned to continue through the planning period, but may be canceled or rescheduled based on budgets and funds available.

**Spring Clean-Up Day** - Costs associated with Spring Clean-Up Day include advertising, materials (bags), the volunteer luncheon, and hauling costs to transport collected recyclables to Litter Landing.

**Tire Collection Days & Landfill Collection** - Costs associated with the Tire Collection Days include advertising and tire processing fees. Other costs associated with this event are borne by the local sponsor. No costs are associated with the Landfill Collection as this service is offered for a fee by the Hancock County Sanitary Landfill.

**Christmas Tree Recycling** - Costs associated with the Christmas Tree Recycling program include advertising and hauling costs.

**HHW Collection Day** - Costs associated with the HHW Collection Day include advertising and the cost to hire the contractor to conduct the event.

**Litter Landing HHW & Paint Collection** - Costs associated with this monthly collection program include advertising and the costs to dispose of the collected materials

**Electronics Collection Day** - Costs associated with this event include advertising and the cost to hire the contractor to conduct the event.

**Adopt-a-Road** - Costs associated with this event include advertising, expenses for the preparation and mailing of brochures and other printed material, and the cost of the signs posted on each segment of county roadway that is part of the Adopt-a-Road program.

**Litter Crew** - Costs associated with the Litter Crew include the vehicle and fuel costs incurred for the Litter Crew truck. This line item does not include the salary costs for the program; these are included under Litter Landing as these employees are assigned to that facility as well.

**Landfill Appliance Collection** -No costs are associated with the Landfill Appliance Collection as this service is offered for a fee by the Hancock County Sanitary Landfill.

**Paper Shredding Day** - Costs associated with the Paper Shredding Day will include



advertising and a portion of the cost for the contractor to conduct the event.

2.d Education/Awareness

**Public Education & Awareness** - This program covers a wide array of education and public outreach activities. Thus, the costs for the program include expenses for such things as maintenance of the District website, printing of brochures and fact sheets, preparation and maintenance of visual aids, advertising, postage, etc. Costs for this program also include implementation of Don't Bag It / Backyard Composting Program, List of Existing Recycler/Brokers, Commercial, Governmental & Organization Recycling, and Program of Industrial Recycling, as described under each of those programs herein.

**Don't Bag It/Backyard Composting Program** - The costs for this program include expenses for the printing of the Don't Bag It/Backyard Composting brochure.

**List of Existing Recycler/Brokers** - The costs for this program include the preparation of the Recycler/Broker brochure and the listing provided on the District website.

**Commercial, Governmental & Organizational Recycling** - The costs for this program include preparation of materials, such as brochures and fact sheets, to support commercial, governmental, and organizational recycling efforts.

**Program of Industrial Recycling** - The costs for this program include preparation of materials, such as brochures and fact sheets, to support industrial recycling efforts.

3 **Health Dept. Enforcement**

Beginning in 2013, and every three years thereafter, the District has allocated \$25,000 to the Hancock County Health Department to provide assistance for their enforcement of ORC Section 3734.03, specifically in regard to scrap tires.

**Table O-8 Budget Summary**

Year	Revenue	Expenses	Annual Surplus/Deficit	Year End Balance
2011	Ending Balance			\$967,956
2012	\$738,372	\$714,354	\$24,018	\$991,975
2013	\$697,676	\$671,226	\$26,451	\$1,018,425
2014	\$643,586	\$995,759	-\$352,173	\$666,253
2015	\$652,531	\$701,271	-\$48,739	\$617,513
<b>2016</b>	\$638,839	<b>\$630,035</b>	<b>\$8,804</b>	\$626,318
2017	\$692,318	\$398,001	\$294,317	\$920,635
2018	\$683,083	\$606,596	\$76,487	\$997,122
2019	\$658,146	\$639,500	\$18,646	\$955,446
2020	\$650,364	\$583,118	\$67,246	\$1,022,693
2021	\$643,620	\$594,148	\$49,472	\$1,072,165
2022	\$637,867	\$630,390	\$7,477	\$1,079,642
2023	\$633,060	\$616,847	\$16,214	\$1,095,856
2024	\$629,159	\$668,523	-\$39,364	\$1,056,492
2025	\$626,124	\$665,423	-\$39,299	\$1,017,193
2026	\$615,221	\$652,550	-\$37,329	\$979,864
2027	\$604,940	\$664,911	-\$59,971	\$919,893
2028	\$595,244	\$702,507	-\$107,263	\$812,630
2029	\$586,102	\$730,346	-\$144,244	\$668,386
2030	\$577,480	\$703,430	-\$125,950	\$542,436

Year	Revenue	Expenses	Annual Surplus/Deficit	Year End Balance
2031	\$569,350	\$741,766	-\$172,415	\$370,021
2032	\$561,684	\$730,357	-\$168,673	\$201,348
2033	\$554,454	\$744,208	-\$189,754	\$11,593
2034	\$547,636	\$823,326	-\$275,689	\$(264,096)

The Hancock County SWMD started the 2016 reference year with a carry-over balance of \$626,318. Based on revenue and expenditure projections discussed throughout this appendix, the District is expected to begin the planning period in 2020 with an estimated carry-over balance of \$1,022,693 and end the planning period with a deficit of \$264,096. Within the next five year update, the District will determine if the budget is still heading towards a deficit and will look to increase fees if that is the case. 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.

**C. Alternative Budget**

The OEPA requires the Hancock County SWMD to provide a contingent source of funding if the funding mechanism used has a high degree of uncertainty.

The primary funding sources for the Hancock County SWMD are the disposal and generation fees. These are dependable fees collected on the waste disposed of and generated in Hancock County.

If the District Solid Waste Management Board identifies a short-fall in the District's revenue that threatens the ability to implement programs that are required in this Plan, the Solid Waste Management Board will initiate the process to raise the disposal and/or generation fees to an amount that will allow the District to implement the Plan. Any increase in the fees that is not included in this Plan and ratified as part of the Plan ratification process will require ratification before it is implemented

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.

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

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

Once the board of directors designates facilities, only designated facilities can receive the SWMD's waste. In more explicit terms, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is when the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and the time period available to the board for making a decision on a waiver request.

**1. Authorization Statement to Designate**

The Board of Directors of the Hancock County Solid Waste Management District is hereby authorized to establish facility designations in accordance with ORC Section 343.014 of the Ohio Revised Code after this plan has been approved by the director of the Ohio Environmental Protection Agency.

**2. Description of the SWMD's Designation Process**

Decisions regarding designation or the granting of a designation waiver shall be made by the District, following a review of the request by the Board of Directors.

Where the District designates facilities, it may grant a waiver to a non-designated entity to provide solid waste disposal, transfer or resource recovery facilities or activities at any time after the plan update is approved and in accordance with the criteria specified in ORC 343.01(1)(2). The Board of Directors will evaluate each request for designation or waiver based upon, at least, the following general criteria:

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

**B. Designated Facilities**

At the present time the Hancock County Solid Waste Management District has designated the Hancock County Landfill to be the landfill that is to manage Hancock County waste. The Hancock County SWMD reserves the right to designate additional facilities.

**Table P-1 Designated Facilities**

Facility Name	County	State	Facility Type
Hancock County Landfill	Hancock	Ohio	Landfill

**Waiver Process of Undesignated Facilities**

The District has developed procedures for issuing a waiver to allow solid waste to flow to undesignated facilities. The District acts on all waivers requested in writing and submitted to the Policy Committee. These procedures are developed in accordance with Section 343.01(1)(2) of the ORC. The District must act on waiver request within 90 days after receipt, and must establish steps to evaluate the impact of issuance of the waiver upon:

- Projections contained in the District's approved plan under Section 3734.53(A)(6) and (A)(7); and
- Implementation and financing of the District's approved plan.

**C. Documents**

APPENDIX Q  
DISTRICT RULES



**A. Existing Rules**

See the attached resolution of the Board of Commissioners of Hancock County, Ohio.

**B. Proposed Rules**

After this updated plan has been approved by the Director of the Ohio Environmental Protection Agency, the Hancock County Solid Waste Management District may, as the District deems appropriate, adopt the rules necessary to implement the ratified and approved Solid Waste Management Plan. Since changes may occur during the planning period, the District reserves for the Board of Directors the power to make and enforce rules to the fullest extent authorized by Ohio law.

The Ohio Revised Code, Section 343.01 (G) gives solid waste districts the authority to adopt, publish and enforce rules 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.

This plan authorizes the Hancock County Solid Waste Management District to adopt, publish and enforce rules doing any of the following:

1. Prohibiting or limiting the receipt of solid waste 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.
2. Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district.
3. Governing the development and implementation of a program for the inspection of solid waste 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.
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.

Section 343.01 of the ORC includes additional language that further defines the limits of the rules which may be promulgated in the four areas listed above.

In order to adopt rules deemed necessary in the future, the District Board of Directors will use the following procedures:

1. The District will draft rules as needed.
2. Upon completion, the Board will mail copies of the rules to the Hancock County Board of Commissioners and other interested parties.
3. The Board will issue a public notice announcing the availability of the rules for review in the newspaper of greatest circulation in the county. The notice will include the date by which comments on the rules must be received and the dates, times and location of public hearings on the rules. The public comment period on the rules will extend at least thirty days from the date of the public notice.
4. The Board will hold at least one public hearing on the proposed rule or rules.
5. After the hearing/s and public comment, the Board will revise the proposed rules as necessary. If the Board determines that significant revisions have occurred, the Board will hold another public hearing.
6. The Board will adopt the rules following any revisions at a regular meeting or a special meeting designated for rule adoption. Rules will be adopted by resolution approved by a majority of the quorum of the Board.

7. Upon adoption, a copy of the rules will be mailed to the Hancock County Commissioners and to the Ohio Environmental Protection Agency. The rule may be mailed to interested parties that have been identified during the comment and public hearing period.



APPENDIX R  
BLANK SURVEY FORMS AND RELATED INFORMATION





APPENDIX S  
SITING STRATEGY



The Hancock County Solid Waste Management District does not plan to site or build any District owned or financed solid waste transfer or disposal facilities during the planning period. The District does not plan to site any privately owned transfer or solid waste disposal facilities to serve Hancock County needs.

If a private owner decides to site a waste disposal facility or transfer station in Hancock County which requires a permit, the District will review the permit applications that are submitted to Ohio EPA and will actively participate in the public review and comment process. Hancock County Solid Waste Management District has chosen not to include a siting strategy in this plan because the District does not believe that it has the necessary authority to approve or deny facility siting.

The District does not believe that a formal siting process is necessary for facilities that do not require solid waste facility permits, like recycling facilities. These facilities are subject to local zoning and building regulations and should be treated like other manufacturing and processing facilities.

APPENDIX T  
MISCELLANEOUS PLAN DOCUMENTS



We as representatives of the Board of Directors of the Hancock County Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft District Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format*, revision 4.0.

APPENDIX U  
RATIFICATION RESULTS

