



# Adopted Solid Waste Management Plan Update



**Henry County  
Solid Waste Management District**

**2020-2034**

**February 12, 2020**

**Prepared by:**



# HENRY COUNTY SOLID WASTE MANAGEMENT DISTRICT

## 2020-2034 DRAFT PLAN UPDATE

### Table of Contents

<u>Section</u>	<u>Page</u>
<b>I. INTRODUCTION .....</b>	<b>I-1</b>
A. Plan Approval Date, Counties in District, and Planning Period Length ....	I-1
B. Reason for Plan Submittal .....	I-1
C. Process to Determine Material Change in Circumstances and Amend the Plan .....	I-1
D. District Formation and Certification Statement.....	I-4
E. District Policy Committee Members .....	I-5
F. District Board of Directors .....	I-6
G. District Address and Phone Number.....	I-6
H. Technical Advisory Council and Other Subcommittees .....	I-6
I. Policy Committee Review of Plan Update.....	I-6
<b>II. EXECUTIVE SUMMARY .....</b>	<b>II-1</b>
A. Section I. Introduction .....	II-2
B. Section III. Inventories .....	II-3
C. Section IV. Reference Year Population, Waste Generation and Waste Reduction.....	II-3
D. Section V. Planning Period Projections and Strategies .....	II-6
E. Section VI. Methods of Management: Facilities and Programs to be Used .....	II-10
F. Section VII. Measurement of Progress Toward Waste Reduction Goals .....	II-11
G. Section VIII. Cost of Financing Plan Implementation .....	II-14
H. Section IX. District Rules (ORC Section 3734.53(C)) .....	II-17
<b>III. INVENTORIES .....</b>	<b>III-1</b>
A. The Reference Year .....	III-1
B. Existing Solid Waste Landfills .....	III-1
C. Existing Incinerators and Resource Recovery Facilities .....	III-2
D. Existing Transfer Facilities .....	III-3
E. Existing Recycling and Household Hazardous Waste Collection Activities.....	III-3
F. Existing Composting/Yard Waste Management Facilities.....	III-5
G. Facilities Used by the District Which are Located Outside Ohio .....	III-5
H. Existing Open Dumps and Waste Tire Dumps.....	III-6

I.	Ash, Foundry Sand, and Slag Disposal Sites .....	III-6
J.	Map of Facilities and Sites .....	III-6
<b>IV.</b>	<b>REFERENCE YEAR POPULATION, WASTE GENERATION AND WASTE REDUCTION.....</b>	<b>IV-1</b>
A.	Reference Year Population and Residential/Commercial Waste Generation .....	IV-1
B.	Residential/Commercial .....	IV-1
C.	Industrial Waste Generation .....	IV-2
D.	Exempt Waste .....	IV-3
E.	Total Waste Generation .....	IV-3
F.	Reference Year Waste Reduction .....	IV-3
G.	Existing Waste Reduction/Recycling Activities for the Residential, Commercial and Industrial Sectors .....	IV-7
H.	Total Waste Generation: Historical Trends Plus Waste Reduction .....	IV-31
I.	Reconciliation of Waste Generation (based on reported recycling and disposal) .....	IV-33
J.	Waste Composition.....	IV-34
<b>V.</b>	<b>PLANNING PERIOD PROJECTIONS AND STRATEGIES .....</b>	<b>V-1</b>
A.	Planning Period .....	V-1
B.	Population Projections .....	V-1
C.	Waste Generation Projections .....	V-2
D.	Projections for Waste Stream Composition .....	V-7
E.	Waste Reduction and Recycling Strategies through the Planning Period .....	V-7
<b>VI.</b>	<b>METHODS OF MANAGEMENT: FACILITIES AND PROGRAMS TO BE USED.....</b>	<b>VI-1</b>
A.	District Methods for Management of Solid Waste .....	VI-1
B.	Demonstration of Access to Capacity .....	VI-4
C.	Schedule for Facilities and Programs: New, Expansions, Closures, Continuations.....	VI-5
D.	Identification and Designation of Facilities.....	VI-5
E.	Authorization Statement to Designate .....	VI-6
F.	Waiver Process for the Use of Undesignated Facilities .....	VI-7
G.	Siting Strategy for Facilities .....	VI-8
H.	Contingencies for Capacity Assurance and District Program Implementation .....	VI-13

**VII. MEASUREMENT OF PROGRESS TOWARD WASTE REDUCTION GOALS .....VII-1**

A. Compliance with Goal #2 .....VII-1

B. Demonstration of Compliance with Goal #2.....VII-2

**VIII. COST OF FINANCING PLAN IMPLEMENTATION .....VIII-1**

A. Funding Mechanisms.....VIII-2

B. Cost of Plan Implementation.....VIII-6

C. Funds Allocated from ORC 3734.57(B), ORC 3734.572 and ORC 37334.573 .....VIII-11

D. Contingent Funding .....VIII-11

E. Summary of Costs and Revenues .....VIII-13

**IX. DISTRICT RULES .....IX-1**

A. Existing Rules .....IX-1

B. Proposed Rules .....IX-1

C. Rule Approval Process .....IX-6

**Appendices**

Appendix A Resolutions for District Formation

Appendix B Public Notices for Public Hearings and Public Comment

Appendix C Resolutions and Certification Statements

Appendix D Identification of Consultants Retained for Plan Preparation

Appendix E District Map

Appendix F Industrial Survey Results

Appendix G Survey Instruments

**I. Introduction**

**A. Plan Approval Date, Counties in District, and Planning Period Length**

**1. Under current approved plan:**

Date of Ohio EPA approval  
or order to implement: April 25, 2014

Counties within district: Henry

Years in planning period: 15

**2. Plan to be implemented with approval of this document:**

Counties within District: Henry

Years in planning period: 15

Year 1 of the planning period: 2020

**B. Reason for Plan Submittal**

Mandatory five-year plan update.

**C. Process to Determine Material Change in Circumstances and Amend the Plan**

In accordance with ORC 3734.56(D), the *Plan Update* must be revised if the Board of County Commissioners (Board) has determined that “circumstances materially changed from those addressed in the approved initial or amended plan of the district....” A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to implement the Solid Waste Plan. The criteria used to make the determination of material change are as follows:

- Change in Waste Generation
- Change in the Capacity Available for Disposal, Transfer and Composting
- Change in Strategies for Waste Reduction and/or Recycling
- Change in the Availability of Revenues for Plan Implementation
- Change in the Procedures to be followed for Plan Implementation
- Change in the Timetable for Implementation of Programs and/or Activities

The Ohio EPA's Plan Format requires that the *Plan Update* must include a description of the process the Board will use to determine when a material change in circumstances has occurred, and, as a result, requires an amended Plan.

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

### **Change in Waste Generation**

A change in waste generation within the District that impairs the ability of the facilities identified in the *Plan Update* to adequately process the 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. However, if the facilities identified in this *Plan Update* adapt to the change in waste generation, the change in waste generation would not be deemed a material change in circumstances.

If the District is able to adjust budgets or implement contingency funding options listed in this *Plan Update* in Section VI from a change in waste generation that would negatively affect the financial funding of this *Plan Update*, then a change in waste generation would not be deemed a material change in circumstances.

### **Change in the Capacity Available for Disposal, Transfer and Composting**

Capacity shortfall to one or more waste management methods identified in the Plan Update would be deemed a material change if other waste management methods identified and/or not identified in the *Plan Update*, but deemed acceptable by the Board, 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 permanent discontinuation of strategies that are necessary in order to demonstrate compliance with the State Plan Goals in this *Plan Update*. The loss of strategies that are not needed to demonstrate State Plan Goals would not be deemed a material change in circumstances.

### **Change in the Availability of Revenues for Plan Implementation**

Any significant shortfall in revenues that would result in a program discontinuation would be deemed a material change in circumstances if the lack of funding prohibits demonstration of State Plan Goals in this Plan Update. However, if the District is able to adjust budgets or implement contingency funding options listed in this *Plan Update* in Section VI from a change in revenues that would negatively affect the financial funding of this *Plan Update*, then a change in revenues would not be deemed a material change in circumstances.

### **Change in the Procedures to be followed for Plan Implementation**

Significant changes in the procedures for implementing the *Plan Update* would be deemed a material change in circumstances if said changes would prevent District staff from implementing programs necessary to meet required State Plan Goals in this *Plan Update*. A delay in procedures for plan implementation would not be a material change in circumstances providing the procedures do not hinder the implementation of programs that are needed to meet required State Plan Goals in this *Plan Update*.

### **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 if said changes resulted in non-compliance with required State Plan Goals in this *Plan Update*. However, if the District is able to implement new strategies within a reasonable time frame to ensure compliance with State Plan Goals in this *Plan Update*, then a material change in circumstances would not have occurred.

#### **1. Monitoring Process**

The District's Board and the solid waste coordinator will monitor the changes indicated above on an annual basis or more frequent if needed by reviewing implementation of the *Plan Update* and looking for indicators such as:

- A significant increase from the 2017 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 identified landfills, along with an absence of alternatives, such that capacity falls short of the 15-year planning period.

- A significant increase in flow of solid waste to non-designated facilities, leading to a loss in revenue adversely impacting the District's ability to fulfill State Plan Goals.
- A significant cost increase for all programs and strategies planned by the District throughout the planning years.
- A significant one-year decrease 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 #1 of the 1995 State Plan.

The District has chosen to not identify specific trigger points in the above monitoring process. The District believes that arbitrary percentages, dollar amounts, tonnages or other trigger points decided during the plan preparation time period (2020-2034) may not always be applicable during a potential material change evaluation in the future. The District feels very comfortable that the above listed procedures will adequately serve the District in determining if a material change has occurred based on the information and data at the time of the evaluation.

## **2. Timetable for Analyzing the Determination**

Within thirty days after the Board makes a determination that a material change has occurred, the Board will call a meeting of the Policy Committee requesting the Policy Committee to analyze the *Plan Update* and submit a Draft Amended Plan to the Board.

## **3. Notification Procedure**

After the Board has decided that a material change has occurred, the Board will notify the municipal corporations and townships within the District and Ohio EPA of its intention to revise the *Plan Update* 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.

## **D. District Formation and Certification Statement**

Appendix A contains the resolution that formed the District. All public notices in local newspapers publicizing hearings and comments on the *Plan Update* are included in Appendix B. A certification statement signed by members of the Board asserting that the contents of the *Plan Update* are true and accurate is included in Appendix C. The certification statement was signed

by a majority of the Board members for both the draft amended *Plan Update* and the ratified draft amended *Plan Update*. Appendix C also includes resolutions by the Board adopting the *Plan Update* prior to ratification and certifying that the *Plan Update* has been properly ratified. A list of all political jurisdictions in the District which voted on the *Plan Update* ratification, their populations, and the percentage of the population represented by the political jurisdictions which ratified the *Plan Update* is included in Appendix C.

**E. Policy Committee Members**

The Policy Committee for the District is comprised of seven members from Henry County. These members will include:

The president of the board of county commissioners or their designee	The mayor, or a representative chosen to act on his/her behalf, of the largest city in the county
A member representing the townships within the county chosen by a majority of the board of township trustees within the county	The health commissioner, or a representative appointed by the health commissioner to act on his/her behalf
One industrial representative to act on behalf of the industries located within that county	A member representing the general interests of citizens who has no conflict of interest through affiliation with a waste management company or significant generator of solid wastes

The following committee members are listed in accordance with the political jurisdictions and constituencies they represent:

Policy Committee Members	Representing	Term
<b>Glenn Miller</b>	County Commissioner	<b>Unlimited</b>
<b>Jeff Rathge</b>	City of Napoleon Representative	<b>Unlimited</b>
<b>Kent Badenhop</b>	Township Representative	<b>Unlimited</b>
<b>Jon Lindsay</b>	Health Department Representative	<b>Unlimited</b>
<b>Aaron McCoy</b>	Industrial Representative	<b>Unlimited</b>
<b>Jeff Brubaker</b>	Public Member	<b>Unlimited</b>
<b>Bob George</b>	Public Member	<b>Unlimited</b>

**F. Board of County Commissioners**

The following board members are listed:

Directors
<b>Tom VonDeylen</b>
<b>Glenn Miller</b>
<b>Robert Hastedt</b>

**G. District Address and Phone Number**

Henry County Solid Waste Management District  
 P.O. Box 96  
 L-622 Twp. Road 11 (between roads L & M)  
 Malinta, Ohio 43535

Contact: Michael Imbrock  
 District Coordinator

Phone: 419-256-7343  
 Fax: 419-256-7343

Email: [solidwaste@henrycountyohio.com](mailto:solidwaste@henrycountyohio.com)

**H. Technical Advisory Council and Other Subcommittees**

The District did not utilize a Technical Advisory Committee (TAC) for the preparation of the *Plan Update*.

**I. Policy Committee Review of Plan Update**

The Policy Committee shall annually review implementation of the *Plan Update* under section 3734.55 of the Ohio Revised Code and report its findings and recommendations regarding implementation of the plan to the Board of County Commissioners of the District.

## II. Executive Summary

The Henry County Waste Management District (District) is required by Section 3734.54 of the Ohio Revised Code (ORC) to periodically update its solid waste management plan (*Plan Update*). This *Plan Update* will cover a planning period beginning in 2020 and ending in 2034. This *Plan Update* includes a description of District programs and projections for solid waste generation, recycling and disposal. This *Plan Update* identifies the District's strategies for managing the District's facilities and programs and provides an assessment on achieving statewide recycling and waste reduction goals. This *Plan Update* follows Ohio EPA's format version 3.0. The format requires specific narrative information and data tables. There are nine major sections of the solid waste plan based on the Plan Format.

### Section I

- Basic information about the District and an important section on determining when material changes would require an amendment to the *Plan Update*.

### Section II

- An Executive Summary and includes brief narrative descriptions of each section in the *Plan Update*.

### Section III

- An inventory of facilities, activities, and haulers used by the District in the reference year (2015).

### Section IV

- The reference year statistics for the *Plan Update* including population data, waste generation and waste reduction estimates for the residential/commercial sector and the industrial sector.

### Section V

- Projections of population, waste generation and waste reduction for each year of the planning period.

### Section VI

- The District's management of facilities and programs to be used by the District throughout the planning period.

### Section VII

- Presentation of how the District meets the state waste reduction and recycling goals.

### Section VIII

- A presentation of the financial resources of the District necessary to implement this Plan.

### Section IX

- District rules proposed, approved and authorized for adoption are presented by the District.

This Executive Summary provides an overview of each section of the *Plan Update*.

## A. Section I. Introduction

On February 27, 1989, the Board of Commissioners of Henry County formed the Henry County Solid Waste Management District (Appendix A). The District includes all incorporated and unincorporated territory in Henry County.

The Board of County Commissioners of Henry County governs the District in their capacity as the Board of Commissioners of the Henry County Solid Waste Management District (hereinafter referred to as the “Board”).

The current Plan was approved by Ohio EPA on April 25, 2014 and includes a fifteen-year planning period. This *Plan Update* begins with the planning year 2020 and includes a fifteen-year planning period.

### Policy Committee Members

The Policy Committee prepares the solid waste management plan, monitors implementation of the Plan, and adjusts the District generation fees as appropriate. The current Policy Committee members are listed in the following table.

Policy Committee Member	Representing
Glenn Miller	County Commissioner
Jeff Rathge	City of Napoleon Representative
Kent Badenhop	Township Representative
Jon Lindsay	Health Department Representative
Aaron McCoy	Industrial Representative
Jeff Brubaker	Public Member
Bob George	Public Member

### Board of County Commissioners of the District

The Board is responsible for implementing the solid waste plan developed by the Policy Committee. The current Board members are listed in the following table.

Board Member	Role
Tom VonDeylen	County Commissioner –Chairman
Glenn Miller	County Commissioner
Robert Hastedt	County Commissioner

### Process to Determine Material Change in Circumstances and Amend the Plan

Section I of the *Plan Update* outlines the process which will be used by the District to determine when a material change in circumstance has occurred. If a material change in circumstances occurs, a plan amendment is required by Ohio law (ORC Section 3734.56 (D)). The District plan must be updated “...when the Board of

County Commissioners...determines that circumstances materially changed from those addressed in the approved initial or amended plan of the district..."

A material change in circumstances is defined by Ohio EPA as changes in any of the following which would be judged to significantly interfere with District achievement of *Plan Update* goals in the context of statutory requirements.

Circumstance which may interfere with goal achievement:
Reduction in Available Capacity
Increase in Waste Generation
Delay in Program Implementation
Discontinuance of Essential Waste Reduction or Recycling Activities
Decrease in Waste Generation
Adequately finance implementation of the Plan

In accordance with ORC 3734.56(D), the *Plan Update* must be revised if the Board has determined that "circumstances materially changed from those addressed in the approved initial or amended plan of the district." A material change in circumstances shall be defined as a change that adversely affects the ability of the Board to: (1) assure waste disposal capacity during the planning period; (2) maintain compliance with applicable waste reduction or access goals; or (3) adequately finance implementation of the *Plan Update*. This process is described in detail in Section I of this *Plan Update*.

**B. Section III. Inventories**

Section III provides an inventory of facilities, programs, and activities during the reference year (2017) of the *Plan Update*.

Inventories include the following:
Landfills
Transfer Facilities
Recycling Programs
Collection Programs
Composting Facilities and Programs
Open Dumps and Waste Tire Dumps
Ash, Slag and Foundry Sand Disposal Sites
Solid Waste Haulers

**C. Section IV. Reference Year Population, Waste Generation and Waste Reduction**

**1. Reference Year Population**

The District's 2017 reference year population of 27,185 was determined by using the 2017 Ohio Department of Development's 2017 Population

Estimates for Counties, Cities, Villages and Townships. This information was obtained from the Ohio Department of Development, Office of Strategic Research.

**2. Waste Generation**

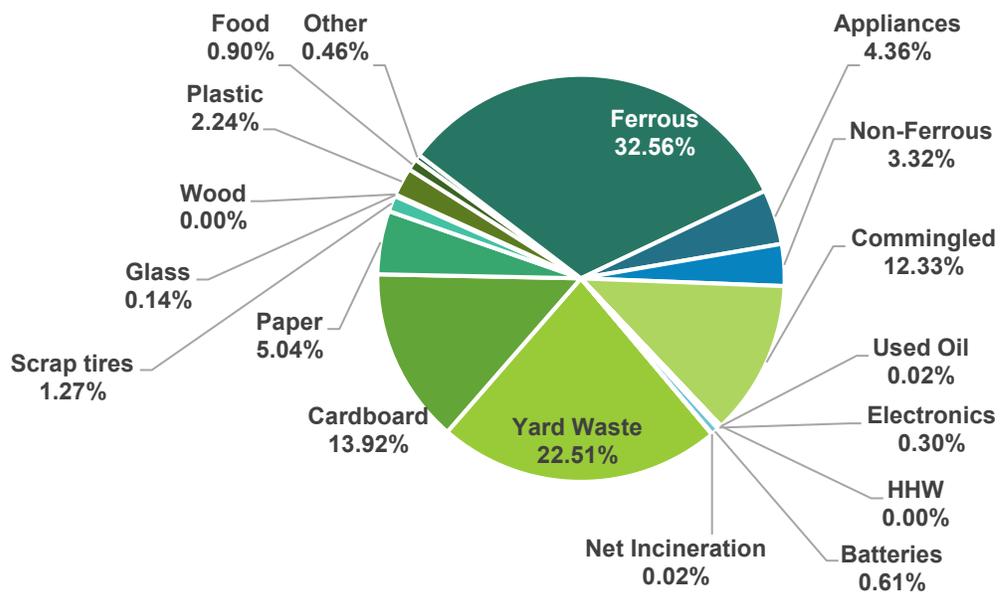
Residential and commercial waste generation was 28,255 tons including 18,087 tons landfilled (see Table III-1) and 10,169 tons recycled, including composting (see Table IV-5). Based on the District population, this is 5.70 pounds generated per person per day of residential/commercial waste generation.

Industrial waste generation was 46,752 tons. This includes 9,412 tons landfilled (see Table III-1) and 37,339 tons recycled (see Table IV-6). Based on the District population, this is 9.42 pounds of industrial waste generated per person per day.

**3. Reference Year Waste Reduction**

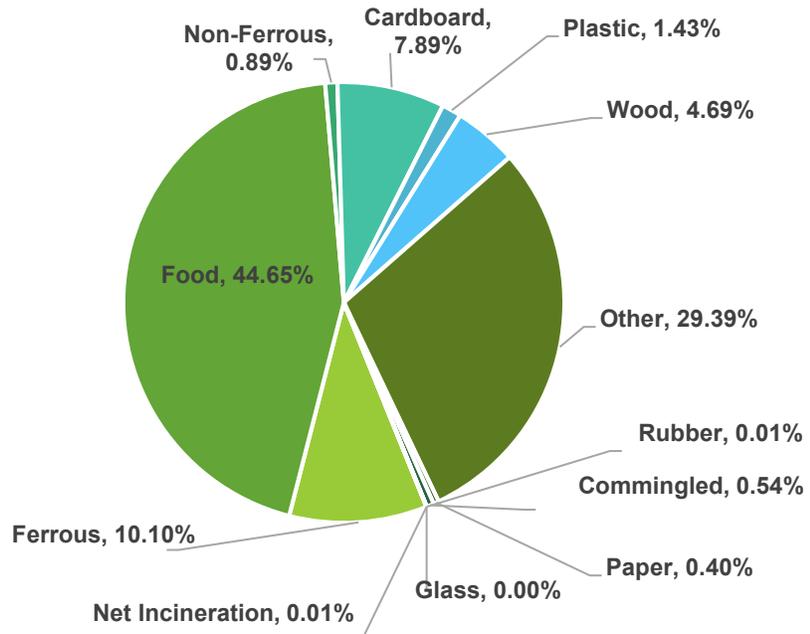
Residential/commercial waste reduction that occurred in the District during the reference year is summarized in Table IV-5. Residential/commercial waste reduction activities include curbside and drop-off collection, District-sponsored special collection events such as household hazardous waste collections and electronics collections, commercial recycling completed by commercial entities operating within the District, and composting. The following graph depicts the residential and commercial waste reduction totals as a percentage for 2017.

**Residential/Commercial Waste Reduction (2017)**



Industrial waste reduction activities that occurred during the reference year are summarized in Table IV-6. The following graph depicts the industrial waste reduction totals as a percentage for 2017.

**Industrial Waste Reduction (2017)**



Section IV also provides specific details for the existing waste reduction/recycling activities for the residential/commercial and industrial sectors.

**4. Existing Waste Reduction/Recycling Activities for Residential, Commercial and Industrial Sectors**

In 2017, the following facilities/programs were implemented.

## **Residential/Commercial/Industrial Waste Reduction/Recycling and Education Strategies**

---

HC-1: Curbside Recycling

---

HC-2: Drop-Off Recycling

---

HC-3: Yard Waste Management

---

HC-4: Household Hazardous Waste Management

---

HC-5: Lead-Acid Battery Management

---

HC-6: Electronics Recycling

---

HC-7: Scrap Tire Management

---

HC-8: Market Development Support

---

HC-9: Education and Awareness

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HC-10: Industrial Sector Data Collection

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HC-11: Litter Collection

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HC-12: Volume-Based Rate Support

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HC-13: District Facilities

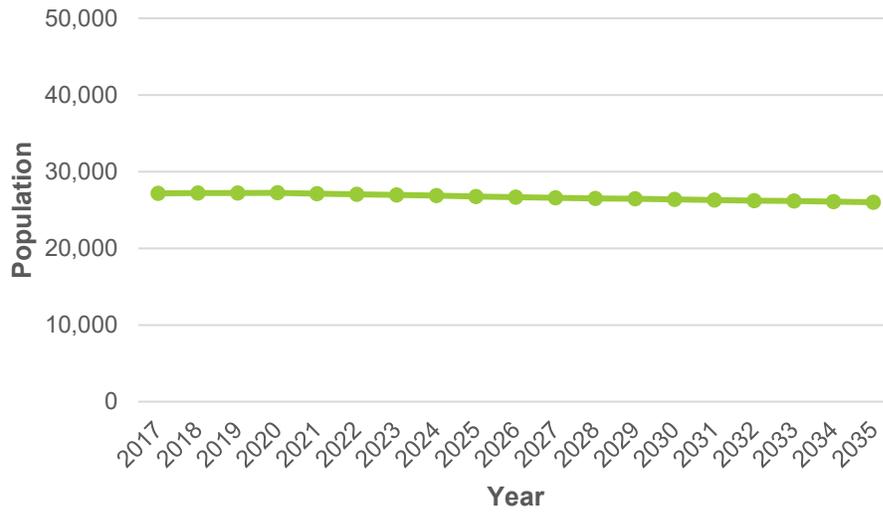
### **D. Section V. Planning Period Projections and Strategies**

Section V includes a summary of projections of population, waste generation and recycling for the planning period (2020 to 2034). New programs and changes to existing programs are presented in this section.

#### **1. Population Projections**

The District anticipates population will decrease 4.22% over the planning period. Population projections were made using growth rates from Ohio Department of Development's Projected Percent Population Change 2010 to 2034 based on the growth rate of the county that each political subdivision or portion of a political subdivision is located. Projections were adjusted using 2015 and 2010 U.S. Census Bureau population data. The following graph depicts the population projections throughout the planning period.

**District Population Estimate (2017 – 2034)**

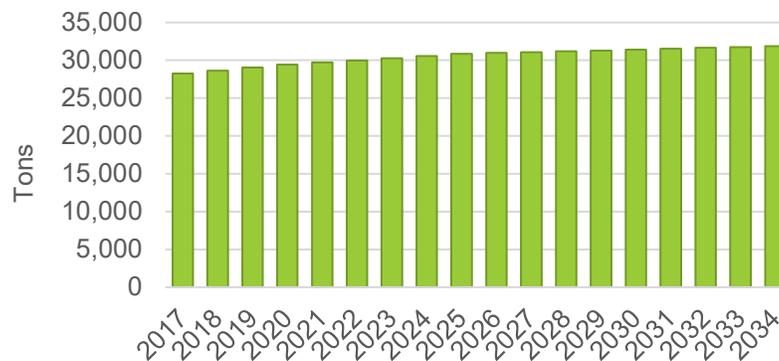


**2. Waste Generation Projections**

**Residential/Commercial Sector**

The total residential/commercial waste generation estimate for 2017 was 28,255 tons. Waste generation is projected to increase throughout the planning period from 2020 – 2034. Beginning in 2020, the first year of the planning period, residential/commercial waste is projected to be 29,424 tons. This is expected to increase to 31,882 tons in 2034, an 8.4% increase during the planning period. The following graph depicts the residential/commercial waste generation projections throughout the planning period.

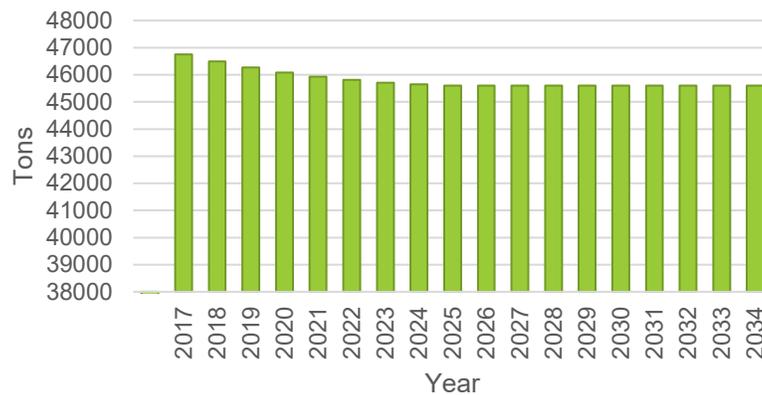
**District Residential/Commercial Waste Generation (2017 – 2034)**



### Industrial Sector

Industrial waste generation is projected for SIC codes 20 and 22-39. Table V-3 presents the average annual change in employment for each SIC code. The District projects industrial waste decrease from 46,752 tons in 2017 to 45,601 tons in 2025, then remain constant. The following figure presents the estimated industrial waste generation throughout the planning period.

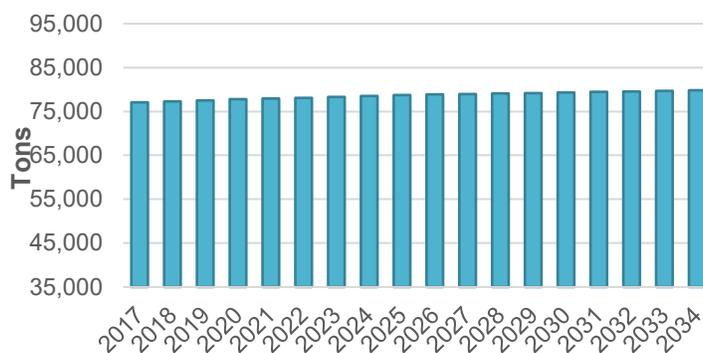
**District Industrial Waste Generation (2017 – 2034)**



### Total Waste Generation

Total waste generation projections for the District during the planning period are presented in Table V-4, “Total Waste Generation for the District during the Planning Period (in TPY)”. The total waste generation estimate for the 2017 reference year was 77,063 tons. This includes residential/commercial waste (28,255 tons), industrial waste (46,752 tons), and exempt waste (2,057 tons).

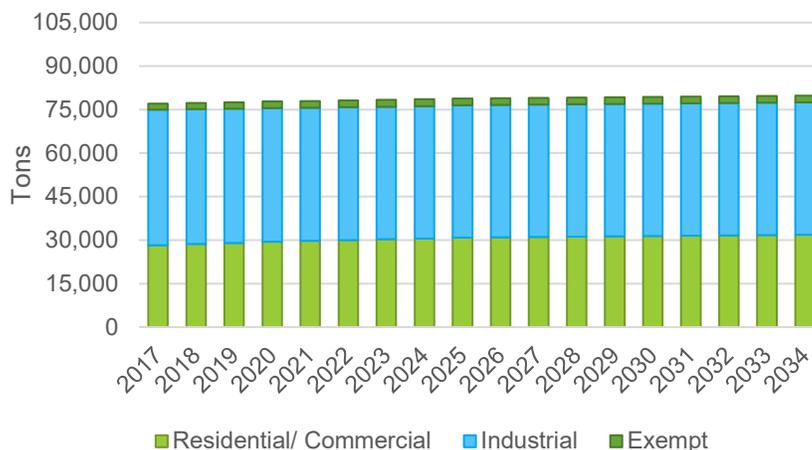
**District Total Waste Generation (2017 – 2034)**



The following graph depicts the waste generation per sector as a

percentage of the total waste generation.

**District Total Waste Generation Distribution (2017 – 2034)**



**3. Waste Reduction and Recycling Strategies through the Planning Period**

The District must continue to develop recycling and waste reduction strategies to meet the goals established in the 1995 State Plan and to pursue continuous improvement in meeting the 1995 State Plan goals. The following table summarizes the program, initiatives, and strategies for the planning period, and which goals each program meets.

**District Strategies by State Plan Goal**

Program	Program #	1995 State Plan Goals						
		#1	#2	#3	#4	#5	#6	#7
Curbside Recycling	HC-01	✓	✓					
Drop-Off Recycling	HC-02	✓	✓					
Yard Waste Management	HC-03		✓					
Household Hazardous Waste Management	HC-04		✓			✓		
Lead Acid Battery Management	HC-05		✓			✓		
Electronics Recycling	HC-06		✓			✓		
Scrap Tire Management	HC-07		✓			✓		
Market Development Support	HC-08							✓
Education and Awareness	HC-09			✓	✓			

<b>Industrial Sector Data Collection</b>	HC-10		✓				✓	
<b>Litter Collection</b>	HC-11							
<b>Volume Based Rate Support</b>	HC-12		✓					
<b>District Facilities</b>	HC-13		✓					
<b>Number of Strategies Per Goal</b>		<b>2</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>

Details for each program listed above including changes, update and new programs are included in Section V.

## **E. Section VI. Methods of Management: Facilities and Programs to be Used**

Section VI presents the District's methods for managing solid waste. It includes management methods, a siting strategy, and a demonstration of capacity for the planning period 2020 to 2034.

### **1. District Methods for Management of Solid Waste**

The net tons that were managed by the District in 2017 are calculated to be 77,063 tons. The landfill total in Table VI-1 is calculated by subtracting recycling, yard waste composting, and net incineration tonnage from the net tons to be managed. The District projects 77,760 tons of solid waste will need to be managed in 2020, and by the end of the planning period in 2034, the District will need to manage 79,798 tons.

### **2. Demonstration of Access to Capacity**

During the reference year, 8 landfills managed 29,556 tons of solid waste generated by District residents, businesses, and industries.

#### **Regional Capacity Analysis**

The District's assessment of regional landfill capacity demonstrates there is sufficient permitted capacity available to manage the District's waste until December 31, 2034. The 8 landfills utilized by the District either directly or indirectly through transfer stations have permitted capacity to manage the District's solid waste through 2034.

### **3. Identification and Designation of Facilities**

The District continues to support an open market for the collection, transport and disposal of solid waste. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is identifying all Ohio licensed and permitted solid waste landfill, transfer, and resource recovery facilities and all licensed and permitted out-of-state landfill,

transfer, and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Section III Inventories.

The following facilities have been designated by the District to manage solid waste.

- Henry County Landfill
- Defiance County Landfill
- Archibold Refuse Service
- Wood County Landfill
- Fulton County Transfer Station
- Williams County Landfill
- Hancock County Sanitary Landfill
- Sunny Farms Landfill
- Evergreen Landfill
- Lima Transfer Station
- Stony Hollow Landfill
- American Landfill
- Geneva Landfill
- Suburban Landfill

The Board is authorized to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. In addition, facility designations, if adopted, will be supported by applicable District rules.

#### **4. Siting Strategy for Facilities**

The District has a rule that requires that anyone interested in constructing, enlarging, or modifying a solid waste facility within the District has to obtain approval by the Board after review of the general plans and specifications of the proposed solid waste facility or modification of an existing solid waste facility. See Sections VI and IX for more details.

#### **5. Contingencies for Capacity Assurance and District Program Implementation**

The District will implement the contingency plan outlined in Section VI of the *Plan Update* if landfills or transfer facilities that service the District are required to close operations for a period of time that would be detrimental to the health and safety of District residents.

### **F. Section VII. Measurement of Progress Toward Waste Reduction Goals**

The District annually conducts a comprehensive survey that has consistently provided high quality waste reduction data over the last several years. This data,

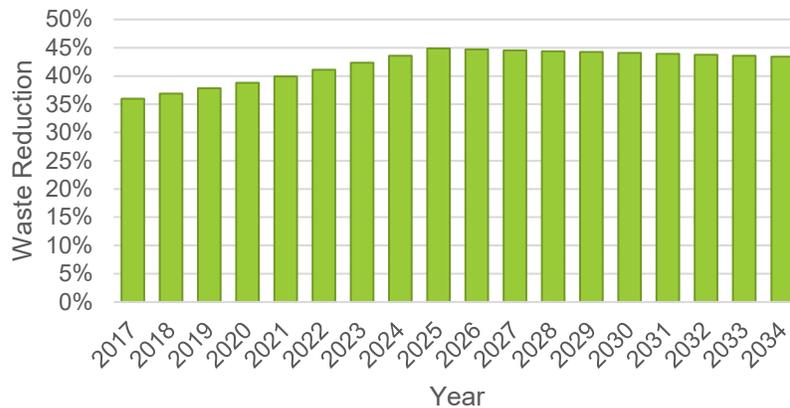
coupled with District waste generation, has resulted in the District achieving a 36% waste reduction rate in the reference year in the residential/commercial sector and an 80% waste reduction rate in the industrial sector. Based on this data and past historical performance, the District has demonstrated compliance with Goal #2 of the 1995 State Solid Waste Management Plan. Goal #2 requires solid waste districts to:

- Reduce or recycle at least 25% of the residential/commercial waste generated; and
- Reduce or recycle at least 50% of the industrial waste generated.

**1. Compliance with Goal #2**

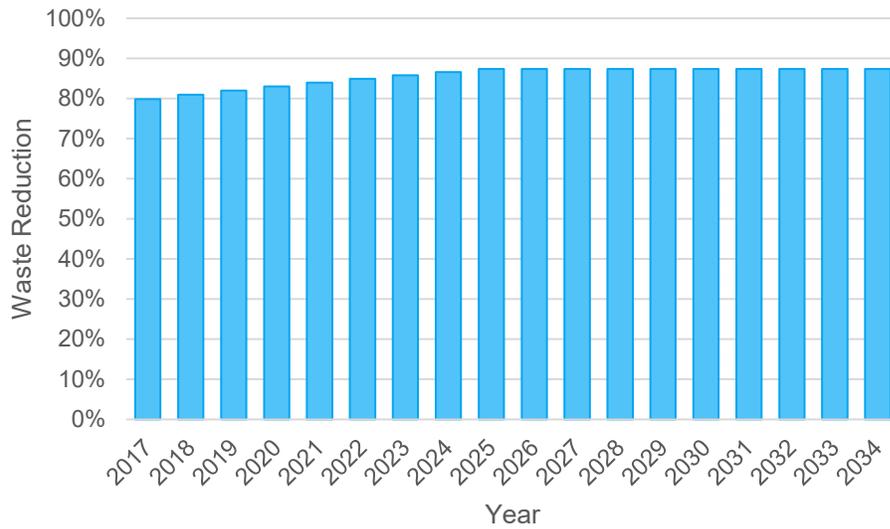
In the 2017 reference year, approximately 36% of the District’s residential/commercial waste stream was reduced. This percentage reflects tonnage that was diverted from landfill disposal by recycling and composting. The residential/commercial waste reduction percentage rate is expected to gradually increase to about 43% by the end of the planning period as depicted by the following chart.

**Residential/Commercial Waste Reduction Percentage  
(2017 – 2034)**



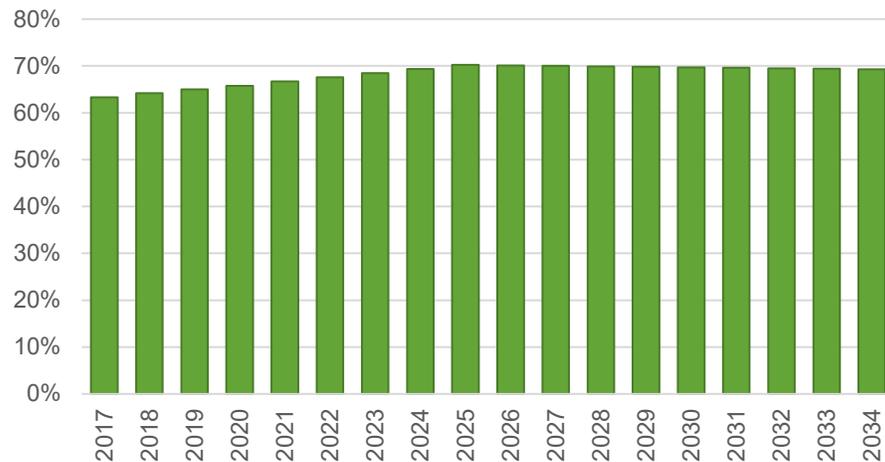
The industrial sector had a waste reduction rate of approximately 80% in 2017 and will increase to 87% by the end of the planning period as indicated by the following chart.

**Industrial Waste Reduction Percentage (2017 – 2034)**



The District’s annual waste reduction rate for the reference year was 63%. The District projects the total waste reduction rate will increase to 69% by the end of the planning period (2034). The following figure depicts the District’s projected waste reduction rate over the planning period for the residential/commercial and industrial sectors combined.

**Total District Waste Reduction Percentage (2017 – 2034)**



**G. Section VIII. Cost of Financing Plan Implementation**

**1. Funding Mechanisms**

**a. District Disposal Fees**

At this time, the District will levy no tiered disposal fees through the authority granted by Divisions B (1) to (3) of Section 3734.57 of the Ohio Revised Code. The District reserves the right to levy such fees in the future should it determine that such fees are necessary for the implementation of the plan.

**b. Generation Fee**

The District does not have a generation fee.

**c. Contract Fee**

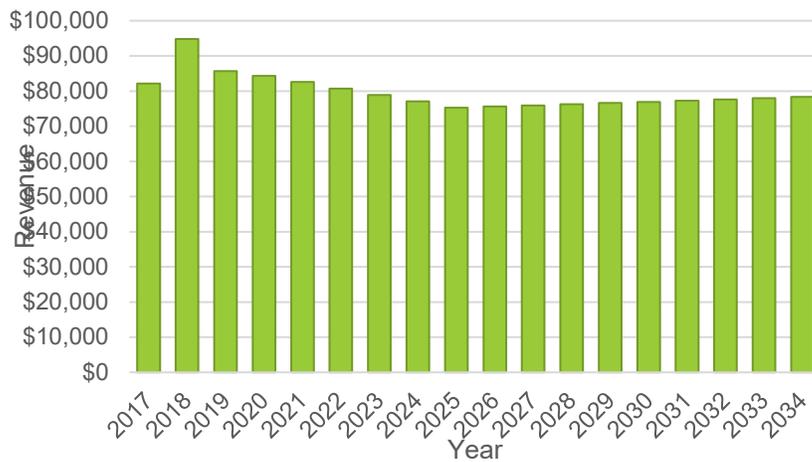
Starting in 2011, the District created a new funding mechanism for operating the District due to the 2013 projected closure of the Henry County Landfill. The District evaluated its long-term funding needs and decided to designate solid waste facilities and impose a \$4.00 per ton contract fee for the following designated facilities.

- Henry County Landfill
- Defiance County Landfill
- Archibold Refuse Service
- Wood County Landfill
- Fulton County Transfer Station
- Williams County Landfill
- Hancock County Sanitary Landfill
- Sunny Farms Landfill
- Evergreen Landfill
- Lima Transfer Station
- Stony Hollow Landfill
- American Landfill
- Geneva Landfill
- Suburban Landfill
- Kimble Sanitary Landfill
- Coshocton Landfill
- Mahoning Landfill

The contract fee is divided in two separate revenue centers. For the post-closure care of the Henry County Landfill, a total of \$1.00 per ton of the \$4.00 contract fee will be set aside for this purpose until mid-2019. The remaining \$3.00 per ton of the \$4.00 contract fee was used by the District to implement its solid waste management plan in 2017 up to 2020. In June of 2019, the District adjusted the contract fee from \$4.00 to \$5.00. The new split on the contract fee is \$2.00 to the post-closure care fund (starting in 2019) and \$3.00 for District operations.

The following chart depicts the contract fee revenue projections from 2010 – 2028.

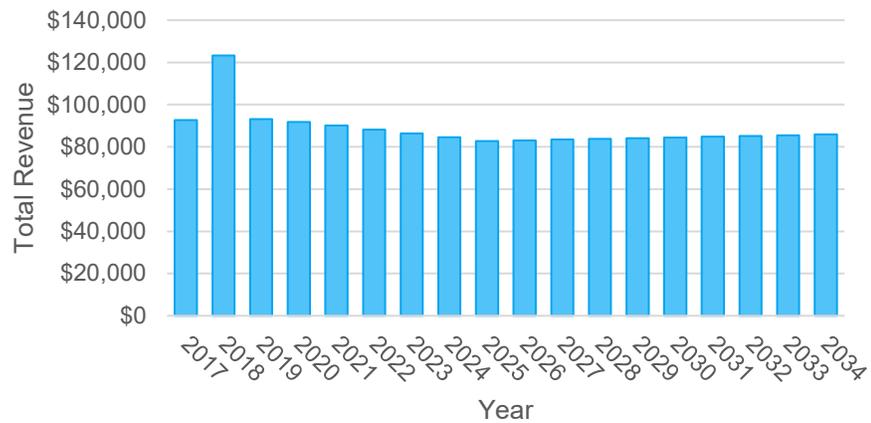
**Contract Fees (2017-2034)**



Estimated revenues include contract fees, recycling revenue, grants, electronics roundup revenue, and donations.

The following graph depicts the District’s total actual and projected revenue from 2017 – 2034 and includes all anticipated revenue sources identified above.

**District Revenue (2017 – 2034)**



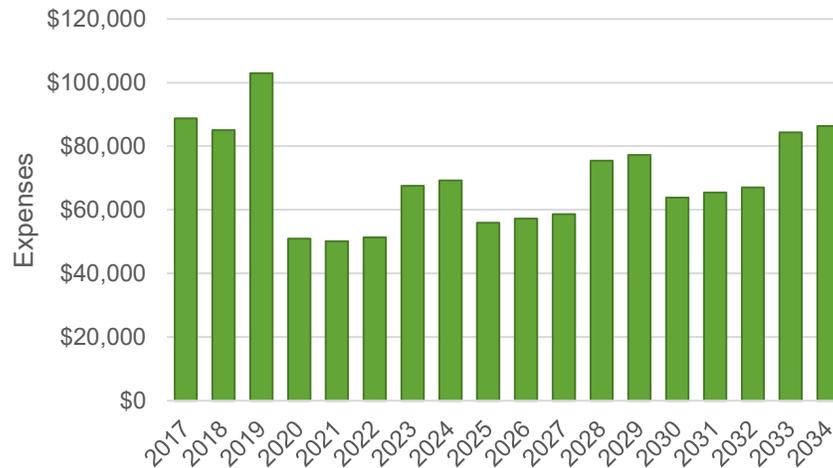
**2. Cost of Plan Implementation**

Section VIII includes the strategies, facilities, activities, and programs that the District will use to implement the *Plan Update*.

The District is projecting to spend \$50,923 in 2020, the first year of the planning period and \$86,398 in 2034, the final year of the planning period.

The following chart summarizes the District's actual and projected expenses throughout the planning period.

**District Expenses (2017 – 2034)**



The District's budget falls into three categories: preparation and monitoring of plan implementation, implementation of the approved plan, and solid waste enforcement.

### 3. Contingent Funding

The Policy Committee and District Board of County Commissioners do not consider funding to be an issue of concern during this planning period. The Board would consider increasing the contract fee or other funding options if the District's revenues and/or expenses were creating excessive budgetary shortfalls that reduced the District's fund balance to below \$75,000 without a projected short-term recovery.

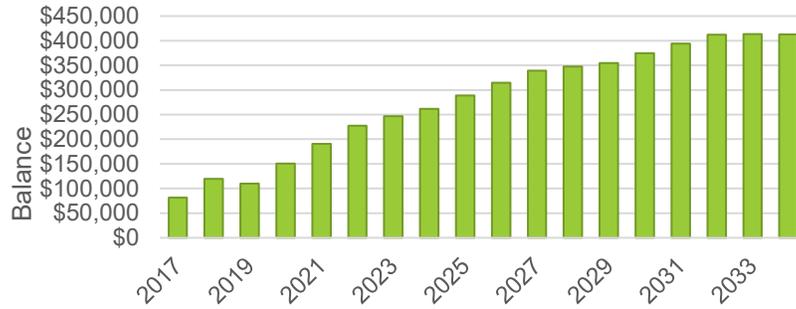
The District may also consider other funding mechanisms as a part of this contingent funding procedure including but not limited to generation fees. The Board of County Commissioners may choose to use this mechanism as a contingent funding source or as a replacement-funding source to contract fees, whichever is in the best interest of the District. Any proposed generation fee funding mechanism will require the District Policy Committee approval and ratification by the communities within the District.

### 4. Summary of Costs and Revenues

A summary of District revenues and expenditures for each year of the planning period is included in Table VIII-8. The District has a positive year-end cash flow for each year of the planning period. At the end of the planning period in 2034, the District projects a carryover of approximately

\$412,928. The following figure presents the District’s year-end cash flow from 2017 through 2034.

**District Fund Balance (2017 – 2034)**



**H. Section IX. District Rules (ORC Section 3734.53(C))**

**1. Existing Rules**

The District maintains the authority to adopt rules consistent with the solid waste management plan adopted by the District in accordance and pursuant to Section 3734.53 (C)(1) through (C)(4) of the Revised Code. The District does not have any existing rules. There are no current plans to adopt new rules at the time of developing this *Plan Update*.

**Table ES-1  
General Information**

District Name: Henry County Solid Waste District		
District ID # (for OEPA use only)	Reference Year 2017	Planning Period: 2020-2034
<b>Plan Status (underline one)</b>		
<u>D</u> RD DR	Approved (date) / /	OI (date) / / DA
		Reason for Plan Submittal: Mandatory five year update
Abbreviations: D=draft; RD=ratified draft, DR=draft revised, OI=ordered to be implemented, DA=draft amended		

**Table ES-2  
District/Coordinator/Office**

Name: Michael Imbrock, Coordinator		
Address: PO Box 96		
City: Malinta	State: Ohio	Zip: 43535
Phone: (419) 256-7343	Fax: N/A	

**Table ES-3  
Plan Data Summary**

Plan Data		Reference Year 2017	2020 (year 1)	2024 (year 5)	2029 (year 10)	2034 (year 15)
<b>Population</b>		27,185	27,230	26,854	26,440	26,080
<b>Generation</b>	Industrial	46,752	46,088	45,644	45,601	45,601
	Res/Comm	28,255	29,424	30,563	31,288	31,882
	Exempt	2,057	2,247	2,315	2,315	2,315
<b>Total Generation (tons)</b>		77,063	77,760	78,522	79,204	79,798
<b>Waste Reduction</b>	Industrial Source Reduction	0	0	0	0	0
	Industrial Recycling	37,339	38,258	39,518	39,839	39,839
	Res/Comm Source Reduction	0	0	0	0	0
	Res/Comm Recycling	7,878	9,218	11,238	11,789	11,789
	Yard Waste Composting	2,289	2,196	2,079	2,051	2,051
	MSW Composting	0	0	0	0	0
<b>Total Waste Reduction (tons)</b>		47,512	49,672	52,835	53,679	53,679
<b>Disposal</b>	In-District Landfills	0	0	0	0	0
	Out-of-District Landfills	29,556	28,087	25,687	25,525	26,240
<b>Total Landfill (tons)</b>		29,556	28,087	25,687	25,525	26,240
<b>Waste Reduction Rate</b>	Industrial	79.9%	83.0%	86.6%	87.4%	87.4%
	Residential/Commercial	36.0%	38.8%	43.6%	44.2%	43.4%

Source(s) of information: Tables IV-1, IV-5, IV-6, V-2, V-3, V-4 , V-6, and VI-4A

**Table ES-4  
Existing Disposal Facilities**

Name	County	District Tons	Total Tons	Years Left
<b>In-District Landfills</b>				
None				
<b>Out-of-District Landfills</b>				
Wood County Landfill	Wood, OH	4,901	397,342	6.6
Evergreen Recycling & Disposal	Wood, OH	192	5,215,605	42
Williams County Landfill	Williams, OH	2,683	1,643,096	174.5
Sunny Farms Landfill	Seneca, OH	5	18,695,881	12.2
Noble Rd Landfill	Richland, OH	13	5,088,800	5.26
Hancock County Sanitary Landfill	Hancock, OH	1,539	4,576,196	31.9
Defiance County Sanitary Landfill	Defiance, OH	20,217	7,835,461	56.8
<b>Out-of-State Landfills</b>				
Southside Landfill	Marion, IN	5	1,036,553	20.09
<b>Total/Average</b>		<b>29,556</b>	<b>44,488,934</b>	<b>43.67</b>

**Source(s) of information:** 2017 Ohio Facility Data Report Tables, Table III-1, and Table VI-4A

**Note:** The SouthSide landfill was a destination of a transfer station used by the District.

### III. Inventories [ORC Section 3734-53(A)(1)-(4)]

This section of the plan update describes how solid waste was collected, reduced, recycled, disposed, incinerated, and ultimately managed in the Henry County Solid Waste Management District during 2017.

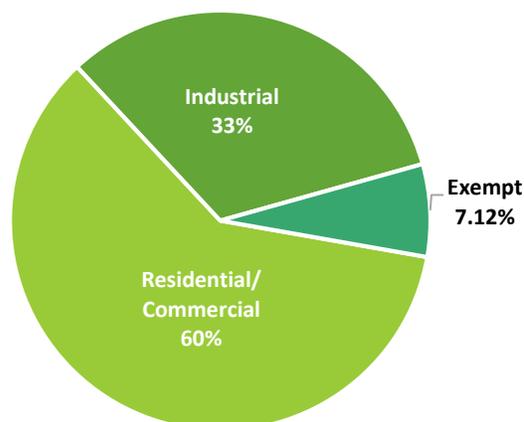
#### A. The Reference Year

The District will use calendar year 2017 as a reference year for all subsequent projections in the Plan.

#### B. Existing Solid Waste Landfills

Table III-1, "Landfills Used by the District" presents a list of the landfills that received directly hauled solid waste from the District. There are currently no operating MSW landfills located in the District. District-generated solid waste that was directly hauled (versus transferred) was managed at seven out-of-District landfills and zero out-of-state landfills. Approximately 28,881 tons of solid waste were directly hauled to landfills for disposal in 2017. The residential/commercial sector generated 60% of the waste that was directly hauled, and the industrial sector generated 33% of all directly hauled waste. Exempt waste represented approximately 7% of the waste that was directly hauled. Exempt waste can include earth or materials from construction, mining, or demolition operations, non-toxic fly ash, non-toxic bottom ash, or slag. The following figure presents the percent of directly hauled solid waste generated by each sector in 2017.

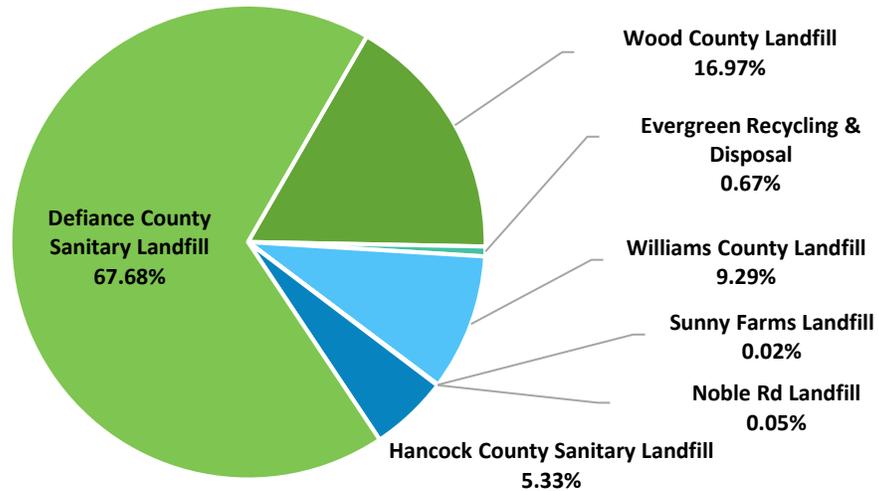
#### 2017 Percentage of Directly Hauled Solid Waste Generated by Sector



The Defiance County Sanitary Landfill managed approximately 68% (19,547 tons) of the District's solid waste. Wood County Landfill, Williams County Landfill, and Hancock County Sanitary Landfill also received a significant portion of the District's solid waste (17%, 9%, and 5%

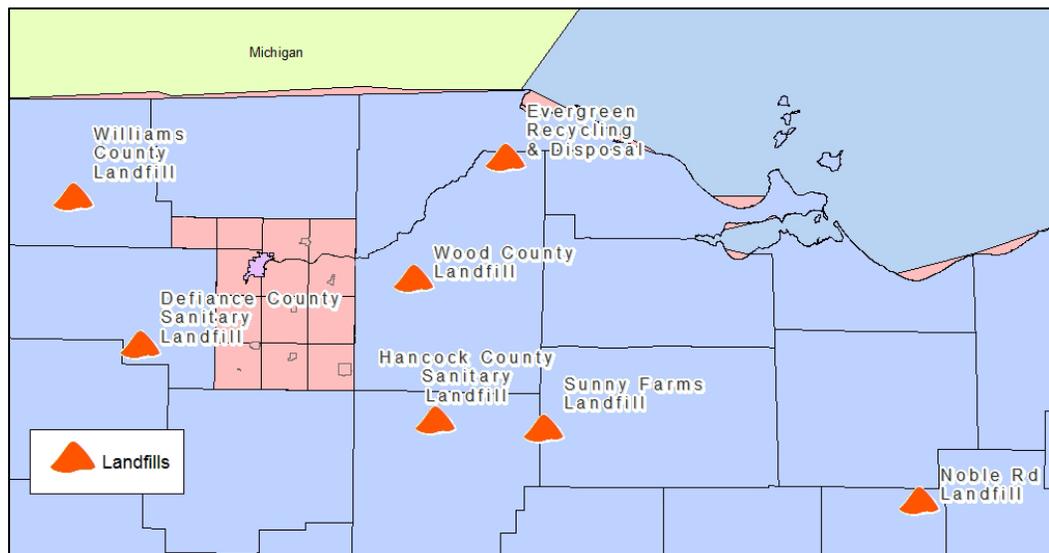
respectively). The following chart depicts the landfills used by the District for direct hauled solid and exempt waste in 2017.

**2017 Direct Haul Landfills Receiving District Solid/Exempt Waste**



The following map presents the location of these facilities in relation to Henry County.

**2017 Landfills that Accepted Directly-Hauled Solid Waste**



**C. Existing Incinerators and Waste-to-Energy Facilities**

There were two incinerators or waste-to-energy facilities located within the District or used by the District in 2017 (see Table III-2). These facilities took a total of 9.68 tons from the District.

## D. Existing Transfer Facilities

Table III-3 presents transfer facilities used by the District. Archbold Refuse Service Solid Waste Transfer Facility in Fulton County was the only in-state transfer station used by the District in 2017 other than the District-operated exempt transfer station located at the Henry County Landfill location. The Archbold transfer station reported accepting and processing 669 tons. One transfer station located in Indiana, Tradebe Treatment & Recycling, processed 2 tons to be disposed of in 2017. No transfer facilities were located in the District in 2017. The following figure presents the transfer station in relation to Henry County.

**2017 Transfer Stations Used by the District**



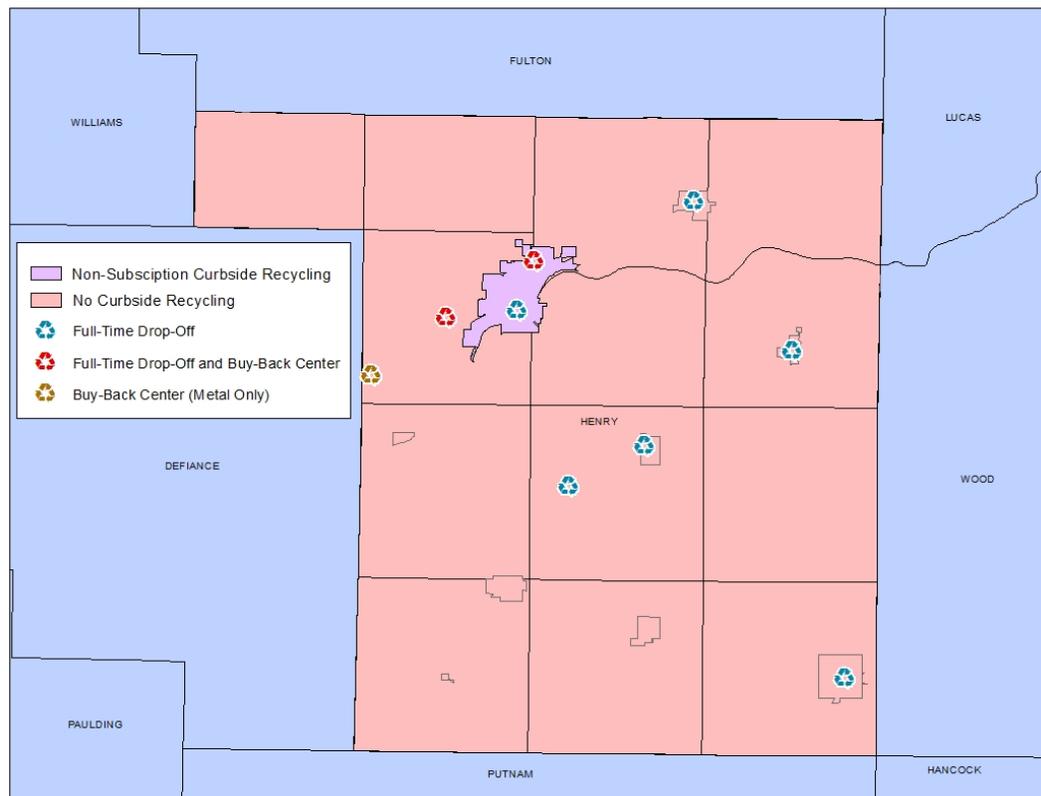
## E. Existing Recycling and Household Hazardous Waste Collection Activities

Table III-4, “Residential Curbside Recycling Activities,” identifies one community that provides pay-as-you-throw (PAYT) non-subscription curbside recycling service. There are no subscription curbside programs operating in the District. The non-subscription curbside program offers community residents weekly collection of recyclable materials including #1 and #2 plastics, glass, aluminum and tin cans, corrugated cardboard, paperboard, newspapers, magazines, catalogues, gift wrap, and junk mail. In 2017, the curbside programs collected 732 tons of recyclable materials.

Table III-5, “Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities, and HHW Collection Used by the District,” lists 6 in-District drop-

off facilities available for public use that accept, at a minimum, 5 materials defined as highly amenable to recycling for the residential sector. These materials include aluminum and bi-metal cans, glass, plastic, and newspaper. Six of the drop-off recycling centers are full-time, meaning they are available at least 40 hours per week. All Henry County residents have access to these 6 public drop-off sites. The following figure presents the locations of the drop-off recycling centers, as well as public buy-back centers, and curbside recycling programs.

**2017 Curbside and Drop-Off Recycling Facilities**



The Henry County Landfill operates a drop-off facility and accepts aluminum containers, steel, tin, cardboard, glass, newsprint, other paper, and plastics (#1 and #2). The landfill also accepts scrap metal, appliances, tires, and lead acid batteries.

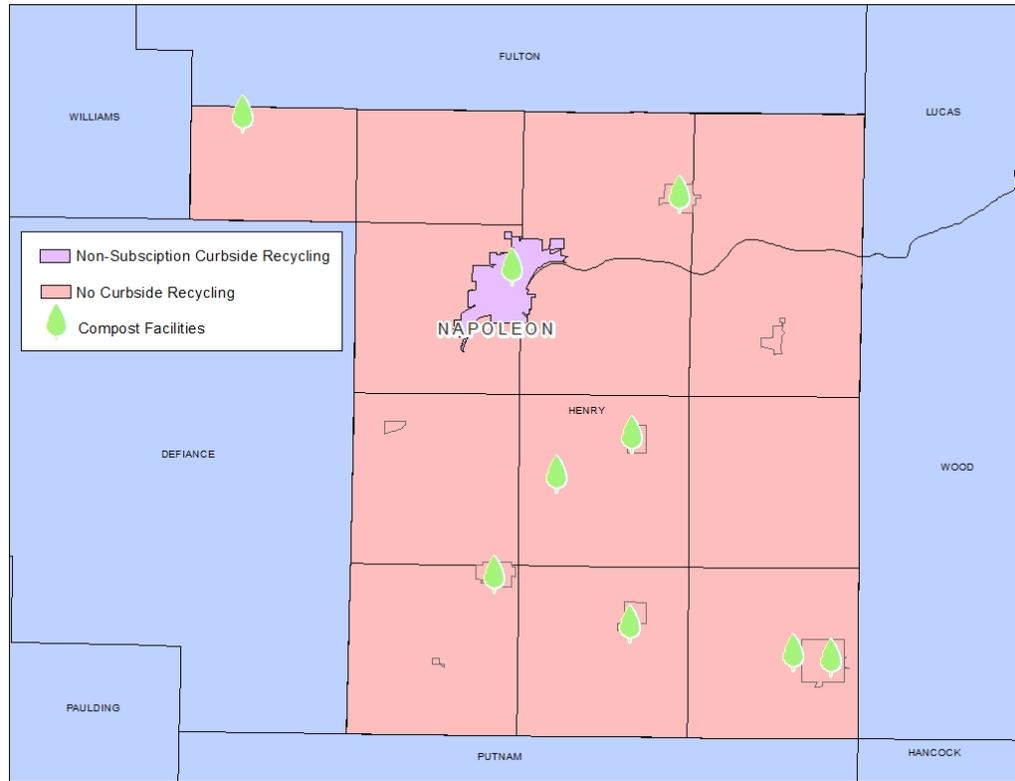
Table III-5 also lists private use drop-off facilities, drop-off recycling sites that accept less than the minimum 5 materials, brokers, and special collection programs operating in the District.

**F. Existing Composting/Yard Waste Management Facilities**

Compost facilities that are located within the District are presented in Table III-6, “Composting/Yard Waste Management Activities Used by the District.” There was one Class IV and one Class III compost facilities operating in Henry County during 2017 that managed 1,321 tons of yard waste. Six communities collected leaves and land-applied the processed material. Additionally, 92 tons of food waste were processed by haulers and grocers in the District. The overall organics composted by the District totaled 2,289 tons.

The following map presents the locations of registered composting facilities used to manage organics generated in the District, as well as the community leaf collection activities throughout the District.

**2017 Yard Waste Facilities and Activities**



**G. Facilities Used by the District Which are Located Outside Ohio**

Table III-7 presents one facility that is located outside of Ohio that received District waste.

**H. Existing Open Dumps and Waste Tire Dumps**

Table III-8 identifies no open dumps in the Henry County Solid Waste Management District. There are no identified waste tire dumps.

**I. Ash, Foundry Sand, and Slag Disposal Sites**

Table III-9 identifies no ash, foundry sand and slag disposal sites located in the Henry County Solid Waste Management District.

**J. Map of Facilities and Sites**

Figure III-7 displays a map of the District’s facilities. A full-size version of this map is included in Appendix E.

**2017 District Facilities and Sites**

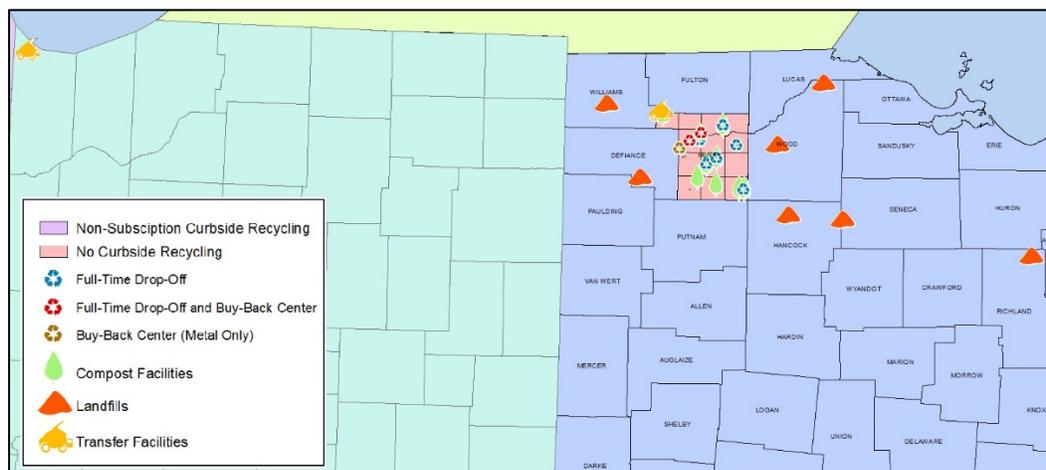


Table III-10, “Solid Waste Haulers Operating in the District,” contains the public and private sector waste haulers providing service to waste generators in the District.

There were ten known private sector haulers (not counting Scrap Tire Haulers) and one public sector haulers that provided collection services within the District. The list of haulers was taken from the 2017 ADR survey results; haulers were researched to identify whether they were still in business and/or still providing hauling services in the District.

**Table III-1  
Landfills Used by the District**

Facility Name	Type	Location		Waste Received from the SWMD (TPY)			
		County	State	Residential/ Commercial	Industrial	Exempt	Total
<b>In-District Landfills</b>							
None							0
<b>Out-of-District Landfills</b>							
Wood County Landfill	PA, GO	Wood	OH	4,692	0	209	4,901
Evergreen Recycling & Disposal	PA, PO	Wood	OH	48	12	132	192
Williams County Landfill	PA, PO	Williams	OH	2,119	545	19	2,683
Sunny Farms Landfill	PA, PO	Seneca	OH	0	0	5	5
Noble Rd Landfill	PA, PO	Richland	OH	13	0	0	13
Hancock County Sanitary Landfill	PA, GO	Hancock	OH	1,392	0	147	1,539
Defiance County Sanitary Landfill	PA, GO	Defiance	OH	9,152	8,851	1,544	19,547
<b>Out-of-State Landfills</b>							
None				0	0	0	0
<b>Landfill Total</b>				<b>17,416</b>	<b>9,408</b>	<b>2,057</b>	<b>28,881</b>
<b>Incinerator Facilities</b>				<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>Transfer Stations</b>				<b>669</b>	<b>2</b>	<b>0</b>	<b>672</b>
<b>Total Disposal</b>				<b>18,087</b>	<b>9,412</b>	<b>2,057</b>	<b>29,556</b>

PA = publicly available, PO = privately-operated, GO = government-operated, N/A = not applicable

**Source(s) of information:** Ohio EPA, 2017 Annual District Review Forms, Indiana Department of Environmental Management, 2017 Complete Solid Waste Quarterly Report Database

**Table III-2  
Solid Waste Incinerators, Waste-to-Energy, and Processing Facilities Used by the District**

Facility Name	Type	Location		Waste Received from the SWMD (TPY)					Total Ash Produced (TPY)
				Residential/Commercial	Industrial	Exempt	Total	Volume Reduction (TPY)	
		County	State						
<b>In-District Facilities</b>									
None.							0		
<b>Out-of-District Facilities</b>									
None.							0		
<b>Out-of-State Facilities</b>									
Indianapolis Resource Recovery Facility	INP	Marion	IN	0	6	0	6	4	2
Medassure Of Indiana Treatment Facility	MWP	Marion	IN	3	0	0	3	2	1
<b>Totals</b>				<b>3</b>	<b>6</b>	<b>0</b>	<b>10</b>	<b>7</b>	<b>3</b>

MWP = medical waste processor, INP = Incinerator

**Table III-3  
Solid Waste Transfer Facilities Used by the District**

Facility Name	Type	Location		Waste Received from the SWMD (TPY)				Recyclables Processed	
				Residential/Commercial	Industrial	Exempt	Total	Recovered from Waste	Total
		County	State						
<b>In-District Facilities</b>									
Henry County Landfill Exempt	PA	Henry	OH	0	0	0	2098*		0
<b>Out-of-District Facilities</b>									
Archbold Refuse Service Solid Waste Transfer Facility	PO, PA	Fulton	OH	669	0.00	0.00	669	0.00	0
<b>Out-of-State Facilities</b>									
Tradebe Treatment & Recycling, LLC	PFO	Lake	IN	0.00	2.40	0.00	<b>2</b>		
<b>Totals</b>				<b>669</b>	<b>2</b>	<b>0</b>	<b>672</b>	<b>0</b>	<b>0</b>

PA = publicly available, PO = privately-operated, GO = government-operated, PFO = Processing Facility - Other

**Source(s) of information:** Ohio EPA, 2017 Annual District Review Form, Indiana Department of Environmental Management, 2017 Complete Solid Waste Quarterly Report Database

**\*Note:** Henry County Landfill is an exempt transfer station and therefore is not added into the total tonnage of waste managed by transfer stations

**Table III-4  
Residential Curbside Recycling Activities Used by the District**

Community	Type	Population Served	Collection Frequency	Types of Materials Accepted							Tons Processed from SWMD
				AC	GL	PL	ONP	OCC	SC	MxP	
<b>Non-Subscription Curbside Recycling</b>											
City of Napoleon Operations Dept. Napoleon, OH 43545 (419) 599-1891	PAYT	2,262	Weekly	x		x	x	x	x	x	732
<b>2017 Non-Subscription Curbside Recycling Total</b>											<b>732</b>
<b>Subscription Curbside Recycling</b>											
None											0
<b>2017 Subscription Curbside Recycling Total</b>											<b>0</b>
<b>2017 Total Curbside Recycling Total</b>											<b>732</b>

NS = non-subscription curbside recycling; S = subscription curbside recycling

AC = aluminum containers; GL = glass containers; PL = plastic containers; ONP = newspaper; OCC = cardboard; SC = steel containers; MxP = mixed paper; AS = aseptic containers

**Source(s) of information:** 2017 Annual District Report. Population: Ohio Development Services Agency Office of Research, 2017 Population Estimates: Cities, Villages, and Townships by County

Table III-5  
Drop-offs, Buybacks, Hauler Collection, Other Recycling Activities and HHW Collection Used by the District

Facility/Activity Name, Address, Phone	Type	Types of Materials Accepted															Service Area			Hours Available to Public	Tons of Recyclables from SWMD	% of Tons by Sector
		AC	GL	PL	ONP	OCC	SC	MAG	OffP	MxP	LAB	ST	WG	OM	W	Oth	County	Twp./ City	Population Served			
<b>Full Time Drop-Off Recycling Centers</b>																						
Henry County Landfill L-622 Township Rd 11 Malinta, OH 43535 (419) 256-7343	PA, DO	x		x	x	x	x	x	x	x	x	x	x	x	x	x	Henry	All	27,185	8-3:30 M-F 8-11 Sat	42.95	100% R
Village of Malinta Behind Maintenance Bldg. Malinta, OH 43535 (419) 256-7961	PA, DO	x		x	x	x	x	x	x	x							Henry	Malinta	1,111	24 Hours 7 days/week	37.96	100% R
Village of Liberty Center 110 East St. Liberty Center, OH 43532 (419) 533-3321	PA, DO	x		x	x	x	x	x	x	x							Henry	Liberty Center	1,882	24 Hours 7 days/week	56.52	100% R
Canal Basin & Lions Club Corner of Scott & 424 Napoleon, OH 43545 (419) 256-7343	PA, DO	x		x	x	x	x	x	x	x							Henry	Napoleon	8,299	24 Hours 7 days/week	460.84	100% R
Village of Deshler Behind Historical Bldg. Deshler, OH 43516 (419) 278-2955	PA, DO	x		x	x	x	x	x	x	x							Henry	Deshler	1,730	24 Hours 7 days/week	29.24	100% R
Village of McClure South of Old School House McClure, OH 43534 (419) 748-8592	PA, DO	x		x	x	x	x	x	x	x							Henry	McClure	683	24 Hours 7 days/week	24.26	100% R
<b>Part-Time Drop-Off Recycling Centers</b>																						
<b>Brokers, Processors, and Scrap Yards</b>																						
		AC	GL	PL		OCC	SC				LAB	ST	WG	OM	Oth							
N&R&G Recycling 471 Freedom Drive Napoleon, OH 43545 (419) 599-1659	PA, DO, BB	x		x	x	x	x	x	x	x	x	x	x	x	x		Henry	All	27,185	8-4:45 M-F 8-11:45 Sat	3,320.91	48% R; 52% I
Okolona Iron & Metal 18641 Co. Rd. N Okolona, OH 43550 (419) 758-3701	PA, DO, BB	x					x						x	x			Henry	All	27,185	8-5 M-F 8-12 Sat.	676.12	100% R
Zack's Recycling 708 Filmore St. Napoleon, OH 43545 (419) 592-4791	PA, DO, BB	x		x	x	x	x	x	x	x	x		x	x	x		Henry	All	27,185	8-4 M-F 8-11:45 Sat	5,311.40	77% R; 23% I
Werlor Recycling 1420 Ralston Ave. Defiance, OH 43512 (419) 784-4285	PA, DO, BB	x		x	x	x	x	x	x	x				x	x		Henry	All	27,185	7-4 M-F	1,011.00	80% R; 20% I
State Paper & Gateway Recy. 926 Dearborn Ave. Toledo, OH 43605 (419) 729-9777	BR	x		x	x	x	x	x	x	x							Henry	All	27,185	7-3 M-F	1.25	100% I
Sims Metal Management 2535 Hill Avenue Toledo, OH 43607 (419) 535-6856	PA, BB													x			Henry	All	27,185	8-4 M-F 8-12 Sat.	DNR	DNR
Covanta (WTE facility) 2320 Harding St. Indianapolis, IN (317) 634-7367	WTE																Henry	All	27,185	24 Hours 7 days/week	DNR	DNR
H&S Forest Products 2000 W. Henderson Columbus, OH (800) 297-6283	BB, BR			x											x		Henry	All	27,185	7-4 M-F	DNR	25% C; 75% I
Chep Pallets 8517 South Park Circle Orlando, FL 32819 (407) 370-2437	PUO														x		Henry	All	27,185	DNR	DNR	DNR
Buckeye Pallets 18743 Co. Rd. 424 Defiance, OH 43512 (419) 782-3492	BB, BR														x		Henry	All	27,185	Varies	DNR	50% C; 50% I
River City Polymers 425 Enterprise Ave. Wauseon, OH 43587 (419) 335-2355	BB, BR			x													Henry	All	27,185	8-4 M-F	DNR	25% C; 75% I
Omni-Source 880 Linden St. Defiance, OH 43512 (419) 784-5669	PA, BB, BR	x					x								x		Henry	All	27,185	8-12 M-Sat.	DNR	DNR



**Table III-6  
Composting/Yard Waste Management Activities Used by the District**

Facility Name or Activity	Class	County	Waste Received from the SWMD		
			Address/Phone	Food Waste Tons	Yard Waste Tons
<b><i>In-District Registered Compost Facilities</i></b>					
Panning Excavating	IV	Henry	3278 St. Rt 18 Deshler, OH 43516 (419) 278-0278	0	1,321
Tri State Garden Supply	III	Henry	U856 St. Rt. 66 Archbold, OH 43502 (419) 445-6561	0	N/A
<b>Subtotal</b>				<b>0</b>	<b>1,321</b>
<b><i>Out-of-District Registered Compost Facilities</i></b>					
None					
<b>Subtotal</b>				<b>0</b>	<b>0.00</b>
<b><i>Other Activities</i></b>					
Hauler and grocer food waste data		Henry	N/A	92	
Village of Deshler	PA, DO	Henry	142 E. Elm St. Deshler, OH 43516 (419) 278-2955	0	Included in Panning Excavating total
City of Napoleon <sup>2</sup>	PA, DO	Henry	1722 Oakwood Ave Napoleon, OH 43545 (419) 599-1891	0	968
Village of Hamler	PA, DO	Henry	871 Hubbard St. Hamler, OH 43524 (419) 274-7651	0	Included in Panning Excavating total
Village of Holgate	PA, DO	Henry	327 Railway Ave. Holgate, OH 43527 (419) 264-4395	0	No data reported
Village of Liberty Center <sup>1</sup>	PA, DO	Henry	110 East St. Liberty Center, OH 43532 (419) 533-3321	0	No data reported
Village of Malinta	PA, DO	Henry	103 1/2 Turkeyfoot Ave. Malinta, OH 43535 (419) 256-7961	0	No data reported
Henry County Landfill <sup>1</sup>	PA, DO	Henry	L622 Twp. Rd. 11 Malinta, OH 43535 (419) 256-7343	0	No data reported
<b>Subtotal</b>				<b>92</b>	<b>968</b>
<b>Grand Total</b>				<b>92</b>	<b>2,289</b>

NA = not applicable, YW = yard waste

**Source(s) of information:** Ohio EPA, 2017 Compost Facility Planning Report, 2017 ADR

<sup>1</sup>Henry County Landfill and Village of Liberty Center were land applied

<sup>2</sup>City of Napoleon had 967 tons processed by Findlay Warehousing Co Inc (Tawa) and Public. Additional tonnage is included in Panning

**Table III-7  
Facilities Used by the District Which are Located Outside Ohio: Additional Data**

Facility Name	Facility Mailing Address	Facility Owner	Facility Operator	2017 Tons Received	Operating Days/Year
Pollution Control Industries Solid Waste Processing Facility	4343 Kennedy Avenue East Chicago, IN 46312 (219) 397-3951	TRADEBE 4344 Kennedy Avenue East Chicago, IN 46312 (219) 397-3951	Pollution Control 4344 Kennedy Avenue East Chicago, IN 46312 (219) 397-3952	Unknown	260

**Source(s) of information:** Indiana Department of Environmental Management, 2017 Authorized Operating Solid Waste Facilities

**Table III-8  
Open Dumps and Waste Tire Dumps Located in the District**

Site Location (description)	Land Owner Contact Information	Description of Materials Dumped	Approximate Size of Site	Time Period Site has Existed	Update
<b><i>Open Dump Sites</i></b>					
None.					
<b><i>Waste Tire Dump Sites</i></b>					
None.					

N/A=Not available

**Source(s) of information:** Henry County Health Department

**Table III-9  
Ash, Foundry Sand, and Slag Disposal Sites Used by the District**

Site Location (describe briefly)	Land Owner Contact Information	Description of Materials Dumped	Approximate Size of Site	Time Period Site has Existed
None.				

**Source(s) of information:** Henry County Health Department

**Table III-10  
Solid Waste Haulers Operating in the District**

Hauler	Mailing Address	Service Area	Materials Collected	Trash Collected	Recyclables Collected	Name of Facility Used by Hauler
<b>Private Sector Haulers</b>						
Tim Behrman	2532 Co Rd H Deshler, OH 43516 (419) 278-2205	Henry County	Residential, Commercial, Industrial, and Construction Solid Waste, Recyclables	DNR	DNR	Henry County Exempt Transfer Wood County Landfill DK Enterprise (CC&D Facility)
Allied Waste (Bryan Division)	12604 Road G Bryan, OH 43506 (419) 636-2242	Henry County	DNR	DNR	DNR	DNR
Robert Blue Trucking	7591 Co Rd 7, Hamler, OH 43524 (419) 274-8305	Henry County	DNR	DNR	DNR	DNR
Heartland Disposal Service	7192 US-6, Napoleon, OH 43545 (419) 748-7652	Henry County	DNR	DNR	DNR	DNR
Hoops Brothers Trash Removal	440 N Keyser Ave, Deshler, OH 43516 (419) 278-8319	Henry County	DNR	DNR	DNR	DNR
Knapp Refuse	Delta, Ohio, 43515 (419) 822-9012	Henry County	DNR	DNR	DNR	DNR
N&R&G Recycling	471 Co Rd R, Napoleon, OH 43545 (419) 599-1659	Henry County	DNR	DNR	DNR	DNR
Werlor Waste Control & Recycling Center, Inc.	1420 Ralston Ave, Defiance, OH 43512 (419) 784-4285	Henry County	DNR	DNR	DNR	DNR
Zack's Recycling	708 Fillmore St, Napoleon, OH 43545 (419) 592-4791	Henry County	DNR	DNR	DNR	DNR
Panning Excavating	3278 OH-18, Deshler, OH 43516 (419) 278-0278	Henry County	DNR	DNR	DNR	DNR
<b>Public Sector Haulers</b>						
City of Napoleon	1775 Industrial Dr., P.O. Box 151, Napoleon, OH 43545 (419) 599-1891	Henry County	DNR	DNR	DNR	DNR
<b>Total</b>				<b>N/A</b>	<b>N/A</b>	

SW = solid waste, R = recyclables, FW = food waste

#### IV. Reference Year Population, Waste Generation and Waste Reduction [ORC Section 3734.53(A)(5)-(6)]

This section of the Plan Update presents information regarding the District's population, waste generation, and waste reduction estimates for the reference year.

##### A. Reference Year Population and Residential/Commercial Waste Generation

Table IV-1, "Reference Year Population and Residential/Commercial Generation," presents an estimate of the District's population and projected residential/commercial waste generation for 2017. The District's base population was 27,185. This population estimate was not adjusted for political subdivisions located in more than one solid waste district.

##### Population Adjustments

In accordance with Ohio law, the entire population of political subdivisions located in more than one solid waste district was credited to the district containing the largest portion of the jurisdiction's population.

No political subdivisions in Henry County straddled the border between more than one county. No adjustments to the population were necessary.

The District's total adjusted 2017 population was 27,185 residents.

##### B. Residential/Commercial Waste Generation

The 2017 residential/commercial waste generation rate was projected using historical data, which is summarized in the following table:

Year	Waste + Recycling	Population	Per Capita Gen Rate (lbs./person/day)	Average Rate of Change for Per Capita Gen Rate
2013	26,646	28,092	5.20	
2014	27,839	27,937	5.46	4.81%
2015	28,152	27,937	5.52	1.11%
2016	31,435	27,629	6.23	11.43%
<b>Average:</b>				<b>5.79%</b>

The reference year residential/commercial total generation was projected by increasing the per capita generation rate reported in 2016 (6.23 PPD) by the average annual rate of change in per capita residential/commercial waste generation from 2013 through 2016 (5.79%) based upon the generation rates reported on the Annual District Reports.

The 2017 per capita residential/commercial waste generation projection was 6.36 pounds per person per day. Table IV-1 shows the formula used for estimating the residential/commercial waste generation. This methodology calculated the District's residential/commercial waste generation to be 31,540 tons in 2017. For further discussion on reconciling the waste generation values, see Section IV.H of this *Plan Update*.

### C. Industrial Waste Generation

The District conducts annual solid waste and recycling surveys of its local industries. Detailed results from the industrial survey are included in Appendix F and copies of the commercial and industrial survey forms are included in Appendix G. Due to limited reporting from industrial entities, brokers and processors are surveyed for materials collected from the industrial sector. Table IV-2 presents the summarized results of the District's 2017 Industrial Survey, as well as the estimated total for the District's entire industrial sector. A total of 51 industries in SIC codes 20 and 22-39 were identified throughout the District. Two industries and several brokers of the District's industrial sector responded to the survey.

Approximately 37,335 tons (30,991 tons from SIC code 20 and 6,344 tons from other SIC codes) of recycled materials were identified in 2017.

The following table presents the types of industries that reported the largest per capita solid waste generation rates:

SIC Code	Description	Solid Waste Generation Rate (Tons/Employee)	Total Tons Reported on Survey
20	Food & Kindred Products	21	30,991

To estimate total industrial waste generated, a list was compiled that contained all industrial sector businesses located in the District and the total number of employees by SIC code. The District determined the quantity of industries and employees that were not represented in the survey responses. Average per capita generation rates by SIC code from Appendix JJ of the Ohio EPA Plan format were used to project the total tons generated by industries that did not respond to the District's survey. Using this projection methodology, a total of 12,541 tons of industrial waste was generated in the District from non-responding industries. The resulting total is 49,876 tons generated by both responding and non-responding industries.

**D. Exempt Waste**

Exempt waste is material that is not defined as solid waste, such as earth or materials from construction, mining, or demolition operations, nontoxic fly ash, nontoxic bottom ash, or slag. Exempt wastes can be managed in landfills that have different and often less stringent environmental control requirements. Table IV-3 shows that the total exempt waste generated by the District was 2,057 tons. This includes the exempt waste reported by the landfills and transfer stations receiving the District's waste in Table III-1. The generation rate was 0.41 pounds per person per day (PPD).

Exempt waste does not have a direct correlation to changes in population. It may be related to factors such as changes in construction employment. The volume of exempt waste generated within the District fluctuated over the 5-year period from 2013 to 2017, from a high of 2,057 tons in 2017 to a low of 1,419 tons in 2016.

**E. Total Waste Generation (based on national statistics and projections)**

Table IV-4, "Reference Year Total Waste Generation for the District," presents the total waste generated using District data and statewide projections. Using these sources of information, the District estimated that approximately 83,472 tons of waste were generated in 2017. The total generation rate was projected to be 16.82 pounds per person per day. This included 31,540 tons (Table IV-1) of residential/commercial waste, 49,876 tons (Table IV-2) of industrial waste, and 2,057 tons (Table IV-3) of exempt waste. The total waste generation listed in Table IV-4 is 6,409 tons more than the total in Table IV-8 (77,063 tons) as calculated using disposal facility data and reported recycling and waste reduction, including exempt waste. For further discussion on reconciling the waste generation values, see Section IV.H.

**F. Reference Year Waste Reduction**

The District obtained data from service providers, scrap yards, Ohio EPA, and program contractors to obtain data on residential, commercial, institutional, and industrial recycling for 2017. Residential/commercial waste reduction data reported in Table IV-5 and industrial waste reduction data reported in Table IV-6 was obtained from these data collection activities.

Figures in this *Plan Update* may differ slightly from figures reported in the 2010 Annual District Report (ADR) due to revisions in the data. The District contacted brokers and processors who responded to the survey to verify tonnage. The District took steps to determine whether auto bodies, construction and demolition debris, or out-of-district material was included

in the tonnage reported on surveys. The District removed any non-creditable recycling tonnage.

The District was careful to eliminate double counting as described in the sections below.

### **Residential Data**

Most residential sector recycling is collected from community curbside programs, drop-off recycling sites, and special material collection drives held by the District or District communities. The District ensured that there was no double counting by subtracting the recycled tons reported by the communities from the tons reported by the recycling processor, broker, or hauler for that same community.

Three brokers and processors that reported significant quantities of metals were contacted multiple times to confirm data reported on the 2017 annual district report. All three brokers and processors responded to requests to adjust and/or confirm that the metal recycling tonnage reported did not include non-creditable materials such as construction/demolition debris, auto bodies and parts, materials from out-of-district, etc. All three processors interviewed gave updated tonnages of only creditable materials. The recycled ferrous and non-ferrous metal tonnage from the residential/commercial sector has been adjusted in all parts of the Plan Update and do not match the 2017 submitted ADR for the District for this reason.

### **Commercial/Institutional Data**

A survey of commercial businesses and institutions was completed by the District in the spring of 2018 to gather 2017 recycling and disposal data. The District used a mail house to send a cover letter, survey, and postage paid return envelope via the U.S. Postal Service to each commercial business and institution (SIC 42-45, 47-65, 67, 70, 73, 78-84, 86, 87, 91-95) located in the District. The letter explained the purpose of the inquiry and requested that recipients complete the enclosed survey and return it using the provided envelope. The results of these individual surveys were used to compile recycling by commercial businesses and institutions. Brokers, haulers, and MRFs (material recovery facilities) were also surveyed. These surveys requested only tonnage that was generated within the District.

Data from businesses was not blended with data from brokers, haulers, or MRFs when calculating the total tons for the majority of materials. The District typically used the greatest total tons reported by either business,

brokers, haulers, or MRFs but not a combination of totals to avoid double counting.

### **Industrial Data**

A survey of industries was completed by the District in the spring of 2018 to gather 2017 recycling and disposal data. In 2017, the District compiled surveys from haulers, brokers, or MRFs and the largest industry in the District. The results of these individual surveys were used to compile industrial sector recycling. The District analyzed where the materials were sent to in order to avoid double counting.

The District annually surveys industries. Responses from recipients that submitted a completed survey previously were compared to identify possible errors. In cases where current survey responses showed a significant increase or decrease in tonnage or omitting materials that were reported on a previous survey, follow up calls and e-mails were placed to confirm data.

### **Residential/Commercial Waste Reduction**

Table IV-5, "Reference Year Residential/Commercial Waste Reduction in the District," shows that the District's residential and commercial sectors diverted 10,169 tons of materials from landfills in 2017 by recycling, composting, and reducing waste via incineration.

Ferrous Metals represented the most diverted material based on weight (3,310 tons), followed by yard waste (2,289 tons), cardboard (1,416 tons), commingled (1,254 tons), and paper (513 tons). High recovery of ferrous metals is mainly attributed to market pricing. The District will continue to monitor the ferrous metals reports from brokers and processors to determine reporting accuracy. The following table summarizes the residential and commercial recycling totals by commodity.

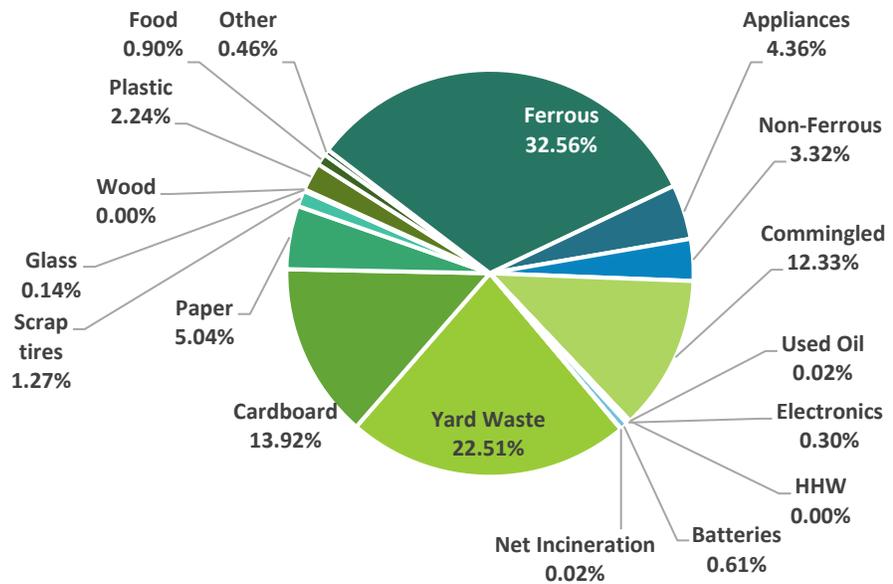
#### **2017 Residential/Commercial Sector Recycling by Commodity**

<b>Material Recycled</b>	<b>Tons</b>
<b>Cardboard</b>	1,416
<b>Paper</b>	513
<b>Scrap tires</b>	129
<b>Glass</b>	14
<b>Wood</b>	0
<b>Plastic</b>	228
<b>Food</b>	92
<b>Other</b>	47
<b>Ferrous</b>	3,310

Material Recycled	Tons
Appliances	443
Non-Ferrous	338
Commingled	1,254
HHW	0
Used Oil	2
Electronics	30
Batteries	62
Composting	2,289
Net Incineration	2.4
<b>Total</b>	<b>10,169</b>

The following figure depicts the waste reduction percentages for the residential/commercial sector.

**2017 District Residential/Commercial Waste Reduction**



**Industrial Waste Reduction**

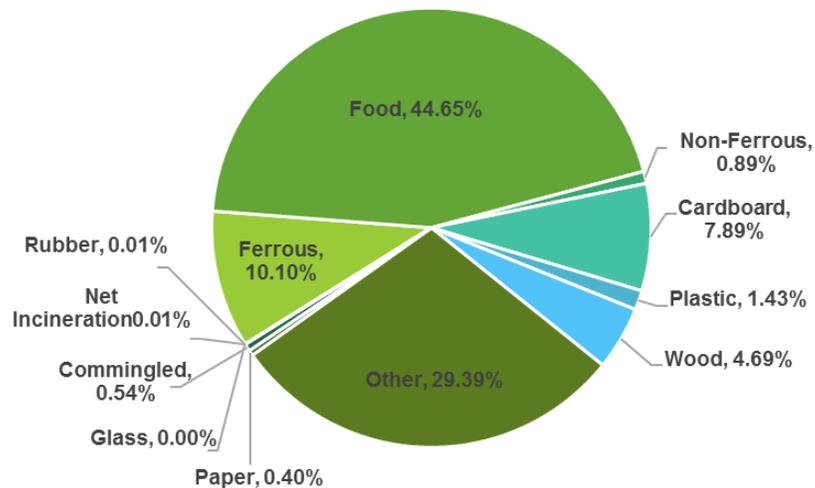
Table IV-6, “Reference Year Industrial Waste Reduction in the District” shows that industries located in the District reduced 37,339 tons of materials in 2017. Food represented approximately 44.7% of the industrial sector recycling; miscellaneous/other represented approximately 29.4%; and ferrous metals represented approximately 10.1%. The following table summarizes the industrial recycling totals by commodity.

**2017 Industrial Sector Recycling Tonnage by Commodity**

Material Recycled	Tons
<b>Ferrous</b>	3,773
<b>Food</b>	16,672
<b>Non-Ferrous</b>	333
<b>Cardboard</b>	2,945
<b>Plastic</b>	535
<b>Wood</b>	1,750
<b>Other</b>	10,973
<b>Paper</b>	148
<b>Commingled</b>	202
<b>Rubber</b>	4
<b>Glass</b>	-
<b>Net Incineration</b>	4
<b>Total</b>	<b>37,339</b>

The following figure is a graphical representation of the commodities recycled by the industrial sector in 2017.

**2017 Industrial Waste Reduction in the District**



**G. Existing Waste Reduction/Recycling Activities for the Residential, Commercial and Industrial Sectors**

The following section summarizes the reference year residential/commercial programs and District initiatives. This section reflects the District’s commitment to reducing solid waste from being disposed at landfills. The following table is an inventory of the District’s programs during the reference year.

Program
Curbside Recycling
Drop-Off Recycling
Yard Waste Management
Household Hazardous Waste Management
Electronics Recycling
Scrap Tire Management
Market Development Support
Education and Awareness
Industrial Sector Data Collection
Litter Collection
Volume Based Rate Support
District Facilities

An analysis on strengths and weaknesses was used to evaluate each of the District’s existing programs. The results of the analysis are discussed following each program in this Section and will guide the District’s planning efforts, which is reflected in Section V.

**RESIDENTIAL/COMMERCIAL RECYCLING PROGRAMS**

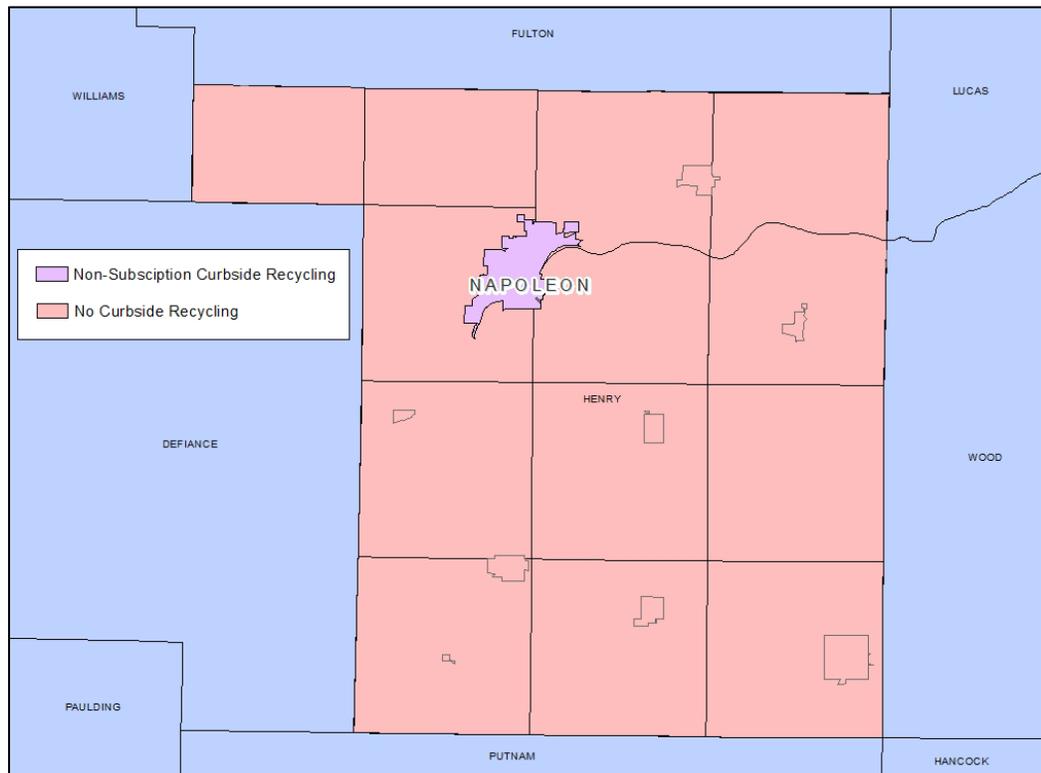
**1. Curbside Recycling Program**

One community provided curbside recycling in 2017. The program was non-subscription based and available in the most populated municipality in the District, the City of Napoleon. Approximately 732 tons of materials were recycled. The following table summarizes non-subscription curbside recycling for 2017.

Location	Population	Operator	Tons Recycled
City of Napoleon	8,299	City of Napoleon	732

The following figure depicts the location of the subscription curbside recycling program.

### District Curbside Recycling Activities



The City of Napoleon operates its curbside recycling program and a pay-as-you-throw (PAYT) system of solid waste collection by requiring resident participation per the following procedures.

- Each residential unit is allowed one 30-gallon trash bag per week
- Residents must purchase additional trash “tags” at the City Utilities Office or other locations in the City
- Recycling is provided at no additional cost, thus encouraging residents to recycle versus dispose of their solid waste materials.

The curbside recycling program collected the following materials.

- |  |              |
|--|--------------|
| • #1 and #2 plastics (PET and HDPE plastics) | • Newspaper  |
| • Aluminum cans                              | • Magazines  |
| • Tin cans                                   | • Catalogues |
| • Corrugated cardboard                       | • Gift wrap  |
| • Paste board                                | • Junk mail  |

The following section summarizes the planned activities and initiatives to complement or provide technical assistance for curbside recycling programs in the District.

### Maintaining Curbside Programs

For any planned or existing curbside recycling program that ceases to operate during the planning period, the District will meet with the operator of the curbside program to determine the cause of program elimination and offer any assistance to restart the program.

For example, in 2017, the City's contract rate with Werlor increased due to contamination issues. Werlor began to identify repeat offenders and educate residents on acceptable materials.

### Developing New Curbside Programs

To assist communities within the District in implementing a new curbside recycling program, the following strategy has been planned for any community expressing interest.

- Conduct stakeholder meetings
- Determine barriers
- Provide technical assistance
- Provide contract bid specifications and sample contracts
- Evaluate willingness to collaborate
- Program promotion
- Survey residents on willingness to support the program

The following table summarizes the program details:

Curbside Recycling Program Summary	
Description	Details
Entity Responsible for Maintaining Program	City of Napoleon
Service Area for Program	City of Napoleon
Materials Reduced/Recycled	#1 and #2 plastics, aluminum cans, tin cans, corrugated cardboard, paste board, newspaper, magazines, catalogues, gift wrap, and junk mail
2017 Recycled Tonnage	732
2017 Annual Program Costs	N/A
Program Operator/Contractor	City of Napoleon, Zack's Recycling

Strengths of the program include:

- The most populous municipality in the District has non-subscription curbside recycling available.

- Residents in Napoleon have an economic incentive to recycle as trash tags are \$2.00 per tag and recycling is offered at no additional cost.

Challenges of the program include:

- Most residents in the District do not have curbside recycling.
- Most haulers do not have the infrastructure to offer curbside recycling.
- There are no communities that contract for trash or recycling in the District.
- City of Napoleon residents’ contract price increased due to high contamination rates.

**2. Drop-Off Recycling Program**

The District, municipalities, and privately-owned recycling entities provide 8 full-time drop-off centers and drop-off locations. Each drop-off collects at least 4 target materials that are recognized by Ohio EPA as highly amenable materials for recovery. The District has identified aluminum/bimetal cans, glass, plastic, and newspaper as highly amenable materials to recover for the residential/commercial sector. Two of the full-time drop-offs are also buy-back centers that provide residents with economic incentives to recycle, and one commercial business in the District accepts metal as a buy-back location.

The following table summarizes the drop-off recycling and buy-back locations that accept at least 4 highly amenable materials for recovery.

**2017 Drop-Off Locations**

Location	2017 Comments	Hours
Malinta (Behind Maintenance Building)	District sorts and transports to Zack’s Recycling Haul one trailer per week (SWD)	24 Hours 7 Days/Wk.
Village of Liberty Center (West Cherry St at park)	Village sorts and transports. Haul one trailer per week to Zack’s Recycling (SWD) Bail cardboard and newspaper	24 Hours 7 Days/Wk.
Canal Basin and Napoleon Lion’s Club (Corner of Scott and 424)	30 cu yds enclosed container – comingled, bottles and cans SWD hauled to Werlor’s	24 Hours 7 Days/Wk.

Location	2017 Comments	Hours
	Pulled 2-3 times per week  Cardboard and newspaper separate Zack's pull and take containers	
Village of Deshler (Behind Historical Society and Downtown)	30 cu yds enclosed container – comingled, single stream SWD hauled to Werlor's Pulled 2x/ month	24 Hours 7 Days/Wk.
Village of McClure (South of Old School House) McClure, OH 43534 (419) 748-8592	30 cu yds enclosed container – comingled, single stream SWD hauled to Werlor's Pulled 2x/ month	24 Hours 7 Days/Wk.
Napoleon N&R&G Recycling	Private drop-off Cardboard, paper, metals No plastic	8 am -4:45 M-F 8 am -11:45 Sat.
Napoleon Zack's Recycling LLC	Private drop-off Cardboard, paper, plastic, metals	8 am - 4:45 pm M-F 8 am - 11:45 pm Sat.
Henry County Landfill L-622 Township Rd 11 Malinta, OH 43535 (419) 256-7343	Sort and separate	8 am - 3:30 pm M-F 8 am -11am Sat.

Buy-Back Center (Metal Only)	
Okolona Iron & Metal	8-5 M-F 8-11:45 Sat.

All drop-off stations collected at a minimum the following materials:

- Aluminum and bimetal cans
- Glass containers
- Plastic #1 and #2
- Newspaper

### Drop-Off Recycling Center at the Henry County Landfill

The District-operated a drop-off in 2017 at the Henry County Landfill accepts glass steel cans, aluminum, newspapers, magazines, cardboard, #1 and #2 plastics, computers, and household batteries.



Bulky metal items can be recycled at the District's scrap metal roll-off, located near the drop-off at the Henry County Landfill.



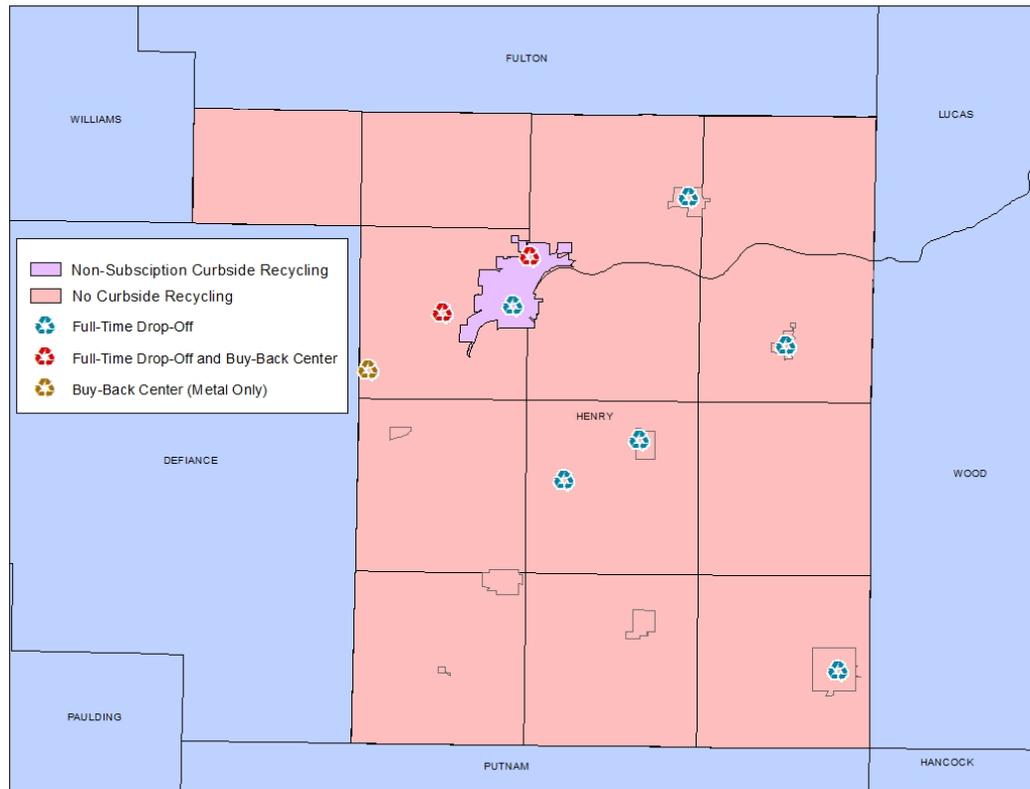
### Recycling Drives and Limited Material Drop-Off Recycling Centers

The District has additional drop-off recycling opportunities located throughout the District that collect less than the 4 targeted materials. Churches and other entities also hold annual and quarterly recycling drives. A local church held a recycling drive in May of 2017, but collection was minimal. To target this issue and contamination, the District held meetings in 2017 to determine if adding four new multi-stream drop-off sites would benefit the District.

Over 24 tons of recyclables were collected at recycling drives during the reference year. Okolona Iron & Metal is a full-time buy-back center in the District that accepts metal and other materials and helped residential/commercial sector recycle approximately 676 tons of creditable material during the reference year.

Locations of recycling drives and limited material drop-off recycling centers are listed in Table III-5. The following map depicts the approximate location of each drop-off location that accepts the 4 minimum designated materials.

### 2017 District Drop-Off Recycling Locations



In 2017 and 2018, the District began an initiative to transfer operation of the drop-off program from the District to the communities. Section V will discuss this initiative in more detail.

The following table summarizes the program details.

Drop-Off Recycling Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District, municipalities, private sector, and not-for-profit organizations (See Table III-5)
Service Area for Program	District
Materials Reduced/Recycled	Aluminum and bimetal cans, glass containers, plastics #1 and #2, and newspaper
2017 Recycled Tonnage	652
2017 Annual Program Costs	\$11,609
Program Operator/Contractor	District, municipalities, private sector, and non-profit operators

Strengths of the program include:

- The program has been well utilized by the public and continues to grow.
- The program provides recycling opportunities to residents in rural settings, multi-family dwellings, and small businesses.

Challenges of the program include:

- Some areas of the District are under served.
- Some drop-off sites could be expanded from part-time to full-time.
- Processors do not have a sustaining glass market within reasonable distance. Processors cannot make glass into a necessary, usable material for end user.
- Drop-off costs are excessive for District budget.
- Contamination causing extra fees for recycle processing.
- The local church recycling drive does not collect as much recycling as other drop-offs.

### **3. Yard Waste Management Program**

In 2017, there were 7 non-registered facilities, activities, and programs and 2 registered yard waste composting facilities in the District that recycled 2,289 tons of materials. Composting represents approximately 23% of residential/commercial waste reduction in the District.

Private and public sector compost operations were responsible for their own program or facility. The private sector operations provide service to the entire District. The public sector facilities were typically limited in service area to their respective communities.

#### **Non-Registered Facilities**

The political subdivisions (Napoleon, Liberty Center, Holgate, and Malinta) managed five-yard waste drop-off locations. Yard waste drop-off locations at the Henry County Landfill and in the City of Napoleon were funded (\$4,100 in 2017) by the District; however, this funding to the City of Napoleon ceased once the landfill closed. Seasonal curbside yard waste collection was provided by four political subdivisions in the District (Napoleon, Liberty Center, Hamler, and Holgate). The Village of Deshler provided monthly curbside collection of yard waste. The City of Napoleon offered a comprehensive yard waste management program, in addition to

providing a drop-off location and seasonal curbside yard waste collection. These services include leaf vacuuming for elderly and disabled residents in the fall and access to unlimited free mulch. Residents may load mulch into their own vehicle/trailer with no limit and no charge. The City will load a privately-owned truck or trailer for \$5.00 or deliver loads of mulch for about \$10.00-\$15.00.

Each non-registered facility managed the collected yard waste via land application or transferred to a registered compost facility to process the organic materials. The drop-off at the Henry County Landfill began accepting yard waste during this transition to assist residents. The landfill continues to accept yard waste for transfer. Most facilities that accepted or collected tree trimmings chipped the material and made it available to the residents.

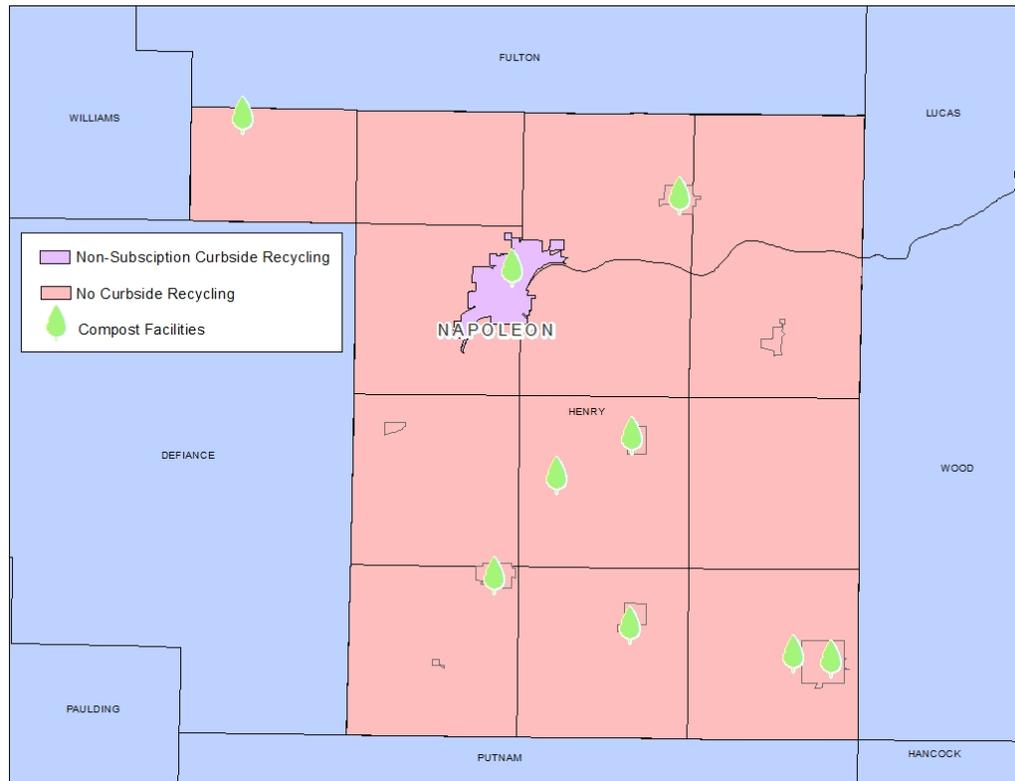
### **Registered Compost Facilities**

One registered Class III compost facility and one registered Class IV compost facility were operating in the District during 2017. The Class III compost facility exclusively processed manure (however, manure was not included in composting totals since it is not creditable towards the recycling rate). The Class IV compost facility accepted grass, leaves, and tree trimmings. This facility also processes composting material from two municipalities in the District. Over 50% of composted material in the District was processed by the registered Class IV facility.

### **Yard Waste Facility Capacity Management**

The District will monitor the availability of yard waste recycling and processing facilities. Capacity shortages will be documented to aid the District in managing yard waste volumes. The following map presents yard waste management activities in the District during 2017.

2017 District Yard Waste Activities



The following table summarizes the program details:

Yard Waste Management Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District, political subdivisions, and private sector compost facilities
Service Area for Program	District
Materials Reduced/Recycled	Yard waste, brush, leaves, grass, and wood
2017 Recycled Tonnage	2,289
2017 Annual Program Costs	\$4,100
Program Operator/Contractor	Political subdivisions, and private sector compost facilities

Strengths of the program include:

- The District diverted a significant amount of yard waste from landfills in 2017.
- This program is conducted at very little cost to the District.

Challenges of the program include:

- None.

#### 4. Household Hazardous Waste Management

The District accepted Freon-containing appliances and dried latex paint at the drop-off at the Henry County Landfill. Freon-containing appliances cost \$12 per item to recycle and can be dropped off at the drop-off at the Henry County Landfill Monday through Friday 8:00AM to 3:30PM and Saturday 8:00AM to 11AM. The District advertises additional facilities that are licensed to remove Freon (N&R&G Recycling) and accept Freon-containing devices (Zack’s Recycling and Okolona Recycling).

Dried latex paint is not considered hazardous waste and could be properly disposed with regular household refuse or at the drop-off at the Henry County Landfill during normal operating hours. Used motor oil was not accepted at the landfill, but the District maintains a list of approximately 10 businesses that accept used motor oil for residents who inquire. Household hazardous waste (HHW) brochures were available to residents at the landfill and during the Henry County Fair.

#### Suggested Oil Disposal Outlets

##### Locations for Oil Disposal in Henry County

These locations will accept clean oil (no water mixed in)

##### Napoleon

Wal-Mart 419-599-1792 1815 Scott Street  
Up to 5 gallons per visit. Check in with automotive Dept. for disposal

Howard Service Center 419-592-7911 808 Perry Street

Pat’s Repair 419-592-3311 M-098 Co. Rd. M

Gunn’s Automotive 419-592-8383 2254 ½ N Scott Street

Dan Gilliland 419-769-1252 Co. Rd. M

##### Holgate

Holgate Wash & Fill 419-264-0400 160 N. Wilhelm  
Up to 5 gallons – Holgate residents only

##### Hamler

Hamler Chevrolet 419-274-2441 128 S. Main Call first and talk to Scott

##### Ridgeville

Ridgeville Elevator 419-267-5101 20903 SR 6 Unlimited quantity

##### Deshler

Panning Excavating 419-278-0278 3278 SR 18 Any Amount

##### Liberty Center

Mitchell’s Farm Service 419-533-3061 R-245 SR 109 Call before taking.

The following section summarizes the planned activities and initiatives to complement or provide technical assistance for HHW programs in the District.

### Develop a Resource Guide

The District developed a resource guide to communicate the proper management of HHW. The guide explains waste reduction and reuse options, proper management techniques, local recycling and disposal options, and procedures for participating in District collections. The resource guide is in the form of a brochure that the District hands out at the County Fair and has available in the Henry County Solid Waste office.

The following table summarizes the program details.

Household Hazardous Waste Management Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District, private sector businesses
Service Area for Program	District
Materials Reduced/Recycled	Freon-containing appliances, used motor oil, dried latex paint
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$0
Program Operator/Contractor	District, private sector businesses

Strengths of the program include:

- Provides an opportunity for the District to educate residents on HHW management issues and other District initiatives.
- The costs of managing used oil are deferred by a network of local retailers that accept used oil for recycling.

Challenges of the program include:

- Some hard to manage HHW was not accepted locally so residents did not have a recycling outlet.
- Convenient all-inclusive HHW collection was not available to residents on an ongoing basis.

## 5. Lead-Acid Battery Collection

The disposal of lead-acid batteries (LAB) in solid waste landfills was prohibited by law on April 25, 2008. The drop-off at the Henry County Landfill will continue to accept LABs for no cost to residents. Residents can drop off LABs at the landfill for proper management Monday through Friday 8:00AM to 3:30PM and Saturday 8:00AM to 11:00AM. Wholesalers and retailers of lead-acid batteries are required by law to accept spent LABs from their customers at the time of purchase. LABs are also accepted at each of the recycling buy-back facilities in the District. The District maintains a list of in-District businesses that accept LAB for residents who inquire. Locating an outlet to properly dispose of LABs has become significantly easier for residents since the 2008 legislation went into effect.

### Lead-Acid Battery Collection Locations

Location	Address	Hours
Napoleon Zack's Recycling LLC	708 Fillmore St, Napoleon, OH 43545	8 am - 4:45 pm M-F 8 am - 11:45 pm Sat.
Henry County Landfill (419) 256-7343	L-622 Township Rd 11 Malinta, OH 43535	8 am - 3:30 pm M-F 8 am - 11am Sat.

The following table summarizes the program details:

Lead-Acid Battery Collection Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District, private sector businesses
Service Area for Program	District
Materials Reduced/Recycled	LAB
2017 Recycled Tonnage	58 LAB
2017 Annual Program Costs	\$0
Program Operator/Contractor	District, private sector businesses

Strengths of the program include:

- Provides a free outlet for residents to recycle LABs.
- The costs of managing LABs are reduced by a network of local retailers that accept spent LABs for recycling.

Challenges of the program include:

- None.

## 6. Electronics Recycling

Many electronics contain heavy metals and toxic constituents. The availability of proper recycling outlets is important for maintaining drinking water safety and environmental health. The District accepted computers at the drop-off located at the Henry County Landfill.

Every spring, the District provides an electronic round-up for residents and businesses at four schools. This program does not accept TV's or leaded glass. Materials from two schools are sent to N&R&G Recycling, and materials from the other two schools are taken to Zack's Recycling. The District funds the round-up and receives revenue back from the processors. The revenue is then given to the schools who compete for the most tonnage.

Goodwill and Dell's Reconnect program continued to be promoted to residents via the District's website and drop-off recycling center at the Henry County Landfill brochure. The Reconnect program provides a free computer/electronics recycling outlet available Monday through Saturday 9:00AM to 8:00PM and Sunday 12:00PM to 5:00PM. Proceeds from re-marketing the electronic components support Goodwill's non-profit training and employment programs.

Goodwill has facilities at the following locations:

Location	Address	Phone
<b>Lagrange Street Store</b>	230 Lagrange Street Napoleon, OH 43545	(419) 592-0201
<b>North Clinton Street Store</b>	1005 N Clinton St, Ste 2 Defiance, OH 43512	(419) 782-2577
<b>North Clinton Street Store</b>	822 N Shoop Ave Wauseon, OH 43567	(419) 335-1080

The following table summarizes the program details:

Electronics Recycling Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District, private sector businesses
Service Area for Program	District
Materials Reduced/Recycled	Computers, electronics
2017 Recycled Tonnage	30
2017 Annual Program Costs	\$5,314
Program Operator/Contractor	District, private sector businesses

Strengths of the program include:

- Provides a free outlet for residents to recycle electronics.
- The costs of managing electronics are deferred by Goodwill/Dell's program.
- Schools receive revenue for electronic round-ups.

Challenges of the program include:

- Locations of Goodwill stores may not be central or convenient for all residents.

## 7. Scrap Tire Management

Effective management of scrap tires is important to public health and can minimize costs for scrap tire abatement programs at local and state levels. Illegally dumped tires are not only unsightly, they hold stagnant water, and provide a breeding ground for mosquitos, carriers of the West Nile Virus.

Scrap tires in Ohio can only be disposed at permitted and licensed scrap tire monofills or scrap tire monocells (OAC 3745-27-69 and 3745-27-70). There are 32 registered scrap tire facilities in Ohio. The District operates a Class II Registered Scrap Tire Facility at the Henry County Landfill. Class II registered scrap tire facilities are limited to a maximum of 10,000 square feet of effective scrap tire storage area (equal to approximately 50,000 passenger tires).



The District accepts passenger tires, tractor tires, and semi-truck tires for a reasonable fee. Earthmoving tires will not be accepted. The following table summarizes the fees charged in 2017 for the acceptance of scrap tires.

Henry County Landfill Scrap Tire Prices	
Type	Price/LB
Passenger tires (no rims) up to 16"	\$0.06/LB
Passenger tires (with rims), tractor tires, or mixed loads	\$0.07/LB
Semi tires	\$0.10/LB

The operation includes a tire cutter, de-rimming device, de-beader, shredder, and screen. Ohio EPA encourages the re-use of all waste materials, including scrap tires. Henry County provides tire derived chip (TDC) for County residents and outside entities for beneficial use projects such as for drainage collection systems.

In 2017, over 100 tons of tires were collected and recycled in Henry County. The 2017 District Annual Report included tonnages from tire transporters (272.96 tons) and tires reports on broker surveys (8.00 tons). The County, rather than the District, owns, operates, and funds this program.

The following table summarizes the program details:

Scrap Tire Management Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Scrap Tires
2017 Recycled Tonnage	129
2017 Annual Program Costs	\$0
Program Operator/Contractor	N/A

Strengths of the program include:

- Provides opportunities to recycle various types of tires.
- Shredding system creates a beneficial use for scrap tires.

Challenges of the program include:

- Fees may deter some residents of properly disposing scrap tires.
- District's cost has increased over the years.

## MARKET DEVELOPMENT PROGRAMS

### 8. Market Development Support

The District seeks ways to develop markets for recyclables and recycled commodities. When grants are received, the District expands its effort to solicit quality projects by doing the following.

- Expands promotion of the grant through the District's website and other publications

- Identifies a list of potential commercial and industrial companies that can be targeted for promotion of the program directly
- Assists companies with their applications for funding when it is determined that viable candidates for the funds have been identified

In 2017, the District did not receive any grants. The following table summarizes the program details:

Market Development Support Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$0
Program Operator/Contractor	District

Strengths of the program include:

- Promotes recycled content materials and supports local and regional markets.

Challenges of the program include:

- Market development support is unavailable when grants are not received during a year.

**RESIDENTIAL/COMMERCIAL/INDUSTRIAL SECTOR EDUCATION AND AWARENESS PROGRAMS**

**9. Education and Awareness Program**

The District utilizes a variety of efforts to provide education and awareness to all sectors in Henry County for youth and adult audiences, small and large businesses, and institutions.

The following section summarizes the District’s education and awareness initiatives for 2017.

**Youth Presentations**

In 2017, the District provided litter coloring books to a preschool group. The District offers presentations to explain the importance of recycling, how to recycle, and why youth are important to the recycling program. The District

works with schools to arrange as many presentations as possible throughout the school year.

### **Educational Videos**

The District provided educational videos to local schools, libraries, and District offices. Topics include recycling, composting, and tire shredding.

### **Brochures**

The District maintains a variety of waste reduction and recycling brochures on various topics including recycling, composting, how to properly dispose of paint, and managing junk mail. Brochures were distributed at the Henry County Fair, schools, and landfill.

### **Commercial/Industrial Sector Presentations**

The District provides educational materials and conducts presentations to businesses and groups.

### **District Website**

The District maintained a web site in 2017 located at the following address: <https://www.henrycountyohio.com/landfill.htm>

The web page contains the following:

- Contact information and operating hours
- Where to Recycle (drop-off locations, buy-back centers, computer recycling)
- Waste reduction and recycling links
- Litter Roundup information
- Electronics recycling information
- A copy of the Solid Waste Management Plan Update
- Disposal information
- Hard-to-recycle materials information
- Recycling guide
- Paint tips for disposal

### **Sort and Separate Promotion and Outreach**

Starting in 2017, the District began educating the public on the sort and separate drop-off program.

The following table summarizes the program details.

Education and Awareness Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$50
Program Operator/Contractor	District

Strengths of the program include:

- The District accomplished many initiatives with minimal staffing and funding.

Challenges of the program include:

- Limited staffing and funding prevent the District from conducting more education and awareness activities.
- Limited exposure and education to council on drop-off program.
- Not enough information on sorting/separating recyclable materials or on no longer accepting glass in drop-off programs.

## INDUSTRIAL RECYCLING

### 10. Industrial Sector Data Collection

The District annually surveys industrial sector businesses (SIC code 20 and 22 – 39) to obtain data on recycling, source reduction, and waste generation. The District continually seeks ways to improve data collection methodology and the quality of data recorded.

Industrial Sector Data Collection Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$0
Program Operator/Contractor	District

Strengths of the program include:

- The District's surveying data has produced recycling tonnage that has exceeded the State Solid Waste Plan goals.

Challenges of the program include:

- The commercial sector is not surveyed.

## LITTER PREVENTION AND CLEAN-UP

### 11. Annual Litter Round-Up

Litter is unsightly, misplaced solid waste that devalues communities and invites others to litter. Each year, the District conducts an annual litter round-up. Organizations and families may register to volunteer. Organizations can earn up to \$4.00 per bag of litter collected, up to \$100.00. There are also cash bonuses (\$60) donated by the county commissioners to the top three groups that separate their recyclables. The District provides bags and gloves; area businesses, townships, and local organizations sponsor the event and provide financial incentives for volunteers.

In 2017, the District received a grant to fund the litter round-up from the Ohio Department of Natural Resources, Division of Recycling and Litter Prevention. Over 200 miles were cleaned up by more than 600 volunteers.

Annual Litter Round-Up Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	Various
2017 Recycled Tonnage	3.05
2017 Annual Program Costs	\$5,294
Program Operator/Contractor	District

Strengths of the program include:

- The communities in the District appreciate all the activities that are conducted for this program.
- Over 200 miles of District roadways were cleaned in 2017, making Henry County a better place to live.

- The District created a great collaboration between hundreds of volunteers, multiple organizations including working with the Juvenile Probation Office.

Challenges of the program include:

- Lack of education for volunteers on how to properly separate collected recyclables from trash

**ECONOMIC INCENTIVES**

**12. Volume-Based Rate Support**

The District currently has one political subdivision operating a non-subscription curbside recycling program as a pay-as-you-throw (PAYT) collection system. There is strong evidence that PAYT programs out-perform non-PAYT programs in terms of recyclables collected.

The City of Napoleon’s per capita waste reduction are summarized below:

Community	Population	Tons Recycled	Pounds Per Person Per Year
City of Napoleon	8,299	732	176

The City of Napoleon operates its curbside recycling program a pay-as-you-throw (PAYT) system of solid waste collection where residents are allowed one 30-gallon trash bag per week and must purchase additional trash “tags” at the City Utilities Office or other locations in the City. Recycling is provided at no additional cost, thus encouraging residents to recycle versus dispose of their solid waste materials. The curbside recycling program collected the following materials:

- #1 and #2 plastics (PET and HDPE plastics)
- Clear, green, and brown glass
- Aluminum cans
- Tin cans
- Corrugated cardboard
- Paste board
- Newspaper
- Magazines
- Catalogues
- Gift wrap
- Junk mail

Volume-based collection systems (PAYT programs) can dramatically increase residential waste reduction. For this reason, the District will provide technical and educational support to any communities or haulers who express an interest to switch to volume-based billing.

Volume-Based Rate Support Program Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$0
Program Operator/Contractor	District

Strengths of the program include:

- The City of Napoleon's curbside program rates as one of the best overall programs in the State of Ohio. This program performs at or above other similar programs regarding recycling performance and offers a great deal of service and value to its residents.

Challenges of the program include:

- No other community in the District offers an economic incentive curbside program.

## OTHER PROGRAMS

### 13. Facilities

#### Henry County Landfill

The Henry County Landfill was one of the smallest landfills in Ohio and is owned by the County Commissioners. When the landfill reached capacity in July 6, 2013, the County closed the landfill and operates the property as an exempt transfer station. The Ohio EPA's official closure date was July 6, 2015.

#### Henry County Exempt Transfer Station

This facility began operation in 2000 on a limited basis. The facility is not classified as a regulated transfer station by Ohio EPA. It began shipping collected solid waste to out-of-District landfills when the Henry County Landfill closed in 2013. This facility is anticipated to operate as an exempt facility into the planning period. The tipping fee for this facility is \$60 per ton of covered waste, with a \$15 minimum up to 500 lbs. Additionally, the transfer station acts as a recycling center/collection location for hard-to-recycle materials such as tires, mattresses, Freon appliances, paint, metals, electronics, batteries, and used oil. The fee for tires increased to \$0.10 per

lb. at the end of 2018. The County, rather than the District, owns, operates, and funds this program.

**Henry County Solid Waste Management District Brochure (front)**

<p style="text-align: center;"><b>\$10.00</b> <b>"NO TARP" FEE!!!</b></p> <p>In an effort to reduce roadside litter, the Henry County Landfill requires all loads entering the facility to be covered securely. An additional \$10.00 will be added to other disposal fees. Thank you for your cooperation.</p> <p>-----                  Directions: Office is located on Twp. Rd. 11 between roads L &amp; M.</p> <p><b>From Napoleon:</b> Take SR 108 South. Turn left onto Co. Rd. M. Turn right onto Co. Rd. 11.</p> <p><b>From Defiance:</b> Take SR 281 East. Turn left onto SR 108. Turn right onto Co. Rd. L. Turn left onto Co. Rd. 11.</p> <p><b>From Toledo:</b> Take SR 24 West. Turn left onto SR 109. Turn right onto Co. Rd. M. Turn left onto Co. Rd. 11.</p> <p><b>From Fulton Co.:</b> Take SR 108 South through Napoleon. Turn left onto Co. Rd. M. Turn right onto Co. Rd. 11. OR Take SR 109 South. Turn right onto Co. Rd. M. Turn left onto Co. Rd. 11.</p> <p>LOST!!! Call 419-256-7343 for directions.</p> <p style="text-align: center;"><b>Vendor Accounts</b></p> <p>Interested businesses in opening a charge account need to complete a credit application.</p>	<p><b>24-Hour Recycling Facilities</b></p> <p><b>Napoleon Canal Basin:</b> Corner Scott St and 424 aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers, magazines  <b>DeShler:</b> Behind Historical Society aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers  <b>McClure:</b> East Street just south of SR 6 aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers  <b>Liberty Center:</b> West Cherry Street at Park aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers, magazines  <b>Malinta:</b> Henry Street behind village maintenance aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers, magazines</p> <p><b>Recycling Facilities</b></p> <p><b>Henry Co. Landfill:</b> Semi trailer at entrance Hours 8-3:30 M-F, 8-11:00 Sat. electronics, aluminum cans, tin cans, #1 &amp; #2 plastics, cardboard, newspapers, magazines</p> <p><b>Buy-Back Facilities</b></p> <p><b>N&amp;R&amp;G Recycling:</b> 471 Freedom Drive, Napoleon 419-599-1659  <b>Zacks's Recycling:</b> 708 Filmore Street, Napoleon 419-592-4791  <b>Okolona Iron &amp; Metal:</b> 18-641 Road N, Napoleon 419-758-3701</p> <p><b>Yard Waste Facilities</b></p> <p><b>Panning Composting:</b> 419-278-0278  <b>Napoleon Residents:</b> 419-599-1891  <b>County Residents:</b> 419-256-7343</p>	<p style="text-align: center;"><b>Henry County</b> <b>Solid Waste</b> <b>Management</b> <b>District</b></p> <p style="text-align: center;">Office                  PO Box 96, L-622 Co. Rd. 11                  Malinta, OH 43535                  419-256-7343                  solidwaste@henrycountyohio.com                  www.henrycountyohio.com/landfill</p> <p style="text-align: center;"><b>Hours of Operation</b>                  8:00-3:30 M-F, 8:00-11:00 Sat.                  Closed Sunday &amp; Government Holidays</p> <p style="text-align: center;"><b>Information</b>                  Municipal Waste Disposal &amp; Rates                  Tire Disposal &amp; Rates                  Concrete Disposal &amp; Rates                  Yard Waste Disposal &amp; Rates                  Local Recycling Facilities</p> <p style="text-align: center;"><i>Here to serve the businesses and residents of Henry County as part of the Henry County Solid Waste Program.</i></p> <p style="text-align: center;">Printing funded by the Ohio Environmental Protection Agency</p>
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**Henry County Solid Waste Management District Brochure (back)**

<p style="text-align: center;"><b>Municipal Waste</b>                  Guideline Change 07-01-13                  Rate Change 07-01-13</p> <p style="text-align: center;">CASH, CHECK, OR DEBIT/CREDIT CARDS</p> <p><b>\$60.00/Ton</b> - includes all fees  <b>\$15.00 Minimum</b> - up to 500 pounds  <b>\$10.00 Fee</b> - uncovered loads</p> <p>The following items are accepted at municipal waste rate (some additional fees may apply) but must be unloaded at designated area or container for recycling purposes. Notify scale operator of any of the following items at time of check in.</p> <p><b>Mattress:</b> \$12.00/each  <b>Freon Appliance:</b> \$12.00/each  <b>Paint:</b> May be disposed in waste container if dry or thickened.  <b>Clean Metals:</b> Container south of waste container. Examples - bicycles, non-freon appliances, grills, fencing, pipes, etc.  <b>Cardboard:</b> Trailer at east end of waste container. Boxes should be broken down.  <b>Electronics:</b> Mighty tidy at each end of waste container. All items with a power cord supply.  <b>Aluminum Cans:</b> Mighty tidy at west end of waste container.  <b>Batteries:</b> Pallet at each end of waste container.  <b>Motor Oil:</b> Ask for local disposal centers.</p> <p><b>Items not accepted as municipal waste:</b>                  Yard Waste • Hazardous Waste • Liquids</p>	<p style="text-align: center;"><b>Scrap Tires</b>                  Guideline Approved 03-01-02                  Rate Change 12-10-18</p> <p style="text-align: center;">CASH, CHECK, OR DEBIT/CREDIT CARDS</p> <p><b>General Public Rates:</b>  <b>\$10/LB</b> - passenger tires without rims  <b>\$10/LB</b> - passenger tires with rims  <b>\$10/LB</b> - tractor tires or mixed loads  <b>\$10/LB</b> - semi tires</p> <p><b>Licensed Tire Transporter Rates:</b>  <b>\$07/LB</b> - passenger tires  <b>\$10/LB</b> - mixed loads  <b>\$10/LB</b> - semi tires</p> <p><i>Please follow these guidelines when bringing in clean tires:</i></p> <p>Notify scale operator with loads of tires at time of check in. Tires do not need to be covered.</p> <p>Earthmoving tires will not be accepted.</p> <p>EPA Guidelines only allow 10 tires per load. Contact a licensed tire transporter for hauling. Passenger Tire Equivalent (PTE) equals 20 pounds per tire.</p> <p>Delivery of tires cannot include any municipal waste.</p> <p>Final inspection of tires will be made at the unloading area.</p>	<p style="text-align: center;"><b>Concrete or Asphalt</b>                  Guidelines Approved 03-01-96                  Rate Change 08-01-07</p> <p><b>\$4.50/Ton</b> - Concrete  <b>\$3.00/Ton</b> - Asphalt</p> <p style="text-align: center;"><b>Yard Waste</b>                  Guidelines Approved 12-10-18                  Rate Change 12-10-18</p> <p><b>\$20.00/Ton</b> - includes all fees  <b>\$5.00 Minimum</b> - up to 500 pounds  <b>\$10.00 Fee</b> - uncovered loads</p> <p><i>Please follow these guidelines when bringing in concrete, asphalt, or yard waste:</i></p> <p>Notify scale operator with loads of concrete, asphalt, or yard waste at time of check in. Concrete or asphalt loads do not need to be covered.</p> <p>Delivery of concrete, asphalt, or yard waste cannot include any municipal waste. Should there be any other waste found, the load will be adjusted at the scale house and charged \$60.00/ton.</p> <p>All haulers are responsible for loading any garbage or other debris left at the unloading area.</p> <p>Final inspection of loads will be made at the unloading area.</p>
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The following table summarizes the program details.

District Facilities Summary	
Description	Details
Entity Responsible for Maintaining Program	District
Service Area for Program	District
Materials Reduced/Recycled	N/A
2017 Recycled Tonnage	N/A
2017 Annual Program Costs	\$0
Program Operator/Contractor	District

Strengths of the program include:

- The Henry County Landfill has provided a valuable service to the generators in the region for many years.
- The landfill site will continue to provide solid waste management options including special waste and scrap tire management.
- Landfill was converted to a transfer station after the landfill closed.

Challenges of the program include:

- Transitioned from a landfill operation to transfer station operation may be challenging for District staff.

#### **Program Acknowledgment:**

##### *Compact and Fluorescent Light Bulb Take-Back*

The City of Napoleon operated a fluorescent bulb take back program for anyone (resident or business) that is a Napoleon Power and Light Customer. The City of Napoleon discontinued their fluorescent bulb take-back program in June 2014.

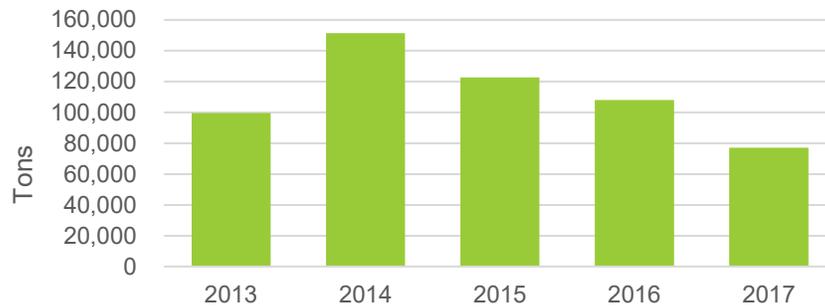
This program will not be in this plan update moving forward.

#### **H. Total Waste Generation: Historical Trends Plus Waste Reduction**

Table IV-7, "Total Waste Generation Based Upon Disposal Plus Waste Reduction", presents total waste generation based upon disposal plus waste reduction. In 2017, the District generated 77,063 tons of solid waste based on landfill disposal, yard waste composting and recycling. Historically, the District generated a high of 151,353 tons in 2014 and a low

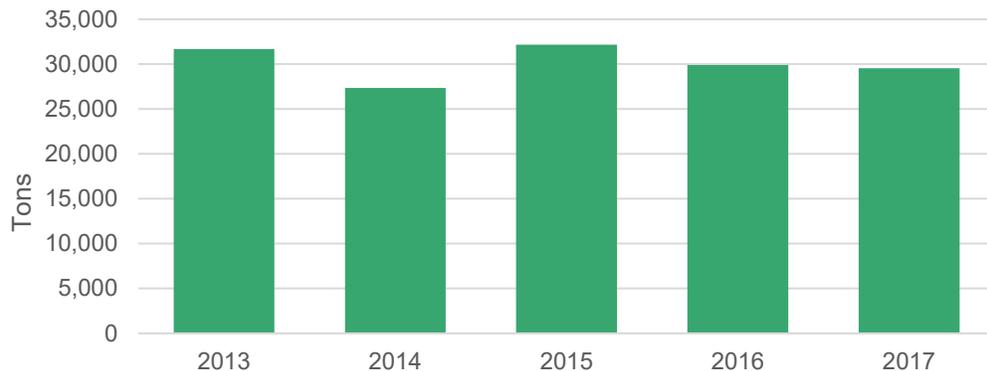
of 77,063 in 2017. The following graph presents the fluctuations in District waste generation over the past five years. The initial downward trend is likely a result of economic decline and mistaken metals reporting by scrap yards in historical years. Tonnage has been decreasing since 2014, indicative of modest economic recovery.

**District Historical Total Generation**



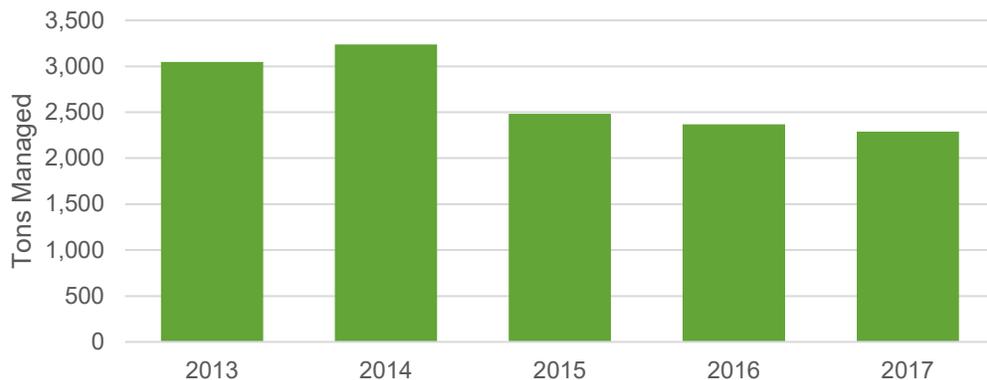
Landfilled waste tonnage was within a 5,000-ton range level between 2013-2017 and tended to fluctuate up and down. Landfilled waste has ranged from a high of 32,152 in 2015 to a low of 27,350 in 2014. The following graph depicts the historical landfill totals which include residential, commercial, industry, and exempt waste from 2013-2017.

**District Historical Landfill Disposal**



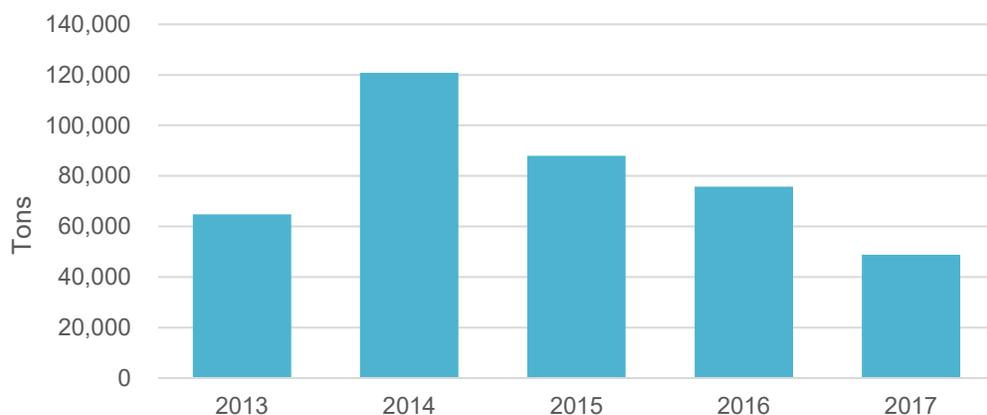
Yard waste generally decreased from 2013-2017. A drop occurred from 2014 to 2015 by approximately 800 tons. Yard waste has ranged from a low in 2017 of 2,289 tons to a high of 3,237 tons in 2014. The following graph depicts the historical yard waste totals from 2013-2017.

### District Historical Yard Waste Management



Waste reduction had decreased from 2014 to 2017. Waste reduction has ranged from a low in 2017 of 45,213 tons to a high of 120,766 in 2014. The drastic difference mainly comes from data collected from the industrial sector and scrap yards. The following graph depicts the historical waste reduction totals from 2013-2017.

### District Historical Waste Reduction



**I. Reconciliation of Waste Generation (based on reported recycling and disposal)**

Table IV-8, “Adjusted Reference Year Total Waste Generation for the District”, presents adjusted reference year total waste generation for the District. This is based on actual reported recycling and disposal.

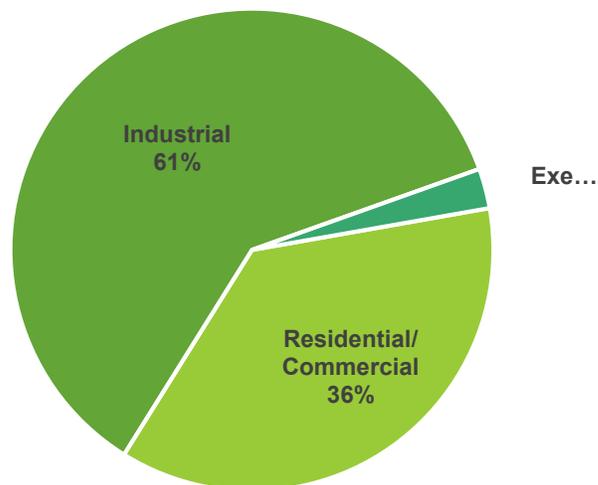
The District calculated waste generation using two methods. The first method outlined in Part E of this Section (see page IV-4) uses statewide generation estimates to determine industrial waste generation projections. Residential/commercial generation was determined based upon the rate of

change in generation rate observed within the District during the past several years. Finally, exempt waste was obtained from actual landfill and transfer station operating reports. Using this methodology, the District estimated 83,472 tons of solid waste generated in 2017. The resulting total generation rate was 16.82 pounds per person per day (Table IV-4).

The second method used to calculate solid waste generation is based on actual reported recycling and disposal in the District during the reference year (Table IV-8). For 2017, District residents, businesses, and industry generated 77,063 tons. The total generation rate was 15.53 pounds per person per day (Table IV-8), which includes recycling and waste disposal from all sectors. The residential/commercial sector generated 28,255 tons or 5.70 pounds per person per day, which includes recycling and yard waste composting. Industrial generation was calculated to be 46,752 tons or approximately 9.42 pounds per person per day. Exempt waste generation was 2,057 tons or approximately 0.41 pounds per person per day.

The District selected the second method as the most accurate method of projecting waste generation because waste at the landfills and transfer stations is weighed. This method of collecting solid waste data has been fairly consistent for several years. The first method of projecting waste generation is based on surveys, projections, and secondary data sources, which are generally not as accurate as actually weighing the materials. The following figure depicts the reference year waste generation by sector based upon using the second method of waste generation estimation.

**2017 Adjusted Waste Generation by Sector**

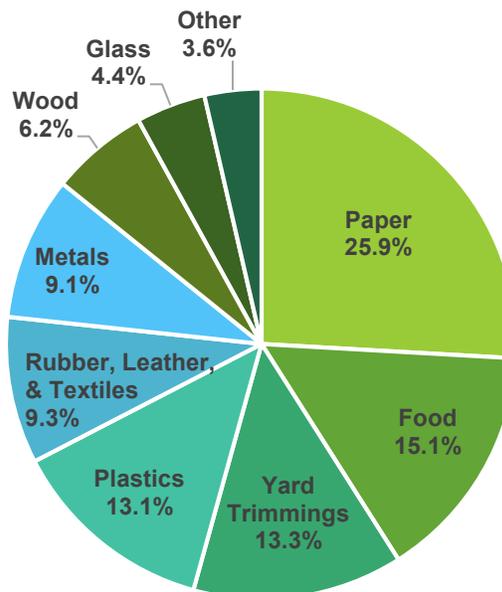


**J. Waste Composition**

The District estimated the residential/commercial waste stream composition in Table IV-9, "Estimated Residential/Commercial Waste Stream

Composition for the District for the Reference Year”, using the national averages from US EPA for 2015. The largest component of the residential/commercial waste stream is projected to be paper and paperboard at 25.9% (7,318 tons), followed by food scraps at 15.1% (4,267 tons), and yard trimmings at 13.3% (3,758 tons). The following figure depicts the residential/commercial waste composition for the reference year.

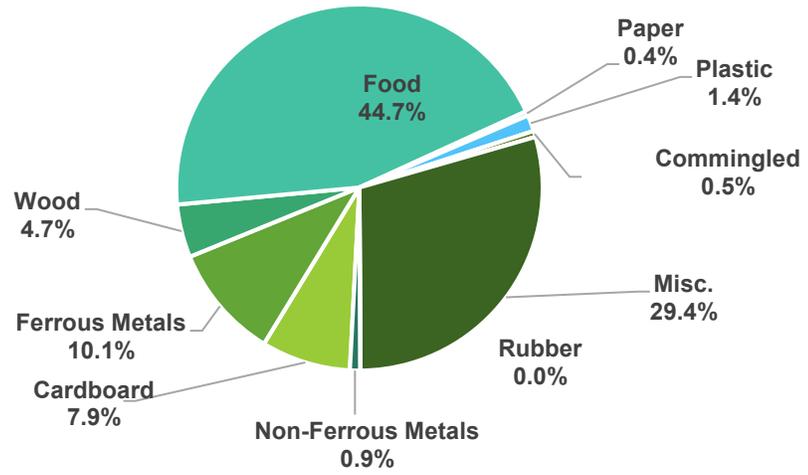
**2017 Residential/Commercial Waste Stream Composition  
(in TPY and Percent of Waste Stream)**



The industrial waste composition included in Table IV-10, “Estimated Industrial Waste Composition for the Reference Year in the District”, was estimated based on the amount of industrial waste disposed and recycled. Non-hazardous waste, concrete, ash, and sludge were eliminated from the acceptable waste materials for recycling calculations only. All recycled materials are provided as actual totals. The remainder of material disposed in the landfill is categorized as general solid waste.

The largest component of the industrial waste stream was food waste, comprising 45% of the total waste composition. Miscellaneous materials (29%) followed by ferrous metals (10%) and cardboard (8%) were the next three largest components of the industrial waste stream. The following figure depicts the industrial waste composition for the reference year.

### 2017 Industrial Waste Composition by Percent and Tonnage



**Table IV-1  
Reference Year Population and Residential/Commercial Generation**

County/Community Name	2017 Population		2017 Generation Rate (lbs/person/day)	2017 District Residential/Commercial Generation (Tons)
	Before Adjustment	After Adjustment		
Henry County	27,185	27,185	6.50	32,241
<b>Total</b>		<b>27,185</b>		

**Source(s) of information:**

Population - Ohio Development Services Agency Office of Research, "2017 Population Estimates by County, City, Village, and Township", May 2018;  
 "2017 Population Estimates by County, City, Village, and Township", May 2018.

**Adjustments:**

**Example calculations:**

$$\text{Total Res/Com Generation} = \frac{\text{Population} \times \text{Generation Rate (lbs/person/day)} \times 365 \text{ (days/year)}}{2,000 \text{ (lb/ton)}}$$

$$32,241 \text{ tons} \quad \frac{27,185 \times 6.50 \times 365}{2,000}$$

**Table IV-2  
Industrial Waste Generation Survey Respondents vs. Unreported**

Standard Industrial Classification (SIC) Code	Survey Respondents				Amounts Based Upon Secondary Data (Unreported)				Total Industrial Waste Generated
	# of Industries	# of Employees	Tons of Waste Generated	Generation Rate (T/employee)	# of Industries	# of Employees	Generation Rate (T/employee)	Tons of Waste Generated	
20	2	1,507	30,991	20.56	7	84	13.92	1,169	32,160
22	0	0	0	0.00	0	0	9.99	0	0
23	0	0	0	0.00	0	0	2.80	0	0
24	0	0	0	0.00	1	4	51.62	206	206
25	0	0	0	0.00	0	9	1.79	16	16
26	0	0	0	0.00	0	25	17.50	438	438
27	0	0	0	0.00	4	19	6.70	127	127
28	0	0	0	0.00	2	4	12.43	50	50
29	0	0	0	0.00	1	25	7.33	183	183
30	0	0	0	0.00	3	180	7.29	1,312	1,312
31	0	0	0	0.00	0	0	3.41	0	0
32	0	0	0	0.00	1	3	10.55	32	32
33	0	0	0	0.00	1	15	36.93	554	554
34	0	0	0	0.00	9	332	11.16	3,705	3,705
35	0	0	0	0.00	13	463	5.72	2,648	2,648
36	0	0	0	0.00	0	0	2.98	0	0
37	0	0	0	0.00	2	634	3.21	2,035	2,035
38	0	0	0	0.00	0	0	1.74	0	0
39	0	0	0	0.00	5	14	4.62	65	65
<b>Industrial Totals from Brokers and Processors Surveyed</b>	N/A	N/A	6,344	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>2</b>	<b>1,507</b>	<b>37,335</b>	<b>24.77</b>	<b>49</b>	<b>1,811</b>	<b>N/A</b>	<b>12,541</b>	<b>49,876</b>

**Source(s) of information:**

2017 District Industrial survey responses

Total number of industries and employees as obtained from the Reference USA online database.

Appendix JJ-2 from the Ohio EPA Plan Format 3.0 was used to calculate the unreported data for the Generation Rate (T/employee).

**Example calculations (SIC 20):****Survey Respondents:**

$$\text{Generation Rate} = \frac{\text{Waste Generated}}{\text{\# of Employees}}$$

$$20.56 \frac{\text{lbs/person/day}}{\text{1,507 employees}} = \frac{30,991 \text{ tons}}{\text{1,507 employees}}$$

**Non-Respondents:**

$$\text{Generation Rate} \times \text{Number of Employees (Unreported)} = \text{Tons of Waste Generation}$$

$$13.92 \times 84 = 1169.28 \text{ tons}$$

**Table IV-3  
Exempt Waste Generated in the District  
and Disposed in Publicly Available Landfills**

Type of Waste Stream	Generation Rate (lb/person/day)	Total Exempt Waste Generation (TPY)
Construction/Demolition	0.41	2,057
<b>Total</b>	<b>0.41</b>	<b>2,057</b>

Source(s) of information: Table III-1

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Exempt Waste (tons/yr)} \times 2,000 \text{ (lb/ton)}}{\text{Population} \times 365 \text{ days/yr}}$$

Example calculation:

$$0.41 = \frac{2057 \times 2,000}{27,185 \times 365}$$

**Table IV-4  
Reference Year Total Waste Generation for the District**

Type of Waste	Generation Rate (lbs/person/day)	Tons/Year
Residential/Commercial	6.50	32,241
Industrial	10.05	49,876
Exempt	0.41	2,057
<b>Total Waste Generation</b>	<b>16.97</b>	<b>84,173</b>

Source(s) of information:

Residential/Commercial - Table IV-1

Exempt - Table IV-3

Industrial - Table IV-2

Example calculation (Industrial):

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Industrial Waste (tons/yr)} \times 2,000 \text{ (lb/ton)}}{\text{Population} \times 365 \text{ days/yr}}$$

$$10.05 = \frac{49,876 \times 2,000}{27,185 \times 365}$$

**Table IV-5  
Reference Year Residential/Commercial Waste Reduction in the District**

Type of Waste Source Reduced	TPY	Type of Waste Recycled	TPY	Composting, Resource Recovery		
				Total Waste Received	Residual Landfilled	Net Waste Reduced
None	0	Cardboard	1,416	Incineration	Ash	Net Incineration
		Paper	513	3	1	2
		Scrap tires	129	Composting	Residuals	Net Compost
		Glass	14	2,289		2,289
		Wood	0	Resource Recovery	Ash	Net Resource
		Plastic	228			0
		Food	92			
		Other	47			
		Ferrous	3,310			
		Appliances	443			
		Non-Ferrous	338			
		Commingled	1,254			
		HHW	0			
		Used Oil	2			
		Electronics	30			
		Batteries	62			
<b>Subtotal</b>	<b>0</b>		<b>7,877</b>	<b>2,292</b>	<b>1</b>	<b>2,291</b>
<b>Grand Total</b>						<b>10,169</b>

**Source(s) of information:**

2017 District Annual Report and Residential/Commercial Surveys

\*Scrap Tires represents the tonnage reported in Ohio EPA 2017 County Scrap Tire Number Report. The 2017 District Annual Report included tonnages from tire transporters (272.96 tons) and tires reports on broker surveys (8.00 tons). These were removed for this table.

Net Incineration - Table III-2

**Table IV-6  
Reference Year Industrial Waste Reduction in the District**

Source Reduction	TPY	Type of Waste Recycled	TPY	Incineration, Composting, Resource Recovery			
				Total Waste Received	Residual Landfilled	Net Waste Reduced	
None	0	Ferrous	3,773	Incineration	Ash	Net Incineration	
		Food	16,672		6	2	4
		Non-Ferrous	333	Resource	Ash		Net Resource
		Cardboard	2,945				0
		Plastic	535	Composting	Residuals		Net Composted
		Wood	1,750				0
		Other	10,973				
		Paper	148				
		Commingled	202				
		Rubber	4				
		Glass	0.00				
<b>Subtotal</b>	<b>0</b>		<b>37,335</b>	<b>6</b>	<b>2</b>	<b>4</b>	
<b>Grand Total</b>						<b>37,339</b>	

**Source(s) of information:**  
 2017 District Annual Report and Industrial Surveys  
 Net Incineration - Table III-2

**Table IV-7  
Total Waste Generation Based Upon Disposal Plus Waste Reduction**

Year	Management Method Used (TPY)								Total Waste Generation
	Source Reduction & Recycling			Yard Waste Composting	Landfill Disposal				
	Res/Com	Industrial	Total		Res/Com	Industrial	Exempt	Total	
2013	6,954	57,830	64,784	3,048	16,644	13,243	1,797	31,684	99,516
2014	9,053	111,713	120,766	3,237	15,549	9,991	1,810	27,350	151,353
2015	8,372	79,582	87,954	2,482	17,298	13,124	1,730	32,152	122,588
2016	11,533	64,224	75,757	2,367	17,535	10,931	1,419	29,885	108,009
2017	7,880	37,339	45,219	2,289	18,087	9,412	2,057	29,556	77,063

**Source(s) of information:**

District Annual Reports and Ohio EPA Facility Data Reports.

**Sample calculation (2017):**

Total waste generation = Total source reduction & recycling + yard waste composting + total landfill disposal

77,063 tons = 45,219 tons + 2,289 tons + 29,556 tons

**Table IV-8  
Adjusted Reference Year Total Waste Generation for the District**

Type of Waste	Generation Rate (lbs/person/day)	Tons/Year
Residential/ Commercial	5.70	28,255
Industrial	9.42	46,752
Exempt	0.41	2,057
<b>Total Waste Generation</b>	<b>15.53</b>	<b>77,063</b>

**Source(s) of information:**

Exempt -Table IV-3

Residential/Commercial and Industrial - Tables III-1, IV-5 and Table IV-6

**Example Calculation:**

$$\text{Generation Rate (lbs/person/day)} = \frac{\text{Total Waste (tons/yr)} \times 2,000 \text{ (lb/ton)}}{\text{Population} \times 365 \text{ days/yr}}$$

$$15.53 = \frac{77,063 \times 2,000}{27,185 \times 365}$$

**Table IV-9**  
**Estimated Residential/Commercial Waste Stream**  
**Composition for the District for the Reference Year**

Waste Stream Type	Percentage of the Waste Stream	Tons
Paper	25.9%	7,318
Food	15.1%	4,267
Yard Trimmings	13.3%	3,758
Plastics	13.1%	3,701
Rubber, Leather, & Textiles	9.3%	2,628
Metals	9.1%	2,571
Wood	6.2%	1,752
Glass	4.4%	1,243
Other	3.6%	1,017
<b>Totals</b>	<b>100.0%</b>	<b>28,255</b>

**Source(s) of information:**

Total tons - Table IV-8

US EPA Advancing Sustainable Materials Management: 2015 Fact Sheet, July 2018.

**Table IV-10  
Estimated Industrial Waste Composition for the Reference Year in the District**

Waste Stream Type	TPY	Waste Stream Type	TPY	Waste Stream Type	TPY
Cardboard	3,687	Paper	185	Misc.	13,741
Ferrous Metals	4,724	Plastic	670	Rubber	5.44
Wood	2,192	Commingled	253	Non-Ferrous Metals	417
Food	20,878	Glass	0.00		
<b>Subtotal</b>	<b>31,481</b>	<b>Subtotal</b>	<b>1,108</b>	<b>Subtotal</b>	<b>14,162.84</b>
<b>Grand Total</b>					<b>46,752</b>

**Source(s) of information:**

Tons generated - Appendix F

Each industrial waste component was projected using the adjustment factor to account for non-respondent industries.

**Example Calculation:**

$$\text{Adjustment Factor} = \frac{\text{Total Industrial Waste Generated (Table IV-8)}}{\text{Total Industrial Waste Generated (Table IV-2 - Survey)}}$$

$$\text{Adjustment Factor} = 1.2522 = 46,752 \text{ tons} \div 37,335 \text{ tons}$$

$$\begin{matrix} \text{Type of Industrial} \\ \text{Waste Generated} \\ \text{(tons)} = \end{matrix} \quad \text{Type of Industrial Waste Generated (Appendix F) x Adjustment Factor}$$

$$3,687 \text{ (tons of cardboard)} = 2,944.51 \text{ (tons of cardboard from Appendix F)} \times 1.2522$$

## V. Planning Period Projections and Strategies [ORC Section 3734.53(A)(5)-(6)]

This Section of the *Plan Update* includes population projections for the District. Projections and estimates are also provided for solid waste generation and recycling for the planning period. Existing District programs and activities that will continue are presented. Most of the detailed descriptions for existing programs refer the reader back to Section IV for details. The details for new programs and activities are described in this section of the *Plan Update*.

### A. Planning Period

Solid waste management plans must provide projections for population, waste generation, and waste reduction for a planning period covering a minimum of ten years. Plans must also provide strategies to manage the District's current and foreseen waste management needs of the residents, businesses, and institutions. This *Plan Update* is based on a fifteen-year planning period. The planning period for this *Plan Update* is January 1, 2020 to December 31, 2034. The projections and tables in this *Plan Update* include the years 2017 through 2034.

### B. Population Projections

The District's population projections from the reference year (2017) through the end of the planning period are presented in Table V-1. The Ohio Development Services Agency's (ODSA) 2017 population estimates by county, city, village, and township were used to calculate a base population for the District. Using a second ODSA publication which presents population projections by county in 10-year intervals from 2010 to 2040, District population projections were interpolated for intermediate years using a straight-line average.

Ohio Law requires that the population of a political subdivision that lies within two or more solid waste management districts shall be credited to the district where the majority of the population resides. The District's reference year population was not adjusted from Henry County's base population of 27,185 because the majority of all political subdivisions' residents live within Henry County.

Population is expected to decrease throughout the planning period. Population is expected to decrease by 1,126 residents or 4.1% throughout the planning period. The District is projected to start the planning period in 2020 with a population of 27,136 and end in 2034 with a total population of 26,080. The following figure presents the estimated District population from the reference year to the end of the planning period.

The following graph depicts the estimated total District population throughout the planning period.

**District Population Estimate (2017 – 2034)**



**C. Waste Generation Projections**

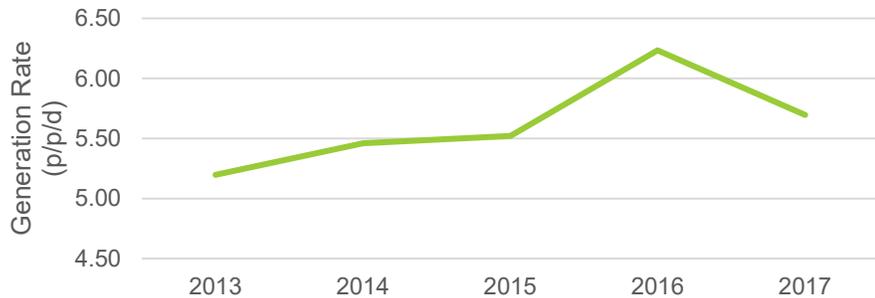
**1. Residential/Commercial Sector**

The District’s residential/commercial waste generation projections are presented in Table V-2, “District Residential/Commercial Waste Generation (TPY).” Waste generation is presented for the 2017 reference year and each subsequent year through 2034. In 2017, the District calculated the per capita generation rate based on Ohio EPA’s Facility Data Reports for disposal and from the District’s 2017 Annual District Report for recycling (with adjustments). The following data was used for this calculation:

2017 Disposal tonnage:	18,087 tons
2017 Recycling tonnage:	10,169 tons
2017 Total generation:	38,255 tons
2017 Residential/commercial per capita generation rate per day:	5.70 pounds

Historic generation rates among the residential/commercial sector have increased from 2013 to 2017. In 2013, the residential/commercial sector generated 26,646 tons, and in 2017, the residential/commercial sector generated 28,255 tons. This is a 6% increase from 2013.

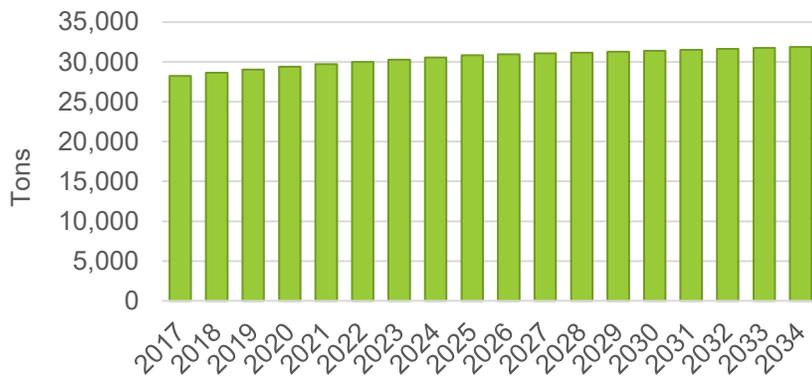
**2013-2017 District Residential/Commercial Per Capita Daily Generation Rates**



Per capita generation rates have increased, on average, by 2.61% annually from 2013-2017.

Table V-2 presents the residential and commercial sector waste generation projections for the reference year through the end of the planning period. This table includes the actual generation amounts for 2017. In order to be conservative, the District has applied an annual increase of 1.3% per year (half of the average historical rate of change) to the 2017 per capita generation rate to calculate the generation rate for years 2018 through 2025, and an annual increase of 0.65% per year (a quarter of the historical rate of change) to calculate the generation rate for years 2026 through 2034. The District believes that the actual average annual change in the generation rate of 2.61% discussed above would result in an unrealistically large increase in R/C generation.

**District Residential/Commercial Waste Generation (2017 – 2034)**



## 2. Industrial Sector

The District's industrial waste generation projections are presented in Table V-3. Industrial waste generation is presented by Standard Industrial Classification (SIC) code for the 2017 reference year through 2034.

The industrial waste generated by each SIC code in 2017 is based on the ratio of waste reported by industries in industrial SIC codes in Table IV-2. The totals have been adjusted to correspond to the total industrial waste generation in Table IV-8, which is based on volumes recorded by landfills and transfer stations, plus recycling and composting.

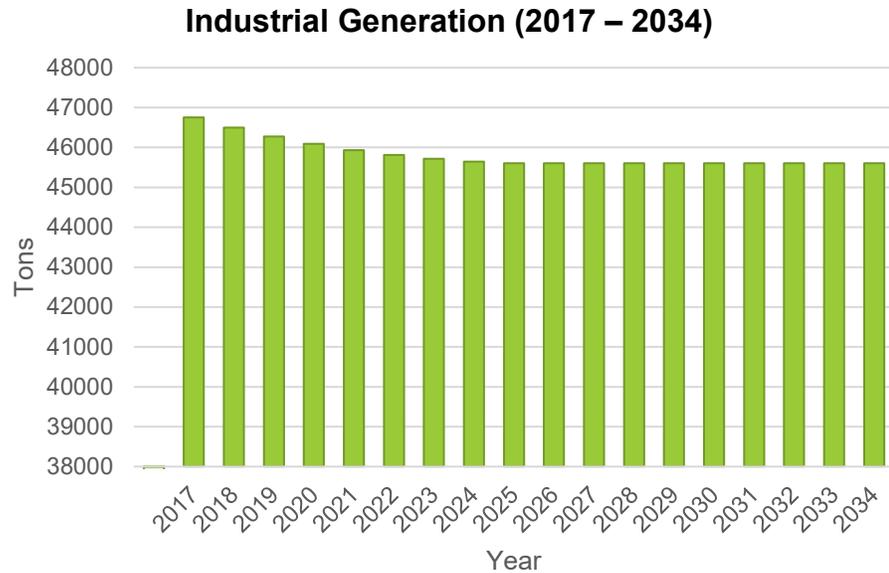
Industrial waste generation projections are based on historical data trends. The following table presents the District's historic generation totals for the industrial sector.

### 2013-2017 Historic District Industrial Generation in Tons

Year	Recycling	Disposal	Total Generation
2013	57,830	13,243	71,073
2014	111,713	9,991	121,704
2015	79,582	13,124	92,706
2016	64,224	10,931	75,155
2017	37,339	9,412	46,752
<b>Average</b>	<b>70,138</b>	<b>11,340</b>	<b>81,478</b>

Generation, recycling, and disposal tonnages in 2020 are projected to be less than the average generation, recycling, and disposal from 2013 to 2017. Tonnages in 2020 are projected by the average rate of change in tonnage from 2013 to 2017 for years 2018 through 2025. Generation is projected to remain steady from 2025 through the end of the planning period.

The District projects industrial waste to decrease from 46,752 tons in 2017 to 46,088 tons in 2020 to 45,601 tons in 2025, then remain constant. The following figure presents the estimated industrial waste generation throughout the planning period.

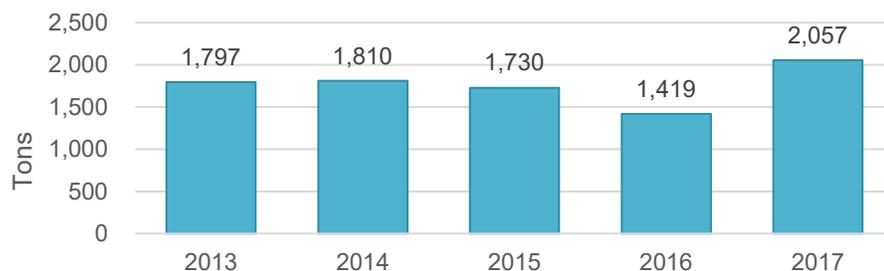


### 3. Total Waste Generation

Total waste generation projections for the District during the planning period are presented in Table V-4. In 2017, the District generated a total of 77,063 tons. This includes residential/commercial waste at 28,255 tons, industrial waste at 46,752 tons, and exempt waste at 2,057 tons.

Exempt waste does not have a direct correlation to population or market/economic factors. Exempt waste is a term used to describe construction and demolition debris, nontoxic fly ash and bottom ash, spent nontoxic foundry sand, slag, and other materials excluded from the definition of solid waste in the Ohio Revised Code (ORC) § 3734.01(E). The figure below presents the District's exempt waste generation totals from 2013 to 2017.

#### 2013-2017 District Exempt Waste Generation



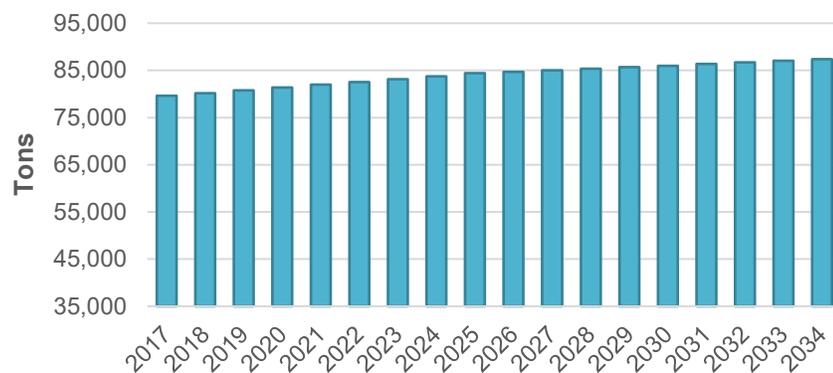
Exempt waste generation patterns increased from 2013 to 2017. Exempt waste in 2020 was projected using the average rate of change in historical years. Generation projections were made by

applying half of the average increase of exempt waste per year from 2013 to 2017 (2.9%) to the Exempt waste. Exempt waste is projected to stay steady throughout the planning period.

The overall generation rate which includes residential/commercial, industrial, and exempt waste generation in pounds per person per day (PPD) for the reference year is 15.53. The projected per capita generation rate will increase slightly to 16.77 PPD in the final year of the planning period. Total waste generation is projected to increase from 77,760 tons in the first year of the planning period (2020) to 79,798 tons in the last year of the planning period (2034), which is an increase of 2,038 tons or 2.6%.

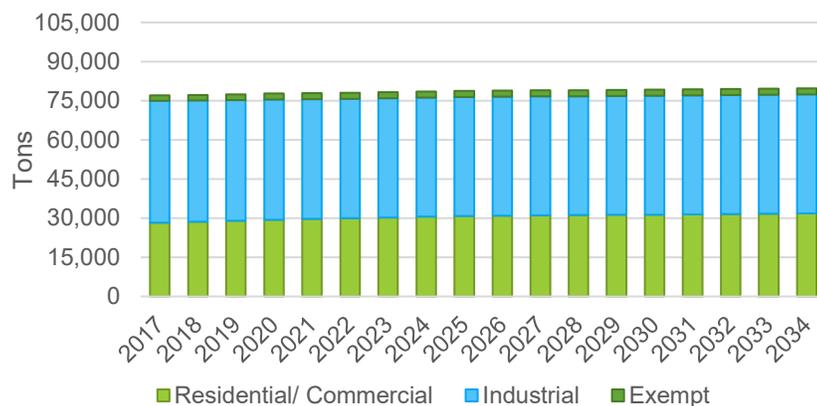
The following figure presents the District’s total waste generation projections throughout the planning period.

**Total District Waste Generation Projections  
(2017 – 2034)**



The following figure presents waste generation by sector as a percentage of the District’s total waste generation.

**District Total Waste Generation Distribution  
(2017 – 2034)**



## D. Projections for Waste Stream Composition

The District does not anticipate any major changes in the composition of the waste stream during the planning period. However, a change in economic conditions or the closure of a plant could greatly impact the industrial as well as residential/commercial projections.

Responses to the District's annual survey should alert the District to any major changes in generation or waste stream composition. Any significant changes will be noted in the Annual Report.

## E. Waste Reduction and Recycling Strategies through the Planning Period

The District must continue to develop recycling and waste reduction strategies to meet the goals established in the *1995 State Plan*. The goals include:

### Goal #1 Access to Alternate Waste Management Opportunities

- The District shall provide access to recycling and waste minimization opportunities for municipal solid waste to its residents and businesses. At a minimum, the District must provide access to recycling opportunities to 90% of its residential population.

### Goal #2 Waste Reduction and Recycling Rates

- The District shall reduce and/or recycle at least 25% of the solid waste generated in the residential/commercial sector and at least 50% of the solid waste generated in the industrial sector.

### Goal #3 Source Reduction

- Provide informational and technical assistance on source reduction.

### Goal #4 Technical and Informational Assistance

- Provide informational and technical assistance on recycling, reuse and composting opportunities.

### Goal #5 Restricted Wastes and Household Hazardous Waste

- Develop strategies for managing scrap tires, yard waste, lead acid batteries and household hazardous waste (HHW).

### Goal #6 Annual Reporting of Plan Implementation

- Districts are required to submit an annual report to Ohio EPA.

### Goal #7 Market Development Strategy (Optional)

- The following table summarizes all of the District strategies for meeting the 1995 State Plan Goals:

### District Strategies for Meeting 1995 State Plan Goals

Program	Program #	1995 State Plan Goals						
		#1	#2	#3	#4	#5	#6	#7
Curbside Recycling	HC-01	✓	✓					
Drop-Off Recycling	HC-02	✓	✓					
Yard Waste Management	HC-03		✓					
Household Hazardous Waste Management	HC-04		✓			✓		
Lead Acid Battery Management	HC-05		✓			✓		
Electronics Recycling	HC-06		✓			✓		
Scrap Tire Management	HC-07		✓			✓		
Market Development Support	HC-08							✓
Education and Awareness	HC-09			✓	✓			
Industrial Sector Data Collection	HC-10		✓				✓	
Litter Collection	HC-11							
Volume Based Rate Support	HC-12		✓					
District Facilities	HC-13		✓					
<b>Number of Strategies Per Goal</b>		<b>2</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>1</b>

#### ***Residential/Commercial Waste Reduction/Recycling and Education Strategies***

The District's residential/commercial waste reduction strategies are presented in Table V-5. The City of Napoleon residential curbside program tonnage is projected to change on an escalating basis using an adjusted average historical rate of change for residential/commercial recycling from 2013 through 2017 (0.502% increase per year) and then remain constant after 2025 to be conservative in projections. From 2020 – 2034 the curbside programs are projected to increase by 2.5% throughout the planning period.

The yard waste management programs are also projected to change each year from 2017 through 2025 based on an adjusted average historical rate of change for yard waste composting (1.36% decrease per year) and then remain constant after 2025 to be conservative in projections. In 2020, yard waste is projected at 2,196 tons and at 2,051 tons in 2034. All other programs are projected to remain constant. The District projects a slight increase in residential/commercial recycling from 7,602 tons in 2020 to 13,840 tons by 2034. Overall, the residential/commercial recycling rate is projected to increase by the average historical rate of change: 3.9%.

## **RESIDENTIAL/COMMERCIAL RECYCLING AND COLLECTION PROGRAMS**

The District's primary strategy for this *Plan Update* is to continue with the successful core programs detailed in Section IV with a few exceptions and modifications. The District is committed to implementing these programs and to continue their success throughout the planning period.

The following section details the specific initiatives by program that will be implemented during the planning period. In addition, the District evaluated each of the programs in Section IV for their strengths and challenges. The results of this analysis assisted the District with the improvements of the programs contained in this section.

Unless a program is new or a change is being initiated, this section does not provide the details of how each program operates, as that information is contained in Section IV.

### **1. HC-1 – Curbside Recycling Program** (State Plan Goals #1 and #2)

This program will continue (see description in Section IV).

The District will continue to work with political subdivisions in the County to promote and support curbside recycling. The District's main objective with this program is to increase the availability of curbside recycling in the County as well as to improve participation.

The District's overall goal for the planning period is to maintain the existing curbside program in Napoleon and add new programs, if possible. The challenges of this program presented in Section IV include:

- Most residents in the District do not have curbside recycling.
- Most haulers do not have the infrastructure to offer curbside recycling.
- There are no communities that contract for trash or recycling in the District.
- City of Napoleon residents' contract price increased due to high contamination rates.

The District acknowledges these challenges and reserves the right to evaluate this program at any point in the planning period based on available funds and District resource availability. However, this is a critical

program to the achievement of State plan goals and will receive maximum priority if there are shortfalls in the District's budget. The following initiative has been created to assist any community in the District that wishes to evaluate and or start-up a curbside recycling program at any point in the planning period:

**Initiative HC-1.1: Curbside Technical Assistance**

The District will provide technical assistance to any community that desires to either evaluate, start-up or improve a residential curbside recycling program. The following may be provided, if requested by communities, by the District.

- Meet with community leaders to discuss options for curbside recycling
- Continue meeting with haulers to determine the best form of education for residents.
- Sponsor community for Ohio EPA recycling grants
- Provide technical assistance and guidance as needed

Implementation Schedule: 2020-2034

**2. HC-2 – Drop-off Recycling Program**  
(State Plan Goals #1 and #2)

This program will continue (see description in Section IV). This is a critical program to the achievement of State plan goals and will receive maximum priority if there are shortfalls in the District's budget. The challenges of this program presented in Section IV include:

- Some areas of the District are under served.
- Some drop-off sites could be expanded from part-time to full-time.
- Processors do not have a sustaining glass market within reasonable distance. Processors cannot make glass into a necessary, usable material for end user.
- Drop-off costs are excessive for District budget.
- Contamination causing extra fees for recycle processing.

- The local church recycling drive does not collect as much recycling as other drop-offs.

To address these challenges, the following initiatives have been developed.

### **Initiative HC-2.1: Drop-Off Program Operations**

The District began a process in 2017 and 2018 to work with any community and/or drop-off site operator who wishes to expand its operation either in materials collected and/or hours of operation. This initiative was designed to reduce the cost of the program to the District by allowing the community to take control of the program. The goal of this change also targeted increasing the quality of the recyclables captured by each program.

The District applied for a grant worth about \$4,000 (with a \$2,000 match) per trailer to purchase six new 16-foot enclosed trailers to place at different drop-off sites throughout the District. The goal is to combat contamination by providing multiple containers at the drop-off locations so that generators can sort and separate different materials into different containers.

As of 2019, the drop-offs at Village of Liberty Center, Canal Basin and Napoleon Lion's Club, and Village of Deshler have each received one of the six trailers.

The drop-offs located in Village of McClure and Village of Hamler will both receive one trailer on the condition that they will provide the opportunity for generators to sort and separate the recyclables. Either the drop-off in Village of Holgate or the drop-off in Ridgeville Township will receive the sixth trailer on the condition that they will provide the opportunity for generators to sort and separate the recyclables.

The stipulation of this overall initiative is that the community shall ensure the trailers are managed properly and then they provide the transportation to one of the District recyclers for processing. Thus, the District saves money and increases the quality of the recycle stream.

Another aspect of this initiative is to address areas in the District that do not have easy access to drop-off recycling opportunities. The District has targeted three new locations for drop-off recycling including the Village of Hamler, Village of Holgate, and Ridgeville Township.

The District will work with other communities if interest is shown by the community and the District has available funds.

The following table summarizes the changes to the existing drop-off program as a direct result of this initiative.

Location	2018	Hours
Malinta (Behind Maintenance Building)	<ul style="list-style-type: none"> <li>No changes</li> </ul>	24 Hours 7 Days/Wk.
Village of Liberty Center (West Cherry St at park)	<ul style="list-style-type: none"> <li>2018 Donated enclosed trailer (16')</li> </ul>	24 Hours 7 Days/Wk.
Canal Basin and Napoleon Lion's Club (Corner of Scott and 424)	<ul style="list-style-type: none"> <li>Donated enclosed trailer (16')</li> <li>Was charged \$100/ton due to contamination</li> <li>Lion's Club Pulled 1x/week and sent to Zack's</li> <li>SWD provided trailer to sort plastics and cans</li> <li>2 (40yrd) trailers for separated cardboard and newspaper</li> <li>Zack's pulled and took containers</li> </ul>	24 Hours 7 Days/Wk.
Village of Deshler (Behind Historical Society and Downtown)	<ul style="list-style-type: none"> <li>Village paid a church \$200/month to maintain recycling center</li> <li>Donated enclosed trailer (16')</li> <li>Filled trailer with sorted materials into bags</li> </ul>	24 Hours 7 Days/Wk.
Village of McClure (South of Old School House) McClure, OH 43534 (419) 748-8592	<ul style="list-style-type: none"> <li>McClure to convert to sort and separate model above</li> <li>Will donate enclosed trailer (16') in condition that they sort and separate when commitment is made by the Village</li> </ul>	24 Hours 7 Days/Wk.
Napoleon N&R&G Recycling	<ul style="list-style-type: none"> <li>No changes</li> </ul>	8 am -4:45 M-F 8 am -11:45 Sat.
Napoleon Zack's Recycling LLC	<ul style="list-style-type: none"> <li>Bailing plastics on site</li> </ul>	8 am - 4:45 pm M-F 8 am - 11:45 pm Sat.
Henry County Landfill L-622 Township Rd 11 Malinta, OH 43535 (419) 256-7343	<ul style="list-style-type: none"> <li>Sort and separate implemented</li> </ul>	8 am - 3:30 pm M-F 8 am -11am Saturday
Hamler Water treatment	<ul style="list-style-type: none"> <li>Sort and separate</li> <li>Men's club to operate</li> <li>Will donate enclosed trailer (16') on condition that they sort and separate</li> <li>The need for a drop-off developed by residents driving to Malinta</li> </ul>	24 Hours 7 Days/Wk.
Ridgeville	<ul style="list-style-type: none"> <li>Targeted village with interest in drop-off program</li> </ul>	

Location	2018	Hours
	<ul style="list-style-type: none"> <li>• May donate enclosed trailer (16') on condition that they sort and separate</li> </ul>	
Holgate	<ul style="list-style-type: none"> <li>• Targeted village with interest in drop-off program</li> <li>• May donate enclosed trailer (16') on condition that they sort and separate</li> </ul>	

Implementation Schedule: 2020-2034

### 3. HC-3 – Yard Waste Management Program (State Plan Goal #2)

This program will continue (see Section IV for program details). No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is, except as noted below, and will monitor any significant changes that would require District intervention.

The District will endeavor to continue supporting this program as it has in past years. With that said, this is a not critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget. Additionally, expenditures have significantly decreased since past years due to the change in programming. Historically, there was an annual payment to the City of Napoleon in exchange for them bringing refuse to the Henry County Landfill. Since the Landfill is now capped and closed, the City no longer brings their refuse to the Landfill and this payment has been discontinued. District residents are now able to dispose of yard waste at the Henry County Landfill's facility and in several villages in Henry County.

### 4. HC-4 – Household Hazardous Waste (HHW) Collection Program (State Plan Goals #2 and #5)

This program will continue (see description in Section IV). This is a critical program to the achievement of State plan goals and will receive maximum priority if there are shortfalls in the District's budget. The challenges of this program presented in Section IV include:

- Some hard to manage HHW was not accepted locally so residents did not have a recycling outlet.
- Convenient all-inclusive HHW collection was not available to residents on an ongoing basis.

To address these challenges, the following initiative has been developed.

**Initiative HC-4.1: Transition to a Full-Service Collection System**

The District plans to evaluate the costs of providing weekly, monthly, or quarterly collection at the Henry County Landfill and charging residents a user fee for proper management. The evaluation plans to look at providing collection of cleaners, flammables, reactive materials, toxins, fluorescent bulbs, pharmaceuticals, and other hazardous materials.

Part of the evaluation will be to consider If the District could add additional materials which would be covered by an acceptable user fee resulting in zero additional costs to the District's budget. Other considerations would be the technical expertise of the District to accept, package and prepare for shipment additional materials. These factors and others will be explored before any changes to the standard HHW program articulated in Section IV occur.

The District is not budgeting a specific amount of money in Section 8 based on the above statement of no new expense additions to the budget.

Implementation Schedule: Evaluation 2020-2022

Implementation (if feasible) 2023 or beyond

**5. HC-5 – Lead Acid Battery Collection Program**  
(State Plan Goals #2 and #5)

This program will continue (see description in Section IV). This is a critical program to the achievement of State plan goals and the private sector provides most of the service related to this program. Based on the above, this program will not receive maximum priority if there are shortfalls in the District's budget. No meaningful challenges were addressed in Section IV; therefore, the District will maintain the program as is and will monitor any significant changes that would require District intervention.

**6. HC-6 – Electronics Recycling Program**  
(State Plan Goals #2 and #5)

This program will continue (see description in Section IV). This is not a critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget. The challenge of this program presented in Section IV include:

- Locations of Goodwill stores may not be central or convenient for all residents.

The District will address the above challenge with the evaluation described in program HC-4.

**7. HC-7 – Scrap Tire Management**  
(State Plan Goal #2)

This program will continue (see description in Section IV). This is a critical program to the achievement of State plan goals and will receive maximum priority if there are shortfalls in the District's budget. The challenges of this program presented in Section IV include:

- Fees may deter some residents of properly disposing scrap tires.
- District's cost has increased over the years.

The District, through the County Commissioners, acknowledges these challenges and reserves the right to evaluate this program at any point in the planning period based on available funds and County resource availability.

However, the County's program offers local residents and business with a local option for the proper management of scrap tires. The District continually strives to operate the program as cost effectively as possible.

**8. HC-8 – Market Development Support**  
(State Plan Goal #7)

This program will continue (see description in Section IV). This is not a critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget. The challenges of this program presented in Section IV include:

- Market development support is unavailable when grants are not received during a year.

The District will conduct the following strategies, if budget allows, to address the challenge above.

**Initiative HC-8.1: Buy Recycled Support**

The District will incorporate the "buy recycled" philosophy into residential, commercial, and industrial reduction and recycling programs as often as possible.

The "buy recycled" philosophy can be included in the District's fair display and discussed during student/adult/civic education presentations. The

District will maintain information on where to purchase items made with recycled materials for interested residents and businesses, such as the Ohio Materials Marketplace.

## **RESIDENTIAL/COMMERCIAL/INDUSTRIAL SECTOR EDUCATION AND AWARENESS PROGRAMS**

### **9. HC-9 – Education and Awareness Program**

(State Plan Goals #3 and #4 for Residential/Commercial and Industrial Sectors)

This program will continue (see description in Section IV). The challenges of this program presented in Section IV include:

- Limited staffing and funding prevent the District from conducting more education and awareness activities.
- Limited exposure and education to council on drop-off program.
- Not enough information on sorting/separating recyclable materials or on no longer accepting glass in drop-off programs.

The District reserves the right to conduct different program promotions and initiatives than those listed in Section IV based on current events, programs, and policies of the District in the new planning period. The District acknowledges the challenge of limited staffing and funding and reserves the right to evaluate this program at any point in the planning period based on available funds and District resource availability. However, this is a critical program to the achievement of State plan goals and will receive maximum priority if there are shortfalls in the District's budget.

To address the other challenges listed in Section IV, the District may conduct the following improvements or changes.

#### **Initiative HC-9.1: Council Education**

The District may create a guide or manual directed towards the Board, Policy Committee, or local community councils within the District to educate them on recycling/solid waste procedures and updates.

Additionally, the District may choose to moderate periodic meetings with the Board, Policy Committee, and/or local councils or governments within the District on recycling/solid waste procedures and updates.

Implementation Schedule: 2023

### **Initiative HC-9.2: Signage and Newspaper**

The District has already begun and plans to add additional signage to all recycling drop-off locations as well as create ads to place in local newspapers on recycling updates, changes, and reminders. The content of these signs and ads may include reminders on what materials are and are not accepted, locations to take special materials, contact information, special event information, and more. Additionally, the District will add it to their website.

Implementation Schedule: 2020-2034

### **Initiative HC-9.3: Recycling Infrastructure Guide**

The District plans to update the current recycling brochure to include a more comprehensive guide to local and regional recycling resources.

Implementation Schedule: 2020-2034

### **Initiative HC-9.4: Education Specialist**

The District reserves the right to add a part-time education specialist to assist in this program and other responsibilities at any point in the planning period. If this position is added, the District will assess its budget to determine if additional revenue would need to be added to cover the costs or if other expense reductions could offset the costs.

This position could also be shared with other operations of the County as needed.

Implementation Schedule: 2020-2034

## **COMMERCIAL, INSTITUTIONAL, AND INDUSTRIAL SECTOR PROGRAMS**

The District's industrial waste reduction strategies are presented in Table V-6, "Industrial Waste Reduction Strategies". Industrial programs waste reduction is projected to increase at the average historical rate of change from years 2013-2017. The District projects a decrease in industrial recycling from 38,258 tons in 2020 to 39,839 tons by 2034.

**10. HC-10 – Industrial Sector Data Collection**  
(State Plan Goals #2, #6)

This program will continue (see description in Section IV). This is not a critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget. To address the challenges identified in Section IV, the District will conduct the following strategies.

**Initiative HC-10.1: Commercial Surveying**

The District may begin surveying the commercial sector in stages. The time frame will allow the District to develop a detailed and consistent mail list of commercial businesses. All survey instruments will include a questionnaire that may include the following.

- A. Does your company recycle?    Yes    No
  
- B. Is your company interested in having a comprehensive solid waste and recycling assessment completed free of charge by the Henry County Solid Waste Management District?    Yes    No

Implementation Schedule: Mail List Development - 2020  
Commercial Surveying Begins - 2022

**Initiative HC-10.2: Business Waste Assessments**

The District may offer free waste assessments to any business (commercial or industrial sector) that requests the service. The District will include the service option in the annual commercial and industrial survey as well as on the District's website. The following waste assessment service will be offered in the planning period:

- Evaluation of current recycling and disposal practices
- Evaluation of current waste generation and waste reduction performance
- Analysis of waste generation sources to determine materials that can be diverted from waste stream
- Evaluation of cost-effective system to manage disposal program
- Recommendations for new programs to divert materials from landfill
- Technical assistance to implement to waste reduction programs

Implementation Schedule: 2020-2034

## **OTHER PROGRAMS/INITIATIVES**

### **11. HC-11 – Annual Litter Round-Up**

This program will continue (see description in Section IV). This is not a critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget. The District will maintain the program as is and will monitor any significant changes that would require District intervention. To address the challenges identified in Section IV, the District will conduct the following strategies.

#### Initiative HC-11.1: Litter Volunteer Recycling Guide

The County Commissioners currently donate cash bonuses of \$60 to the top three groups that separate recyclables from trash litter. This bonus is evaluated annually based on the District budget and is not guaranteed in any year of the planning period.

In addition, the District may create a recycling guide handed out to volunteers before the round-up so that it is clear to volunteers what is and is not recyclable. This should both increase separation of recyclables from other litter collected as well as decrease contamination.

#### Initiative HC-11.2: Advertise Success of Litter Round-Up

During the annual round-up, the program leaders will take pictures that can be posted on the website, social media, and potentially news articles. This may increase awareness and participation of the program in future years as well as persuade volunteers to repeat volunteering in the future.

### **12. HC-12 – Volume-Based Rate Support**

This program will continue (see description in Section IV). This is not a critical program to the achievement of State plan goals and will not receive maximum priority if there are shortfalls in the District's budget.

The District's overall goal for the planning period is to maintain the existing PAYT program in Napoleon and add new programs, if possible. The challenges of this program presented in Section IV include:

- No other community in the District offers an economic incentive curbside program.

The District acknowledges this challenge and reserves the right to evaluate this program at any point in the planning period based on available funds and District resource availability.

The District also created an initiative in program HC-1 to address communities that desire to create curbside recycling programs. This initiative could also be used to incorporate economic incentives for curbside programs.

**13. HC-13 –Facilities**

These facilities will continue (see description in Section IV).

**Table V-1  
District Population Projections**

Year	Henry County Population	Population Adjustment	Total District Population
		None	
2017	27,185	0	27,185
2018	27,200	0	27,200
2019	27,215	0	27,215
2020	27,230	0	27,230
2021	27,136	0	27,136
2022	27,042	0	27,042
2023	26,948	0	26,948
2024	26,854	0	26,854
2025	26,760	0	26,760
2026	26,680	0	26,680
2027	26,600	0	26,600
2028	26,520	0	26,520
2029	26,440	0	26,440
2030	26,360	0	26,360
2031	26,290	0	26,290
2032	26,220	0	26,220
2033	26,150	0	26,150
2034	26,080	0	26,080

**Source(s) of information:**

Population - Ohio Development Services Agency Office of Research, "2017 Population Estimates by County, City, Village, and Township", May 2018.

Population projections 2000-2040 - Ohio Development Services Agency, Ohio County Profiles.

**Sample calculation (2017):**

$$2017 \text{ Total District Population} = \text{Henry County Population} + \text{Village}$$

$$27,185 \text{ residents} = 27,185 \text{ residents} + \text{residents}$$

**Table V-2  
District Residential/Commercial Waste Generation (TPY)**

Year	District Population	Per Capita Generation Rate	Total Residential/Commercial Waste Generation (TPY)	
2017	27,185	5.70	28,255	actual
2018	27,200	5.77	28,640	
2019	27,215	5.84	29,029	
2020	27,230	5.92	29,424	
2021	27,136	6.00	29,706	
2022	27,042	6.08	29,989	
2023	26,948	6.16	30,275	
2024	26,854	6.24	30,563	
2025	26,760	6.32	30,853	
2026	26,680	6.36	30,962	
2027	26,600	6.40	31,070	
2028	26,520	6.44	31,179	
2029	26,440	6.48	31,288	
2030	26,360	6.53	31,397	
2031	26,290	6.57	31,518	
2032	26,220	6.61	31,639	
2033	26,150	6.66	31,760	8.77%
2034	26,080	6.70	31,882	2,579

**Source(s) of information:**

District Population - Table V-1

2017 Per Capita Generation Rate - Table IV-8

2017 Per Capita Generation Rate - 2017 Facility Data Report and Annual District Report

Per Capita Generation Rate projected to increase throughout the planning period using a linear projection, ending in 2035 with a per capita generation rate equal to the 2013-2017 average.

**Sample calculation (2017):**

District population x per capita generation rate (lb/person/day) x 365 days/year x 1 ton/2,000 lbs = Total Residential/Commercial Generation (tons)

27,185 residents x 6 ppd x 365 days ÷ 2,000 pounds/ton = 28,255 tons

**Table V-3  
Projected Industrial Waste Generation**

SIC Code	Year																	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
20	30,146	29,980	29,838	29,718	29,618	29,538	29,476	29,431	29,404	29,404	29,404	29,404	29,404	29,404	29,404	29,404	29,404	29,404
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	194	192	192	191	190	190	189	189	189	189	189	189	189	189	189	189	189	189
25	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
26	410	408	406	404	403	402	401	400	400	400	400	400	400	400	400	400	400	400
27	119	119	118	118	117	117	117	116	116	116	116	116	116	116	116	116	116	116
28	47	46	46	46	46	46	46	46	45	45	45	45	45	45	45	45	45	45
29	172	171	170	169	169	168	168	168	168	168	168	168	168	168	168	168	168	168
30	1,230	1,223	1,217	1,213	1,208	1,205	1,203	1,201	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	30	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
33	519	516	514	512	510	509	508	507	506	506	506	506	506	506	506	506	506	506
34	3,473	3,454	3,438	3,424	3,412	3,403	3,396	3,391	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388
35	2,482	2,469	2,457	2,447	2,439	2,432	2,427	2,424	2,421	2,421	2,421	2,421	2,421	2,421	2,421	2,421	2,421	2,421
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	1,908	1,897	1,888	1,881	1,874	1,869	1,865	1,862	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861	1,861
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	61	60	60	60	60	59	59	59	59	59	59	59	59	59	59	59	59	59
Industrial Generation Reported from Brokers and Processors Surveyed	N/A	N/A	6,344	N/A														
<b>Totals</b>	<b>46,752</b>	<b>46,495</b>	<b>46,275</b>	<b>46,088</b>	<b>45,933</b>	<b>45,809</b>	<b>45,713</b>	<b>45,644</b>	<b>45,601</b>									

**Source(s) of information:**

2017 Generation by SIC Code - Table IV-2 (adjusted to correspond to total industrial waste on Table IV-8)

**Sample calculation (2017):**

SIC Code 20: 2018 Generation = (2017 SIC 20 generation ÷ 2017 total generation) x 2018 total generation  
 29,980 tons = (30,146 tons ÷ 46,752 tons) x 46,495 tons

**Table V-4**  
**Total Waste Generation for the District During the Planning Period**

Year	Residential/ Commercial	Industrial	Exempt	Total Waste	Generation Rate (lbs/person/day)
2017	28,255	46,752	2,057	77,063	15.53
2018	28,640	46,495	2,118	77,253	15.56
2019	29,029	46,275	2,182	77,486	15.60
2020	29,424	46,088	2,247	77,760	15.65
2021	29,706	45,933	2,315	77,954	15.74
2022	29,989	45,809	2,315	78,113	15.83
2023	30,275	45,713	2,315	78,302	15.92
2024	30,563	45,644	2,315	78,522	16.02
2025	30,853	45,601	2,315	78,769	16.13
2026	30,962	45,601	2,315	78,878	16.20
2027	31,070	45,601	2,315	78,986	16.27
2028	31,179	45,601	2,315	79,095	16.34
2029	31,288	45,601	2,315	79,204	16.41
2030	31,397	45,601	2,315	79,312	16.49
2031	31,518	45,601	2,315	79,433	16.56
2032	31,639	45,601	2,315	79,555	16.63
2033	31,760	45,601	2,315	79,676	16.70
2034	31,882	45,601	2,315	79,798	16.77

**Source(s) of information:**

Residential/Commercial Table V-2

Industrial Table V-3

**Sample calculation (2017):**

Total Waste = Residential/Commercial + Industrial + Exempt

77,063 tons = 28,255 tons + 46,752 tons + 2,057 tons

$$\text{Generation Rate (lb/person/day)} = \frac{\text{Total Waste Generated (tons)} \times 2,000 \text{ pounds /ton}}{\text{Population} \times 365 \text{ days/year}}$$

$$15.53 = \frac{77,063.44 \text{ tons} \times 2,000}{27,185 \times 365}$$

**Table V-5  
Residential/Commercial Waste Reduction Strategies**

Strategy	Program #	Type of Material Reduced or Recycled	Tons of Waste Reduction																	
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Residential/Commercial Recycling and Collection Programs																				
Curbside Recycling	HC-01	AC, GL, PL, ONP, MxP, SC, OCC	732	736	739	743	747	751	754	758	762	762	762	762	762	762	762	762	762	762
Drop-Off Recycling	HC-02	AC, GL, PL, ONP, MxP, SC, OCC	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652
Yard Waste Management	HC-03	YW	2,289	2,257	2,227	2,196	2,166	2,137	2,108	2,079	2,051	2,051	2,051	2,051	2,051	2,051	2,051	2,051	2,051	2,051
Household Hazardous Waste Management	HC-04	HHW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lead Acid Battery Management	HC-05	LAB	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Electronics Recycling	HC-06	EW	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Scrap Tire Management	HC-07	ST	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
Market Development Support	HC-08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential - Commercial - Education-Awareness Programs																				
Education and Awareness	HC-09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Industrial Sector Data Collection	HC-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Programs																				
Liter Collection	HC-11	Oth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Volume Based Rate Support	HC-12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
District Facilities	HC-13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other Commercial Recycling	N/A	N/A	6,274.3	6,701.3	7,143.5	7,601.6	8,076.3	8,568.1	9,077.8	9,606.1	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8	10,153.8
<b>Total</b>			<b>10,169</b>	<b>10,568</b>	<b>10,983</b>	<b>11,415</b>	<b>11,853</b>	<b>12,329</b>	<b>12,814</b>	<b>13,317</b>	<b>13,840</b>									

AC = aluminum containers, GL = glass, PL = plastic, OCC = corrugated cardboard, SC = steel containers, PBd = paperboard, MxP = mixed paper, AsC = aseptic containers, YW = yard waste, HHW = hazardous household waste, UO = used oil, EW = electronic waste, LAB = lead-acid batteries, ST = scrap tires, FW = food waste, WG = White Goods, n/a = not applicable

**Source(s) of information:**  
2016 District Annual Report and Residential/Commercial Surveys  
2017 District Annual Report and Residential/Commercial Surveys

**Table V-6  
Industrial Waste Reduction Strategies**

Strategy	Program #	Type of Material Reduced/Recycled	Tons of Source Reduction/Recycling																		
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Industrial Recycling	N/A	Industrial Sector Technical Assistance and Education Programs: Recycling	37,339	37,643	37,949	38,258	38,569	38,883	39,199	39,518	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839
		Total	37,339	37,643	37,949	38,258	38,569	38,883	39,199	39,518	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839	39,839

AL = aluminum; FM = ferrous metals; NFM = non-ferrous metals; PL = plastic; OCC = corrugated cardboard; MxP = mixed paper, W = wood, OTH = other

Source(s) of information:  
2017 tons - Table IV-6

## VI. Methods of Management: Facilities and Programs to be Used [ORC Section 3734.53(A)(7)-(12)]

This section of the *Plan Update* demonstrates that the District has capacity through facilities and its programs to manage the waste generated for the planning period. A regional capacity analysis provides information to demonstrate the District meets or exceeds capacity requirements under Ohio law. The District will continue to reserve its right to exercise flow control but does not currently designate facilities. The designation of facilities is a power granted to SWMDs under Ohio law allowing the District to designate where solid waste generated within or transported into the District shall be taken for disposal, or transfer.

Additionally, this section of the *Plan Update* includes a detailed siting strategy for new proposed facilities.

### A. District Methods for Management of Solid Waste

Table VI-1 presents the waste management methods used and capacity needed for each year of the planning period. The District managed approximately 77,063 net tons of solid waste in 2017. Approximately 77,760 net tons of solid waste will need to be managed in 2020 (the first year of the planning period) and 79,798 net tons will need to be managed by 2034 (the final year of the planning period).

The District will manage the projected waste through recycling, yard waste composting, incineration, the use of transfer stations, and landfilling. In Table VI-1, the total tons landfilled in 2017 (29,556 tons) was calculated by subtracting recycling, yard waste composting, and the volume of waste reduced by incineration. The District projects a need of 28,087 tons of landfill capacity in 2020 and 26,119 tons in 2034.

The following figure shows the projected total net tons to be managed by the District throughout the planning period.

**Net Tons to be Managed by the District (2017 – 2034)**



The following figure shows the projected tons to be landfilled throughout the planning period. The rate of change of tons to be landfilled increases in later years of the planning period because recycling and yard waste composting projections were held constant starting in 2025. Later sections of this Plan Update show a more conservative landfill projection.

**Total Landfill Tons to be Managed by the District (2017 – 2034)**

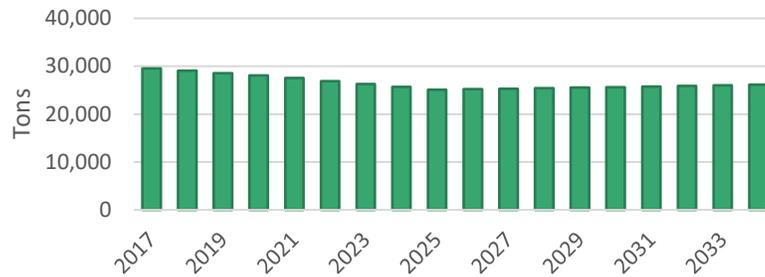


Table VI-2 presents a summary of waste management methods for residential/commercial solid waste generated by the District: recycling, yard waste composting, transferring, incineration, and landfilling. In 2017, the residential/commercial sector generated a total of 28,255 tons. This sector is projected to generate 29,424 tons of solid waste at the beginning of the planning period and 31,882 tons of solid waste by the end of the planning period. The following figure presents the management methods used to manage residential/commercial waste generation throughout the planning period.

**Residential/Commercial Sector  
Waste Management Methods (2017 – 2034)**

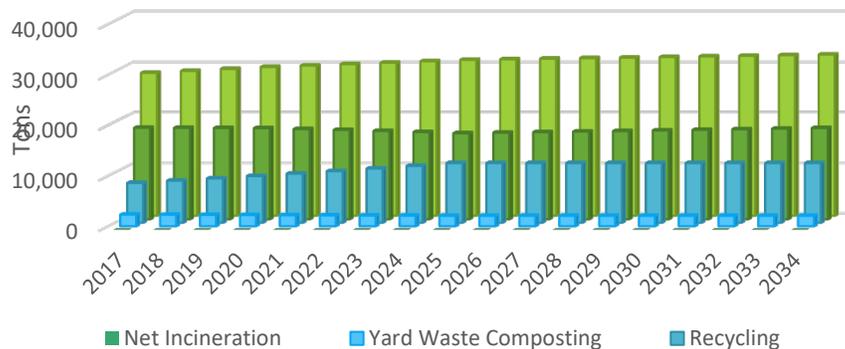


Table VI-3 presents a summary of waste management methods for industrial solid waste generated by the District. This sector’s waste was managed by recycling, transferring, incineration, and landfilling. In 2017, the industrial sector generated a total of 46,752 tons. The industrial sector is

projected to generate 46,088 tons of solid waste at the beginning of the planning period and 45,601 tons of solid waste by the end of the planning period. Total annual waste generation will decrease 487 tons or 1.06% from 2020 to 2034.

The following figure presents the management methods used to manage industrial waste generation throughout the planning period.

**Industrial Sector Waste Management Methods (2017 – 2034)**

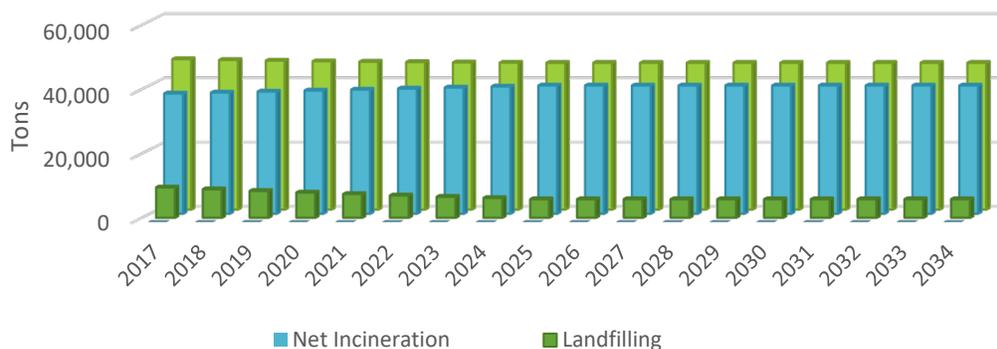


Table VI-4A, “Waste Management Method: Landfill,” presents the reference year landfill capacity utilization and anticipated landfill capacity needs throughout the planning period. The projections in Table VI-4A present the landfill capacity demands from 2017 to 2034. Total tons landfilled includes waste that was directly hauled to landfills, transferred waste, and ash produced through incineration.

Eight landfills received waste generated in the District during the reference year, including waste that was first accepted at incinerators or transfer stations. For the purposes of the analysis in Table VI-4A and future year projections on landfill capacity, the District assumes that each facility that managed District waste during the reference year will manage the same percent of total tons as during the reference year unless a landfill ceases operation or runs out of permitted airspace before the end of the planning period.

There are no in-District landfills. Seven of the landfills were located in Ohio and one landfill was located in Indiana. All seven of the Ohio landfills have sufficient remaining airspace to manage 100% of the District’s landfilling needs throughout the planning period.

Table VI-4B, “Waste Management Method: Incineration, presents the total tons projected to be managed by incineration throughout the planning period. The District used two medical waste incinerators in the reference

year to manage 9.7 tons of waste. The total tons of waste managed by incineration are projected to change at the same rate as population. The overall tonnage managed by incineration annually from 2020 to 2034 is projected to decrease by only 0.4 tons.

Table VI-4C, “Waste Management Method: Transfer,” the District projects transferred waste will manage the same percent of total tons as during the reference year throughout the planning period. In 2020, the first year of the planning period, the District projects approximately 669 tons of solid waste will be managed by transfer facilities. This remains at 669 tons in 2034, the final year of the planning period.

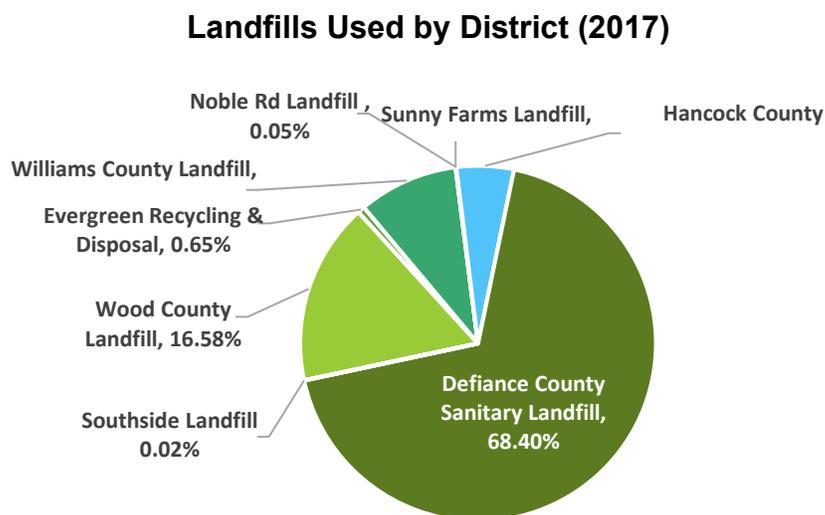
Table VI-4D, Waste Management Method: Recycling,” presents the total tons projected to be managed by recycling. The District is projected to recycle an average of 50,784 tons of material annually throughout the planning period.

Table VI-4E, “Waste Management Method: Composting,” presents the total tons projected to be managed by composting. Composting was projected as the same percent of total tons as during the reference year throughout the planning period. The District does not anticipate any major changes to facilities or programs operating during the reference year.

**B. Demonstration of Access to Capacity**

During 2017, seven out-of-District landfills and one out-of-state landfill managed 29,556 tons of solid waste generated by District residents, businesses, and industries.

The following figure presents the landfills used by the District in 2017, and the percentage of District-generated waste landfilled at each facility.



## Regional Capacity Analysis

The purpose for the regional capacity analysis is to evaluate and demonstrate that the District has access to adequate disposal capacity during the planning period. The District's assessment of regional landfill capacity demonstrates there is sufficient permitted capacity available to manage the District's solid waste until December 31, 2034.

The District projects an average need of approximately 26,027 tons or 39,040 cubic yards of landfill capacity annually throughout the planning period. The District will dispose of approximately 390,402 tons or 1.2 million cubic yards of solid waste. Using a 3:1 conversion factor for cubic yards to tons and applying an average 2:1 compaction ratio for landfilled solid waste, the District will need approximately 585,602 cubic yards of airspace capacity over the fifteen-year planning period.

The landfills used by the District in 2017 had sufficient permitted airspace to dispose of an estimated 29,556 tons of solid waste. The Defiance County Sanitary Landfill, which currently manages the majority of the District's waste, has enough permitted capacity to manage the entirety of the waste generated within the District from the reference year to the end of the planning period. Overall, the landfills used by the District in 2017 had an average remaining lifespan of more than 43 years.

### C. Schedule for Facilities and Programs: New, Expansions, Closures, Continuations

Table VI-5, Implementation Schedule for Facilities, Strategies, Programs and Activities: Dates and Description, presents descriptions and dates of operation for each facility, program or activity presented in the *Plan Update*.

Programs for residential/commercial sector recycling and composting, financial incentive programs, commercial/industrial sector recycling programs, education and awareness, technical assistance, and other programs are presented in Table VI-5. These programs are discussed in detail in Sections IV and V.

### D. Identification and Designation of Facilities

Table VI-6 includes the solid waste facilities identified and current designations. As required in Section 3734.53(A)(13)(a) of the Ohio Revised Code, the District is identifying all Ohio licensed and permitted solid waste landfill, transfer, and resource recovery facilities and all licensed and permitted out-of-state landfill, transfer, and resource recovery facilities. The District is also identifying recycling and composting programs and facilities that are identified in Section III Inventories.

The District does not plan on designating any additional facilities in this *Plan Update*. The District currently has in place following facility designations.

Designated Facilities	
Facility	Solid Waste Management District
Henry County Landfill	Henry County Solid Waste Management District
Defiance County Landfill	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Archibold Refuse Service	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Wood County Landfill	Wood County Solid Waste Management District
Fulton County Transfer Station	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Williams County Landfill	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Hancock County Sanitary Landfill	Hancock County Solid Waste Management District
Sunny Farms Landfill	Ottawa, Sandusky, Seneca Joint Solid Waste District
Evergreen Landfill	Wood County Solid Waste Management District
Lima Transfer Station	NCO Solid Waste Management District
Stony Hollow Landfill	Montgomery County Solid Waste Management District
American Landfill	Stark, Tuscarawas, Wayne Joint Solid Waste Management District
Geneva Landfill	Ashtabula County Solid Waste Management District
Suburban Landfill	Coshocton, Fairfield, Licking, Perry Joint Solid Waste Management District
Kimble Sanitary Landfill	Stark, Tuscarawas, Wayne Joint Solid Waste Management District
Coshocton Landfill	Coshocton, Fairfield, Licking, Perry Joint Solid Waste Management District
Mahoning Landfill	Mahoning County Solid Waste Management District

The District reserves the right to designate one or more additional facilities and recycling activities to receive solid waste and recyclable materials during the planning period.

#### **E. Authorization Statement to Designate**

The Board is authorized to establish facility designations in accordance with Section 343.013 and 343.014 of the Ohio Revised Code. In addition, facility designation will be established and governed by applicable District rules.

**F. Waiver Process for the Use of Undesignated Facilities**

The District is authorized to designate solid waste management facilities. If the Board elects to designate additional facilities, the following waiver process may be followed by any person, municipal corporation, township, or other entity that wishes to deliver waste to a solid waste facility not designated by the District.

In the event that any person, municipal corporation, township or other entity requests permission to use a facility, other than a designated facility, for the disposal of solid waste generated within the District, the entity must submit a written request for a waiver of designation to the Board. The request must contain the following information;

1. Identification of the persons, municipal corporation, township, or other entity requesting the waiver;
2. Identification of the generators(s) of the solid waste for which the waiver is requested;
3. Identification of the type and quantity (in tons per year) of solid waste for which the waiver is requested;
4. Identification of the time period(s) for which the waiver is requested;
5. Identification of the disposal facility(s) to be used if the waiver is granted;
6. If the solid waste is to be disposed in an Ohio landfill, a letter from the solid waste management district where the solid waste will be disposed, acknowledging that the activity is consistent with that District's current plan;
7. An estimate of the financial impact to the District that would occur with issuance of the requested waiver; and
8. An explanation of the reason(s) for requesting the waiver.

Upon receipt of the written request containing all of the information listed above, the District staff will review it and may request additional information necessary to conduct its review. The Board shall act on a waiver request within ninety days following receipt of the request. The Board may grant the request for a waiver only if the Board determines that:

1. Issuance of the waiver is not inconsistent with projections contained in the District's approved *Plan Update* under Section 3734.53 (A)(6) and (A)(7) of the Ohio Revised Code;
2. Issuance of the waiver will not adversely affect implementation and financing of the District's approved *Plan Update*; and
3. The entity is willing to enter into an agreement requiring the payment of a waiver fee to the District.

## **G. Siting Strategy for Facilities**

### **1. Strategy for Identification of Additional Facilities and Capacity**

The identification of additional facilities and capacity requires a four-step process that begins during the development of the solid waste management plan and ends with the identification and District support of the selected facility site(s). The four steps and their components are as follows:

- a. Background regarding facility needed
  - Review of solid waste management plan
  - Review of existing capacity and solid waste generation
  - Review of facilities needed
  - Review of siting process
  - Appointment of site selection task force
- b. Review of criteria and available sites
  - Public review of state mandated exclusionary criteria for selection
  - Public review of District ranking criteria for selection
  - Task force application of exclusionary criteria to available District property
  - Task force selection of a scoring system for the ranking criteria
  - Task force application of selected ranking criteria to property not excluded by above step
  - Task force scoring and selection priorities
  - Task force recommendations
- c. Selection of sites
  - District Policy Committee (DPC) review of ranked sites
  - DPC review of public comments and recommendations of task force
  - DPC announcement of sites selected
  - Public review of sites selected

d. Mediation (if appropriate)

The District Board of County Commissioners will appoint the District Policy Committee to serve as the site selection task force. The Policy Committee, staffed by the District Director will identify the technical expertise required and will, if necessary, hire technical experts to assist the task force. The plan will be revised to reflect these points. The data on criteria will be collected by above named individuals. All hiring will be approved by the Board of County Commissioners.

The Director will be responsible for ensuring that all tasks are carried out and that the concerns of the public are heard and addressed by the task force. The data and resource utilized to make siting decisions will vary depending on the facility to be sited. Data sources will include OEPA requirements, available land, owners, site specific investigations, etc.

All siting efforts will be subject to public hearings and discussions. To the extent necessary, the members of the Technical Advisory Committee will be asked to provide the public concerns and to assess the site selections. Additional assurance of public participation will be gained through articles, mailings, and notification of neighbors.

Mediation will be considered when an impasse is perceived and will be utilized when recommended by the task force. The Policy Committee Chairman will select the mediator and will determine when mediation is required.

While the time frame to be followed in siting facilities is difficult to establish, it is anticipated that the siting process should be completed in about 8 months.

## **2. Siting Criteria**

The District has developed the following siting criteria to assist in narrowing possible sites to two to four potential sites for further consideration. The criteria are divided into exclusionary and ranking categories. The state criteria are required by the Ohio EPA regulations and are the exclusionary criteria. The ranking criteria have been established by the District. The District has chosen not to establish additional exclusionary criteria.

### **Exclusionary Criteria**

Ohio Administrative Code (OAC) Rules 3745-27-07 and 3745-27-20 outline siting criteria for municipal solid waste landfills. These rules describe where landfills are not to be located. For solid waste transfer facilities, OAC Rule

3745-27-22 contains the siting criteria. The siting criteria for composting facilities and solid waste incinerators are listed in OAC Rule 3745-27-43 and OAC Rule 3745-27-51 respectively. Variances to these exclusionary criteria are permitted if approved by Ohio EPA.

### **Ranking Criteria**

District ranking criteria were divided into three general categories: engineering criteria, environmental criteria, and socio-political criteria. These criteria are as follows:

### **Engineering Criteria**

**Site Location:** While still satisfying the other criteria, the facility should be located as close as possible to the waste generation areas to minimize the cost of transporting the waste. For areas with widely dispersed waste generation, a system of facilities may be more economical, using transfer stations to service a single disposal facility or siting more than one disposal facility. Environmental and/or public opinion factors may outweigh the economic savings of a close location and require a more remote site.

**Access to Landfill:** Some facilities, such as waste processing, may generate residue materials or bypass materials that must be landfilled. Good access and short distances to the landfill will reduce hauling costs for the facility residue.

**Site Access:** The facility should be easily accessible from improved major roadways. This is due to the number and type of trucks and transfer vehicles which may be using the facility. Transporting waste through residential or commercial areas should be minimized. Good access on improved roads will minimize impact on residential streets, reduce impact on normal traffic flow, and lower transportation time and expense.

**Site Size and Shape:** Preferable sites should be large enough for the facility buildings and structures, construction areas and open space buffer areas. There should be sufficient space to allow these areas to be laid out to provide optimum vehicle movement, parking areas, queuing space, and private vehicle/truck separation.

**Land Availability:** Preferable sites should be readily available for acquisition at a reasonable cost. Site acquisition should not require condemnation of properties.

**Adjacent Land Use:** Preferable sites should be located a reasonable distance away from residential, community, and commercial development.

However, the site should be conveniently located to encourage participation.

**Existing Zoning:** Preferable sites should be compatible with existing zoning.

**Access to Utilities:** Preferable sites will have ready access to all required utilities. These will include electricity for both purchase and sale of power (as appropriate), potable water, process water, wastewater disposal, and telephone. All utilities should have adequate capacity to supply the facility with its design requirements.

**Access to Markets:** Convenient access to the markets for products produced at a facility may be an important factor, depending upon the type of facility and its products. Market determination is usually based on the market value of the material and the transportation cost to that specific market.

**Topography:** Preferable sites should not have excessive or severe elevation differences and should have reasonable grades on access roads. Sites requiring an extensive amount of grading could add substantially to the cost of the project.

**Soils and Geology:** Existing soils of the site must be adequate to support structures, roads and highways without adverse impacts or excessive costs. Some soil types and properties may make development of a site difficult due to excessive costs or difficulty in providing adequate structural support.

### **Environmental Criteria**

**Traffic:** Preferable sites should minimize congestion and adverse safety effects of facility traffic on the existing traffic flows in the vicinity of the site. Turning functions, site distance from areas of heavy traffic congestion, facility traffic volume, noise and aesthetics are all factors to consider.

**Noise:** Preferable sites should have a minimum adverse impact on noise levels in surrounding residential or other noise-sensitive areas. Noise levels may result from traffic to and from the facility, construction, and operation of the facility.

**Endangered Species:** Preferable sites cannot affect or displace the habitat of known rare or endangered species.

**Screening:** Natural screens such as trees and topography should be utilized when designing the facility.

### **Socio-Political Criteria**

**Impact on Surrounding Areas:** Preferable sites should cause minimal real or perceived environmental or economic impacts on surrounding areas. Public opinion can be a major factor in the relative importance and effect of this criterion.

**Public Attitude:** Preferable sites should minimize public opposition by maximizing the sites conformance to the physical and environmental criteria described above.

**Governmental Cooperation:** Preferable sites should be located within the District or within the jurisdiction of the facility owner to reduce intergovernmental conflicts.

**Public Participation:** The process of selecting a site should be an open process with ample opportunity for public comment and review of documents, plans, and potential impacts.

When the District begins to develop preliminary rankings for the ranking criteria, the public will be notified and encouraged to participate in the process. Otherwise, it will be virtually impossible to minimize public controversy when siting a facility. Additionally, the public may have extremely useful information on the sites which are being considered.

### **3. Ranking of Potential Sites**

Potential sites for development as solid waste facilities will be ranked relative to one another. This ranking is based on suitability for siting a facility at a particular location. The suitability of a site is determined through the numerical scoring of the ranking criteria. These criteria contain the various aspects of a site which must be examined to determine its suitability for a solid waste facility.

Since particular categories are more important than others, a Weight Factor will be assigned for each criterion. The Weight Factor values are based on 100 points and will remain consistent for all potential facility sites.

Once a Weight Factor is established for each criterion, it will be evaluated to determine the appropriate score assignment for its Impact Rating and its Mitigation Factor. The Impact Rating is a measure of the impact of various aspects of a facility. The score for the Impact Rating ranges from 0 through 5 with 0 indicating negligible impact and 5 indicating the greatest impact.

The Mitigation Factor is a measure of the means available to mitigate the impact or increase the suitability of a site. The easier a mitigation measure

can be implemented and the less costly the measure, the higher the score assigned. The numerical score assigned the Mitigation Factor lessens the numerical score assigned to the Impact Rating. The range of values for the Mitigation Factor is also 0 through 5.

The Net Impact is the Impact Rating less the Mitigation Factor.

The final computation is the multiplication of Weight Factor times Net Impact. The product is the Evaluation Score for the criteria.

The scores for Impact Rating and Mitigation Factor are determined and Net Impact and Evaluation Score are computed for all the criteria. The site score is the sum of the Evaluation Score values and is designated the Composite Index for that site. The lower the Composite Index, the more desirable a potential site is for development as a solid waste facility.

#### **4. Resolving Siting Impasses Through Mediation**

At this time, the District does not anticipate any siting impasses since facility siting will be limited and the locations will be associated with already existing facilities. As a result, specific plans for mediation services are not included in this plan.

If the District experiences siting impasses, all efforts will be made to resolve these impasses through ample public participation. Mediation will be considered should all other efforts fail.

The District does not specifically plan to own and/or operate any solid waste management facilities during the fifteen-year planning period. Moreover, the inventories of wastes generated and of available capacity at solid waste facilities indicate that the District does not need additional solid waste management capacity during the planning period.

Consequently, the District does not intend to adopt a siting strategy beyond that which is in accordance with Ohio Administrative Code 3745-27, 3745-30, 3745-37, or other provisions relating to the siting of solid waste facilities.

#### **H. Contingencies for Capacity Assurance and District Program Implementation**

The District does not anticipate any capacity assurance or program implementation problems during this planning period. There are 4 landfills used by the District that have ample capacity available throughout the planning period, and 3 others have some capacity during the planning period. There are also several landfills in northwest Ohio and eastern

Indiana with the capability to provide capacity if an emergency arose with the landfills used by the District.

If there is an emergency impacting the District, the Board will meet on an emergency basis and determine the appropriate actions to take to ensure compliance with this *Plan Update*. The following section defines the District's specific contingencies:

### **Disposal Capacity**

While District disposal capacity is assured for the duration of the planning period, aspects of management, control, and pricing are real concerns to the District.

The District is prepared, if necessary and determined by the Board, to explore the following options if landfill capacity, solid waste management or the cost of solid waste collection, transportation and disposal deteriorates to unacceptable levels:

1. The District may develop a waste disposal cooperative for the purchase or reservation of solid waste disposal capacity for solid waste generated within the District in one or more permitted and licensed landfills outside the District.
2. The District may enter into joint use agreements with other solid waste districts to either obtain new capacity or to secure better disposal options for District generators.

### **Transfer Capacity**

The above referenced potential disposal issue also impacts the transfer of solid waste in the District.

The District monitors the management of solid waste and governmental contracts to evaluate the cost of the transfer of solid waste out of the District. The District may also study individual facilities' roles relative to ultimate disposal destinations, potential disposal cooperative development, as well as other alternatives which may be explored during the planning period.

While it is likely that the private and public sectors will continue to serve the transfer capacity needs of the District, the District reserves the right to respond to changes in the solid waste market and/or management conditions without seeking a full amendment (see material change in circumstances) of the adopted *Plan Update*.

## **Recycling Capacity**

Recycling in the District remains strong with ample infrastructure to handle the District's current and future needs from within and outside the District. In the unlikely event that future District residential recycling needs are not met by the private sector, the District will evaluate whether the District should provide, directly or indirectly, recycling services.

While it is highly likely that the private sector will continue to serve the recyclable materials processing needs of the District, the District reserves the right to respond in a timely fashion to changing market and/or management conditions without seeking a full amendment of the adopted *Plan Update*.

**Table VI-1  
Waste Management Methods Used and Processing Capacity Needed for Each Year of the Planning Period**

Year	Tons of SW Generated	Tons Source Reduced	Net Tons to be Managed	Management Method Used and Processing Capacity Required in TPY					
				Recycling	Transfer	Yard Waste Composting	Gross Incineration	Waste Reduced by Incineration	Landfilling
2017	77,063	0	77,063	45,212	672	2,289	10	7	29,556
2018	77,253	0	77,253	45,954	672	2,257	0	0	29,042
2019	77,486	0	77,486	46,706	670	2,227	0	0	28,554
2020	77,760	0	77,760	47,476	669	2,196	0	0	28,087
2021	77,954	0	77,954	48,266	662	2,166	0	0	27,522
2022	78,113	0	78,113	49,075	656	2,137	0	0	26,901
2023	78,302	0	78,302	49,905	648	2,108	0	0	26,290
2024	78,522	0	78,522	50,756	640	2,079	0	0	25,687
2025	78,769	0	78,769	51,629	631	2,051	0	0	25,090
2026	78,878	0	78,878	51,629	635	2,051	0	0	25,198
2027	78,986	0	78,986	51,629	639	2,051	0	0	25,307
2028	79,095	0	79,095	51,629	643	2,051	0	0	25,416
2029	79,204	0	79,204	51,629	647	2,051	0	0	25,525
2030	79,312	0	79,312	51,629	651	2,051	0	0	25,633
2031	79,433	0	79,433	51,629	656	2,051	0	0	25,754
2032	79,555	0	79,555	51,629	660	2,051	0	0	25,876
2033	79,676	0	79,676	51,629	665	2,051	0	0	25,997
2034	79,798	0	79,798	51,629	669	2,051	0	0	26,119

**Source(s) of information:**

Tons of SW Generated - Table V-4

Tons Recycling and Yard Waste Composting - Tables V-5 and V-6

Tons Transferred - Table VI-2 and VI-3

**Sample calculations:**

$$2017 \text{ Net tons to be managed by SWMD} = \text{Tons of SW generated} - \text{tons source reduced}$$

$$77,063 \text{ tons} = 77,063 \text{ tons} - . \text{ tons}$$

$$2017 \text{ Landfilling} = \text{Net tons to be managed by SWMD} - (\text{recycling} + \text{yard waste composting})$$

$$29,556 \text{ tons} = 77,063 \text{ tons} - (45,212.04 \text{ tons} + 2,289. \text{ tons})$$

**Table VI-2  
Summary for Residential/Commercial Waste Management Methods**

Year	Tons Generated	Management Method in TPY					
		Recycling	Yard Waste Composting	Gross Incineration	Net Incineration	Transfer	Landfilling
2017	28,255	7,878	2,289	3	2	669	18,087
2018	28,640	8,311	2,257	0	0	669	18,072
2019	29,029	8,757	2,227	0	0	668	18,046
2020	29,424	9,218	2,196	0	0	667	18,010
2021	29,706	9,697	2,166	0	0	661	17,842
2022	29,989	10,192	2,137	0	0	654	17,660
2023	30,275	10,706	2,108	0	0	646	17,461
2024	30,563	11,238	2,079	0	0	638	17,246
2025	30,853	11,789	2,051	0	0	630	17,013
2026	30,962	11,789	2,051	0	0	634	17,122
2027	31,070	11,789	2,051	0	0	638	17,230
2028	31,179	11,789	2,051	0	0	642	17,339
2029	31,288	11,789	2,051	0	0	646	17,448
2030	31,397	11,789	2,051	0	0	650	17,557
2031	31,518	11,789	2,051	0	0	654	17,678
2032	31,639	11,789	2,051	0	0	659	17,799
2033	31,760	11,789	2,051	0	0	663	17,920
2034	31,882	11,789	2,051	0	0	668	18,042

**Source(s) of information:**

Tons Generated - Table V-2

Recycling and Yard Waste Composting - Table V-5

Transfer - Table III-3

**Sample calculations (2017):**

Landfilling = Tons Generated - (Recycling + Yard Waste Composting)

18,087 tons = 28,255 tons - (7,877.52 tons + 2,288.67 tons)

**Table VI-3  
Summary for Industrial Waste Management Methods**

Year	Tons Generated	Management Method in TPY				
		Recycling	Gross Incineration	Net Incineration	Transfer	Landfilling
2017	46,752	37,335	6	4	2	9,412
2018	46,495	37,643	0	0	2	8,852
2019	46,275	37,949	0	0	2	8,326
2020	46,088	38,258	0	0	2	7,830
2021	45,933	38,569	0	0	2	7,364
2022	45,809	38,883	0	0	2	6,926
2023	45,713	39,199	0	0	2	6,514
2024	45,644	39,518	0	0	2	6,126
2025	45,601	39,839	0	0	2	5,762
2026	45,601	39,839	0	0	2	5,762
2027	45,601	39,839	0	0	2	5,762
2028	45,601	39,839	0	0	2	5,762
2029	45,601	39,839	0	0	2	5,762
2030	45,601	39,839	0	0	2	5,762
2031	45,601	39,839	0	0	2	5,762
2032	45,601	39,839	0	0	2	5,762
2033	45,601	39,839	0	0	2	5,762
2034	45,601	39,839	0	0	2	5,762

**Source(s) of information:**

Tons Generated - Table V-4

Tons Source Reduction &amp; Recycling - Table V-6

Tons Transferred - Table III-3

**Sample calculations (2017):**

Landfilling = Tons Generated - Source Reduction &amp; Recycling

9,412 tons = 46,752 tons - 37,334.85 tons

Table VI-4A  
Waste Management Method: Landfill

Facilities Used by District	County	Average Daily Waste (Tons)	Remaining Capacity Years	Data Source	Airspace		Tons of District SW Managed																	
					Gross (YD <sup>3</sup> )	Net (tons)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wood County Landfill	Wood, OH	216	6.6	OEPA	557,674	397,342	4,901	4,816	4,735	4,658	4,564	4,461	4,360	4,260	4,161	4,179	4,197	4,215	4,233	4,251	4,271	4,291	4,311	4,331
Evergreen Recycling & Disposal	Wood, OH	560	42	OEPA	8,291,900	5,215,605	192	189	186	183	179	175	171	167	163	164	165	165	166	167	168	168	169	170
Williams County Landfill	Williams, OH	362	174.5	OEPA	20,721,175	1,643,096	2,683	2,636	2,592	2,549	2,498	2,442	2,386	2,331	2,277	2,287	2,297	2,307	2,317	2,327	2,338	2,349	2,360	2,371
Sunny Farms Landfill	Seneca, OH	5,487	12.2	OEPA	24,927,841	18,695,881	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	5	5
Noble Rd Landfill	Richland, OH	3,718	5.26	OEPA	5,966,780	5,088,800	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hancock County Sanitary Landfill	Hancock, OH	511	31.9	OEPA	5,125,292	4,576,196	1,539	1,512	1,487	1,463	1,433	1,401	1,369	1,338	1,307	1,312	1,318	1,324	1,329	1,335	1,341	1,347	1,354	1,360
Defiance County Sanitary Landfill	Defiance, OH	468	56.8	OEPA	1,145,748	7,835,461	20,217	19,878	19,544	19,225	18,838	18,413	17,995	17,582	17,173	17,248	17,322	17,396	17,471	17,545	17,628	17,711	17,794	17,877
Southside Landfill	Marion, IN	3,435	20.09	IDEM	39,399,793	1,036,553	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
<b>Total</b>					<b>106,156,203</b>	<b>44,488,934</b>	<b>29,556</b>	<b>29,042</b>	<b>28,554</b>	<b>28,087</b>	<b>27,522</b>	<b>26,901</b>	<b>26,290</b>	<b>25,687</b>	<b>25,090</b>	<b>25,188</b>	<b>25,307</b>	<b>25,416</b>	<b>25,525</b>	<b>25,633</b>	<b>25,754</b>	<b>25,876</b>	<b>25,997</b>	<b>26,119</b>

Source(s) of information:

- 2017 tons - Tables III-1 - III-3
- 2017 - 2035 tons - Table VI-1
- Projected value for each landfill is calculated as a ratio based on the 2017 distribution.
- 2014 Indiana Municipal Solid Waste (MSW) Landfill Capacity & Life
- 2017 Ohio Facility Data Report Tables

Sample calculation:  
 2018 Wood County Landfill  $\frac{\text{Wood County Landfill 2017}}{\text{Total 2017}} \times \text{Total 2018}$   
 $4,816 \text{ tons} = \frac{4,901 \text{ tons}}{29,556 \text{ tons}} \times 29,042 \text{ tons}$

**Table VI-4B  
Waste Management Method: Incinerator**

Facilities Used by District	Location	Tons of District SW Managed																		
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Indianapolis Resource Recovery Facility	Marion, IN	6.2	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.9	5.8
Medassure Of Indiana Treatment Facility	Marion, IN	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4
<b>Totals</b>		<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.6</b>	<b>9.6</b>	<b>9.6</b>	<b>9.5</b>	<b>9.5</b>	<b>9.5</b>	<b>9.5</b>	<b>9.5</b>	<b>9.5</b>	<b>9.4</b>	<b>9.4</b>	<b>9.4</b>	<b>9.4</b>	<b>9.4</b>	<b>9.3</b>

N/A=Not Available

**Table VI-4C  
Waste Management Method: Transfer**

Facilities Used by District	County	Tons of District SW Managed																	
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Archbold Refuse Service Solid Waste Transfer Facility	Fulton, OH	669	669	668	666	660	653	646	638	629	633	637	641	645	649	654	658	663	667
Tradebe Treatment & Recycling, LLC	Lake, IN	2.40	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
<b>Total</b>		<b>672</b>	<b>672</b>	<b>670</b>	<b>669</b>	<b>662</b>	<b>656</b>	<b>648</b>	<b>640</b>	<b>631</b>	<b>635</b>	<b>639</b>	<b>643</b>	<b>647</b>	<b>651</b>	<b>656</b>	<b>660</b>	<b>665</b>	<b>669</b>

**Source(s) of information:**  
 2017 Tons by Facility - Table III-3  
 Total Tons - Table VI-1

Table VI-4D  
Waste Management Method: Recycling

Facilities Used by District	Area Served	Tons of District SW Managed																
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Henry County Landfill L-622 Township Rd 11 Malinta, OH 43535 (419) 256-7343	Henry	43	44	44	45	46	47	47	48	49	49	49	49	49	49	49	49	49
Village of Malinta Behind Maintenance Bldg. Malinta, OH 43535 (419) 256-7961	Henry	38	39	39	40	41	41	42	43	43	43	43	43	43	43	43	43	43
Village of Liberty Center 110 East St. Liberty Center, OH 43532 (419) 533-3321	Henry	57	57	58	59	60	61	62	63	65	65	65	65	65	65	65	65	65
Canal Basin & Lions Club Corner of Scott & 424 Napoleon, OH 43545 (419) 256-7343	Henry	461	468	476	484	492	500	509	517	526	526	526	526	526	526	526	526	526
Village of Deshler Behind Historical Bldg. Deshler, OH 43516 (419) 278-2955	Henry	29	30	30	31	31	32	32	33	33	33	33	33	33	33	33	33	33
Village of McClure South of Old School House McClure, OH 43534 (419) 748-8592	Henry	24	25	25	25	26	26	27	27	28	28	28	28	28	28	28	28	28
N&R&G Recycling 471 Freedom Drive Napoleon, OH 43545 (419) 599-1659	Henry	3,321	3,375	3,431	3,487	3,545	3,605	3,666	3,728	3,792	3,792	3,792	3,792	3,792	3,792	3,792	3,792	3,792
Okolona Iron & Metal 18641 Co. Rd. N Okolona, OH 43550 (419) 758-3701	Henry	676	687	698	710	722	734	746	759	772	772	772	772	772	772	772	772	772
Zak's Recycling 708 Filmore St. Napoleon, OH 43545 (419) 592-4791	Henry	5,311	5,399	5,487	5,577	5,670	5,765	5,863	5,963	6,065	6,065	6,065	6,065	6,065	6,065	6,065	6,065	6,065
Werfor Recycling 1420 Ralston Ave. Defiance, OH 43512 (419) 784-4285	Henry	1,011	1,028	1,044	1,062	1,079	1,097	1,116	1,135	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154
State Paper & Gateway Recy. 926 Dearborn Ave. Toledo, OH 43605 (419) 729-9777	Henry	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sims Metal Management 2535 Hill Avenue Toledo, OH 43607 (419) 535-6856	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Covanta (WTE facility) 2320 Harding St. Indianapolis, IN (317) 634-7367	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
H&S Forest Products 2000 W. Henderson Columbus, OH (800) 297-6283	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Chep Pallets 8517 South Park Circle Orlando, FL 32819 (407) 370-2437	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Buckeye Pallets 18743 Co. Rd. 424 Defiance, OH 43512 (419) 782-3492	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
River City Polymers 425 Enterprise Ave. Wauseon, OH 43567 (419) 335-2355	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Omni-Source 880 Linden St. Defiance, OH 43512 (419) 784-5669	Henry	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR	DNR
Bob's Tire Services LLC	Henry	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
Enviro Tire Recycling 1155 Bonham Ave Columbus, OH 43211	Henry	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10
Liberty Tire Service of Ohio 3041 Jackson Pike Grove City, OH 43123	Henry	29	29	30	30	31	31	32	32	33	33	33	33	33	33	33	33	33
R Willig Tire Distributions Inc 5027 Wooster Rd W. Norton, OH 44203	Henry	12	12	12	13	13	13	13	13	14	14	14	14	14	14	14	14	14
Truck Stop Supply Co LLC 1120 Greenspring Rd. Newville, PA 17241	Henry	73	74	75	76	78	79	80	82	83	83	83	83	83	83	83	83	83
Wal-Mart Private Sector Collection for Lead-Acid Batteries	Henry	449	456	464	471	479	487	496	504	513	513	513	513	513	513	513	513	513
Additional tonnage from Private Commercial Businesses	Henry	46	47	48	48	49	50	51	52	53	53	53	53	53	53	53	53	53
Additional tonnage from Private Industrial Businesses	Henry	10,973	11,153	11,335	11,522	11,714	11,911	12,112	12,318	12,530	12,530	12,530	12,530	12,530	12,530	12,530	12,530	12,530
Scrap Tire Recycling (Enviro Tire, Liberty, N&R&G Recycling, Henry County Landfill)	Henry	410	417	424	431	438	445	453	460	468	468	468	468	468	468	468	468	468
Cell Phone Collection by Henry County Local Emergency Planning Committee	Henry	50	51	52	53	53	54	55	56	57	57	57	57	57	57	57	57	57
Drug Take Back Program by Henry County Sheriff	Henry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ohio Energy Efficient Appliance Rebate Program	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Henry County Landfill (LAB and freon appliance drop off)	Henry	4,320	4,391	4,463	4,536	4,612	4,689	4,768	4,850	4,933	4,933	4,933	4,933	4,933	4,933	4,933	4,933	4,933
Other recycling facilities used by the residential/commercial and industrial sectors	Henry	17,800	18,092	18,388	18,692	19,002	19,321	19,648	19,983	20,326	20,326	20,326	20,326	20,326	20,326	20,326	20,326	20,326
<b>Total</b>		<b>45,212</b>	<b>45,954</b>	<b>46,706</b>	<b>47,476</b>	<b>48,266</b>	<b>49,075</b>	<b>49,905</b>	<b>50,756</b>	<b>51,629</b>								

Source(s) of information:  
The total recycled is from Table VI-1.  
Projected value for each Recycling Facility is  
calculated as a ratio based on the 2017  
distribution

Sample calculation:

$$\text{N\&R\&G Recycling Recycling 2018} = \frac{2017 \text{ N\&R\&G Recycling}}{2017 \text{ Total}} \times \text{Total 2018}$$

$$3,375 \text{ tons} = \frac{3,321 \text{ tons}}{45,212 \text{ tons}} \times 45,954 \text{ tons}$$

**Table VI-4E  
Waste Management Method: Composting**

Facilities Used by District	County	Tons of District SW Managed																	
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Panning Excavating	Henry	1,321	1,302	1,285	1,267	1,250	1,233	1,216	1,199	1,183	1,183	1,183	1,183	1,183	1,183	1,183	1,183	1,183	1,183
Tri State Garden Supply	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hauler and grocer food waste data	Henry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Village of Deshler	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
City of Napoleon	Henry	968	955	942	929	916	904	891	879	867	867	867	867	867	867	867	867	867	867
Village of Hamler	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Village of Holgate	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Village of Liberty Center	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Village of Malinta	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Henry County Landfill	Henry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total</b>		<b>2,289</b>	<b>2,257</b>	<b>2,227</b>	<b>2,196</b>	<b>2,166</b>	<b>2,137</b>	<b>2,108</b>	<b>2,079</b>	<b>2,051</b>									

**Source(s) of information:**  
 2017 tons - Table III-6  
 2017 tons - 2017 Annual District Report survey data  
 2017 - 2034 tons - Table VI-1

**Table VI-5  
Implementation Schedule for Facilities,  
Strategies, Programs and Activities: Dates and Description**

Program Name	ID #	Location	Description of Program/Facility	Duration	
				Begin	Cease
Curbside Recycling	HC-01	City of Napoleon	The City of Napoleon will continue to operate the pay-as-you-throw (PAYT) and curbside recycling program. The program accepts #1 and #2 plastics, glass, aluminum cans, tin cans, corrugated cardboard, paste board, newspaper, magazines, catalogues, gift wrap, and junk mail.	Ongoing	Ongoing
Initiative HC-1.1: Curbside Technical Assistance			The District may meet with community stakeholders and leaders to discuss options for curbside recycling, sponsor OHIO EPA recycling grants, provide technical assistance and guidance as needed, or any other requested help from District communities.	2021	2035
Drop-Off Recycling	HC-02	District	The District, municipalities, and privately owned recycling entities currently provide 8 full-time drop-off centers. Each drop-off collects at least aluminum/bimetal cans, glass, plastic, and newspaper.	Ongoing	Ongoing
HC-2.1: Drop-Off Program Operations			The District will continue to work with any community and/or drop-off site operator who wishes to expand its operation either in materials collected, hours of operation, number of containers, separation method, or other improvements.	2021	2035
Yard Waste Management	HC-03	District	Private and public sector compost operations will continue to be responsible for their own program and facility. Public sector programs provide seasonal curbside yard waste collection in their respective communities. These activities are expected to continue. The District will continue two yard waste drop-off locations at the Henry County Landfill and City of Napoleon.	Ongoing	Ongoing
Household Hazardous Waste Management	HC-04	District	The District will continue to accept Freon-containing appliances for a fee and dried latex paint at the Henry County Landfill. HHW brochures will continue to be distributed to residents at the landfill and the Henry County Fair. The District will also continue to maintain a list of businesses that accept used motor oil for residents who inquire, as well as promote additional facilities that are licensed to remove Freon and accept Freon-containing appliances. The District will also continue providing a resource guide on the proper management of HHW.	Ongoing	Ongoing
Initiative HC-4.1: Transition to a full-service collection system			The District plans to evaluate the costs of providing weekly, monthly, or quarterly collection at the Henry County Landfill and charging residents a user fee for proper management. The evaluation plans to look at providing collection of cleaners, flammables, reactive materials, toxins, fluorescent bulbs, pharmaceuticals, and other hazardous materials. Part of the evaluation will be to consider if the District could add additional materials which would be covered by an acceptable user fee resulting in zero additional costs to the District's budget. Other considerations would be the technical expertise of the District to accept, package and prepare for shipment additional materials. These factors and others will be explored before any changes to the standard HHW program articulated in Section IV occur.	Evaluation: 2021 Implementation: 2023	Evaluation: 2022 Implementation: Ongoing
Lead Acid Battery Management	HC-05	District	The Henry County Landfill will continue to accept LABs for no cost to residents. LABs are also accepted at LAB wholesalers and retailers and at each of the recycling buy back facilities in the District. The District maintains a list of in-District businesses that accept LAB for residents who inquire.	Ongoing	Ongoing
Electronics Recycling	HC-06	District	The District will continue to accept computers at the recycling facility located at the Henry County Landfill.  Goodwill and Dell's Reconnect program will continue to be promoted to residents via the District's website and landfill brochure. The City of Napoleon is projected to continue their program with Zacks Recycling.  Free electronic drop-offs are provided every spring at electronic round-ups located at schools within the District. The District funds this round-up and receives revenue from processors. This revenue is then given to schools with the most tonnage.	Ongoing	Ongoing

**Table VI-5 (continued)**  
**Implementation Schedule for Facilities,**  
**Strategies, Programs and Activities: Dates and Description**

Program Name	ID #	Location	Description of Program/Facility	Duration	
				Begin	Cease
Scrap Tire Recycling	HC-07	District	The District will continue to operate its Class II Registered Scrap Tire Facility at the Henry County Landfill and accept passenger tires, tractor tires, and semi-truck tires for a reasonable fee.	Ongoing	Ongoing
Market Development Support	HC-08	District	The District will expand its effort to solicit quality projects that fit the requirements of the Ohio Department of Natural Resources Market Development Grant Program by expanding promotion of the grant through the District's website and other publications, identifying a list of potential commercial and industrial companies that can be targeted for promotion of the program directly, and assisting companies with their applications for funding when it is determined that viable candidates for the funds have been identified.	Ongoing	Ongoing
Education and Awareness	HC-09	District	The District will continue to utilize a variety of efforts to provide education and awareness to all sectors in Henry County for youth and adult audiences, small and large businesses, and institutions. Activities and efforts include youth presentations, educational videos, brochures, commercial/industrial sector presentations, the District website, and promotion and outreach about the sort and separate initiatives.	Ongoing	Ongoing
HC-9.1: Council Education			The District may create a guide or manual directed towards the Board, Policy Committee, or local community councils within the District to educate them on recycling/solid waste procedures and updates. Additionally, the District may choose to moderate periodic meetings with the Board, Policy Committee, and/or local councils or governments within the District on recycling/solid waste procedures and updates.	2023	As needed
HC-9.2: Signage and Newspaper			The District plans to add additional signage to all recycling drop-off locations as well as create ads to place in local newspapers on recycling updates, changes, and reminders. The content of these signs and ads may include reminders on what materials are and are not accepted, locations to take special materials, contact information, special event information, and more.	2021	As needed
HC-9.3: Recycling Infrastructure Guide			The District plans to update the current recycling brochure to include a more comprehensive guide to local and regional recycling resources.	2021	2035
HC-9.4: Education Specialist			The District will reserve the right to add a part time education specialist to assist in this program and other responsibilities at any point in the planning period. If this position is added, the District will assess its budget to determine if additional revenue would need to be added to cover the costs or if other expense reductions could offset the costs.	2021	2035
Industrial Sector Data Collection	HC-10	District	The District will continue to annually survey industrial sector businesses (SIC code 20 and 22 – 39) to obtain data on recycling, source reduction, and waste generation.	Ongoing	Ongoing
HC-10.1: Commercial Surveying			The District may begin surveying the commercial sector in stages. The time frame will allow the District to develop a detailed and consistent mail list of commercial businesses. All survey instruments will include a questionnaire.	2021	Ongoing
HC-10.2: Business Waste Assessments			The District may offer free waste assessments to any business (commercial or industrial sector) that requests the service. The District will include the service option in the annual commercial and industrial survey as well as on the District's website.	2021	2035
Litter Collection	HC-11	District	Each year, the District conducts an annual litter round-up. Organizations and families may register to volunteer. There are cash bonuses donated by the county commissioners to the top three groups that separate their recyclables. The District provides bags and gloves; area businesses, townships, and local organizations sponsor the event and provide financial incentives for volunteers.	Ongoing	Ongoing
Volume Based Rate Support	HC-12	District	The District will provide technical and educational support to any communities or haulers who express an interest to switch to volume-based billing as well as continuing to support the existing PAYT program in the City of Napoleon.	Ongoing	Ongoing
District Facilities	HC-13	District	The Henry County Landfill will continue to operate as an exempt transfer station.	Ongoing	Ongoing

**Table VI-6  
Facilities Identified and Current Designations**

Facilities Identified	
Name	Location (SWMD)
<b>Landfills</b>	
Ohio EPA permitted and licensed solid waste landfills.	
<b>Transfer Facilities</b>	
Ohio EPA permitted and licensed solid waste transfer facilities.	
<b>Recycling Facilities</b>	
Recycling Facilities presented in Section III of this Plan.	
<b>Designated Facilities</b>	
Henry County Landfill	Henry County Solid Waste Management District
Defiance County Landfill	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Archibold Refuse Service	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Wood County Landfill	Wood County Solid Waste Management District
Fulton County Transfer Station	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Williams County Landfill	Defiance, Fulton, Paulding, Williams Joint Solid Waste Management District
Hancock County Sanitary Landfill	Hancock County Solid Waste Management District
Sunny Farms Landfill	Ottawa, Sandusky, Seneca Joint Solid Waste District
Evergreen Landfill	Wood County Solid Waste Management District
Lima Transfer Station	NCO Solid Waste Management District
Stony Hollow Landfill	Montgomery County Solid Waste Management District
American Landfill	Stark, Tuscarawas, Wayne Joint Solid Waste Management District
Geneva Landfill	Ashtabula County Solid Waste Management District
Suburban Landfill	Coshocton, Fairfield, Licking, Perry Joint Solid Waste Management District
Kimble Sanitary Landfill	Stark, Tuscarawas, Wayne Joint Solid Waste Management District
Coshocton Landfill	Coshocton, Fairfield, Licking, Perry Joint Solid Waste Management District
Mahoning Landfill	Mahoning County Solid Waste Management District

## VII. Measurement of Progress Toward Waste Reduction Goals [ORC Section 3734.53(A)]

The Ohio EPA *1995 State Plan* establishes seven goals solid waste management districts (SWMDs) are required to achieve in their solid waste management plans. These goals are as follows:

Goal #	Description
#1	Ensure the availability of reduction, recycling and minimization alternatives for municipal solid waste by ensuring 90% of residents have access to curbside and drop-off programs. The District must also demonstrate that there are adequate opportunities for industrial businesses to recycle.
#2	Reduce and/or recycle at least 25% of the total waste generated by the residential/commercial sector and 50% of the total waste generated by the industrial sector.
#3	Provide informational and technical assistance on source reduction.
#4	Provide informational and technical assistance on recycling, reuse, and composting opportunities.
#5	Strategies for scrap tires and household hazardous wastes.
#6	Annual reporting of plan implementation.
#7	Market development strategy (optional).

SWMDs are encouraged to meet Goal #1 and Goal #2 but are only required to demonstrate compliance with one goal or the other. Goals #3 through #6 are mandated goals to which SWMDs must demonstrate compliance, and Goal #7 is optional. This section will cover the goal selected by the District, its progress toward achieving the goal, and plans to maintain compliance throughout the planning period.

### A. Compliance with Goal #2

Convenient opportunities to recycle are important to maintaining and improving recycling rates. It is desirable to provide convenient recycling opportunities throughout the District using a combination of curbside recycling and drop-off programs. The District's current recycling programs and their locations within the District are serving the needs of the District. These programs do not, however, meet the 90% access goal (Goal #1) of the *1995 State Plan*.

The District annually conducts a comprehensive surveying system that has consistently provided high quality waste reduction data over the last several years. This data, coupled with District waste generation, has resulted in the District achieving a 25% or greater waste reduction rate in the residential/commercial sector and a 50% or greater waste reduction rate in

the industrial sector during the reference year of this *Plan Update* including previous plan implementation years of the current solid waste plan. Therefore, the District is choosing to show compliance with Goal #2 instead of Goal #1. As stated in the Ohio EPA Format, Goal #2 requires solid waste districts to:

- Reduce or recycle at least 25% of the residential/commercial waste generated; and
- Reduce or recycle at least 50% of the industrial waste generated.

## **B. Demonstration of Compliance with Goal #2**

Since the District's *Plan Update* is based on Goal #2, Plan format Tables VII-1 and VII-2 are not applicable and have been omitted.

In 2017, approximately 36% of the District's residential/commercial waste stream was recycled including yard waste (see Table VII-3). This equates in a pounds per person per day (PPD) rate of 2.05.

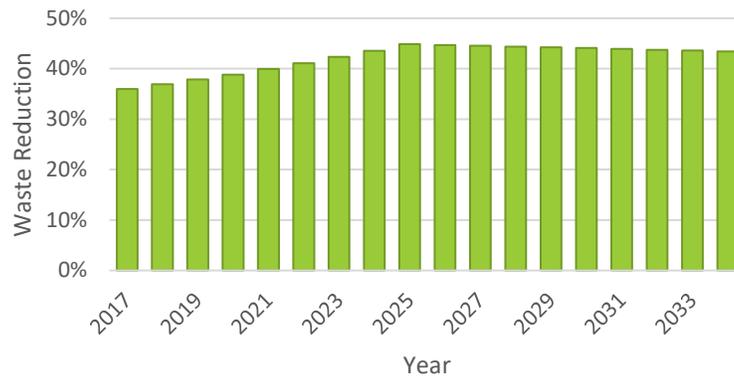
Approximately 38% of the solid waste recycled by the residential/commercial sector is residential. This includes the curbside and drop-off recycling programs, yard waste management and household hazardous waste collection programs. Solid waste recycled by the commercial businesses is approximately 62% of the waste recycled within the residential/commercial sector. Many commercial businesses continue to recycle cardboard, paper, plastics, and metals.

The District is committed to maintaining or exceeding the state goals for recycling and waste reduction. The programs presented in Section V and included in Table VI-5 illustrate the District's plans to continue to maintain or increase the amount of recyclable materials that are recycled.

The District will continue to exceed the 25% waste reduction rate throughout the planning period based on the District's projections for successful recycling programs and waste generation within the District. In 2034, the final year of the planning period, the District anticipates a 43% waste reduction rate for the residential/commercial section. This equates to a pounds per person per day (PPD) rate of 2.91.

The following graph depicts the residential/commercial sector waste reduction rate throughout the planning period.

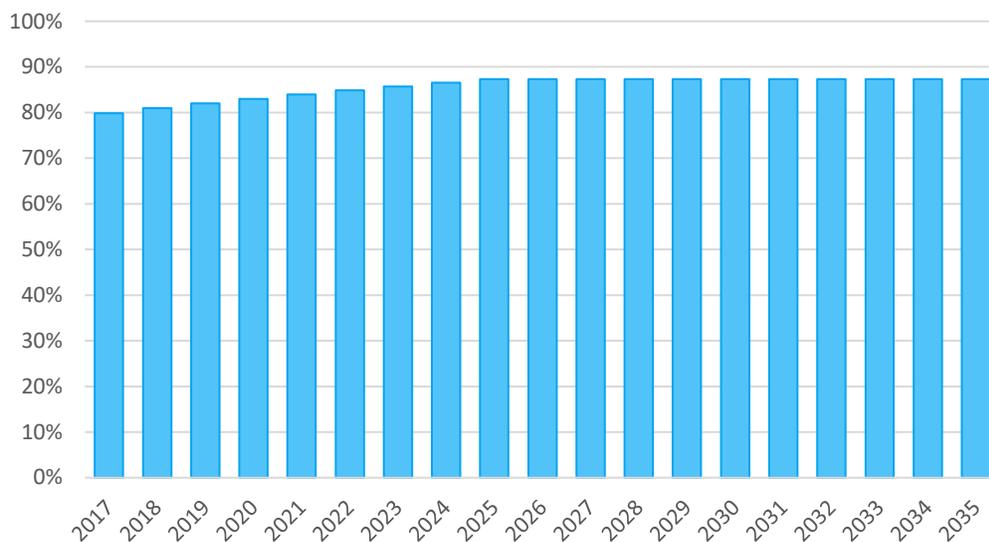
**Residential/Commercial Waste Reduction Percentage (2017 – 2034)**



In 2017, 80% of industrial solid waste was recycled (Table VII-4). This equates in a pounds per person per day (PPD) rate of 7.53. In 2034, the final year of the planning period, the District anticipates a waste reduction rate of 87% for the industrial sector. This equates in a pounds per person per day (PPD) rate of 8.37. This projection was made to stay conservative in the event of fluctuations in the industrial sector.

The following graph depicts the industrial sector waste reduction rate throughout the planning period.

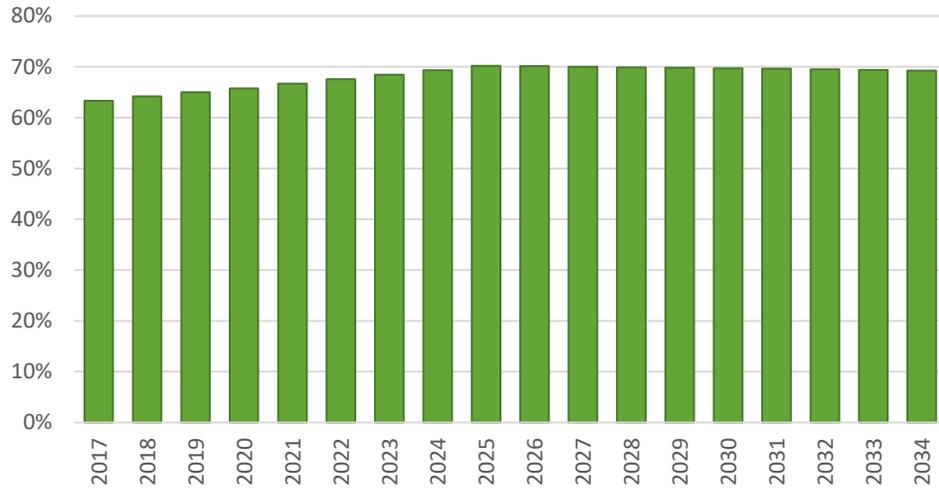
**Industrial Waste Reduction Percentage (2017 – 2034)**



In 2017, the District’s total waste reduction rate (residential/commercial plus industrial) was 63% (Table VII-5). This equates in a pounds per person per day (PPD) rate of 9.57. The District anticipates that the total waste reduction rate will increase to 69% by 2034, the final year of the planning period. This equates in a pounds per person per day (PPD) rate of 11.28.

The following graph depicts all sectors waste reduction rate throughout the planning period.

**Total District Waste Reduction Percentage (2017 – 2034)**



**Table VII-3**  
**Annual Rate of Waste Reduction: Residential/Commercial Waste**

Year	Recycling	Composting	Gross Incineration	Waste Reduction via Incineration	Landfill	Total Waste Reduction	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (PPD)
2017	7,878	2,289	3	2	18,087	10,169	27,185	36%	2.05
2018	8,311	2,257	0	0	18,072	10,568	27,200	37%	2.13
2019	8,757	2,227	0	0	18,046	10,983	27,215	38%	2.21
2020	9,218	2,196	0	0	18,010	11,415	27,230	39%	2.30
2021	9,697	2,166	0	0	17,842	11,863	27,136	40%	2.40
2022	10,192	2,137	0	0	17,660	12,329	27,042	41%	2.50
2023	10,706	2,108	0	0	17,461	12,814	26,948	42%	2.61
2024	11,238	2,079	0	0	17,246	13,317	26,854	44%	2.72
2025	11,789	2,051	0	0	17,013	13,840	26,760	45%	2.83
2026	11,789	2,051	0	0	17,122	13,840	26,680	45%	2.84
2027	11,789	2,051	0	0	17,230	13,840	26,600	45%	2.85
2028	11,789	2,051	0	0	17,339	13,840	26,520	44%	2.86
2029	11,789	2,051	0	0	17,448	13,840	26,440	44%	2.87
2030	11,789	2,051	0	0	17,557	13,840	26,360	44%	2.88
2031	11,789	2,051	0	0	17,678	13,840	26,290	44%	2.88
2032	11,789	2,051	0	0	17,799	13,840	26,220	44%	2.89
2033	11,789	2,051	0	0	17,920	13,840	26,150	44%	2.90
2034	11,789	2,051	0	0	18,042	13,840	26,080	43%	2.91

**Source(s) of information:**

Recycling, composting, incineration, and landfill tonnage - Table VI-2

Gross incineration and waste reduction via incineration - Table VI-1

Population - Table V-1

**Sample calculations (2017):**

Recycling + composting = Total waste reduction

7,878 tons + 2,289 tons = 10,168.63 tons

Total waste reduction ÷ (total waste reduction + landfill) x 100 = Waste reduction rate

10,169 tons / (10,169 tons + 18,086.51 tons) x 100 = 36%

(Total waste reduction x 2,000 lbs) ÷ (District population x 365 days) = Per capita waste reduction rate

(10,169 tons x 2,000 pounds) / (27,185 x 365) = 2.05 lbs/day

**Table VII-4  
Annual Rate of Waste Reduction: Industrial Waste**

Year	Recycling	Gross Incineration	Waste Reduction via Incineration	Landfill	Population	Waste Reduction Rate (%)	Per Capita Waste Reduction Rate (PPD)
2017	37,335	6	4	9,412	27,185	80%	7.53
2018	37,643	0	0	8,852	27,200	81%	7.58
2019	37,949	0	0	8,326	27,215	82%	7.64
2020	38,258	0	0	7,830	27,230	83%	7.70
2021	38,569	0	0	7,364	27,136	84%	7.79
2022	38,883	0	0	6,926	27,042	85%	7.88
2023	39,199	0	0	6,514	26,948	86%	7.97
2024	39,518	0	0	6,126	26,854	87%	8.06
2025	39,839	0	0	5,762	26,760	87%	8.16
2026	39,839	0	0	5,762	26,680	87%	8.18
2027	39,839	0	0	5,762	26,600	87%	8.21
2028	39,839	0	0	5,762	26,520	87%	8.23
2029	39,839	0	0	5,762	26,440	87%	8.26
2030	39,839	0	0	5,762	26,360	87%	8.28
2031	39,839	0	0	5,762	26,290	87%	8.30
2032	39,839	0	0	5,762	26,220	87%	8.33
2033	39,839	0	0	5,762	26,150	87%	8.35
2034	39,839	0	0	5,762	26,080	87%	8.37

**Source(s) of information:**

Recycling and landfill data - Table VI-3

Population - Table V-1

**Sample calculations (2017):**

Recycling = (recycling + landfill) x 100 = Waste reduction rate  
 37,335 tons / (37,335 tons + 9,412.41 tons) x 100 = 80%

Recycling x 2,000 pounds ÷ (district population x 365 days) = Per capita waste reduction rate  
 (37,335 tons x 2,000 pounds) / (27,185 x 365) = 7.53 lbs/day

**Table VII-5  
Annual Rate of Waste Reduction: Total District Solid Waste**

Year	Recycling	Composting	Gross Incineration	Waste Reduction via Incineration	Landfill	Tons Waste Reduction	Population	Waste Reduction Rate	Per Capita Waste Reduction Rate (lb/person/day)
2017	45,212	2,289	10	7	27,499	47,501	27,185	63%	9.57
2018	45,954	2,257	0	0	26,924	48,211	27,200	64%	9.71
2019	46,706	2,227	0	0	26,372	48,932	27,215	65%	9.85
2020	47,476	2,196	0	0	25,840	49,672	27,230	66%	10.00
2021	48,266	2,166	0	0	25,207	50,432	27,136	67%	10.18
2022	49,075	2,137	0	0	24,586	51,212	27,042	68%	10.38
2023	49,905	2,108	0	0	23,975	52,012	26,948	68%	10.58
2024	50,756	2,079	0	0	23,372	52,835	26,854	69%	10.78
2025	51,629	2,051	0	0	22,775	53,679	26,760	70%	10.99
2026	51,629	2,051	0	0	22,884	53,679	26,680	70%	11.02
2027	51,629	2,051	0	0	22,992	53,679	26,600	70%	11.06
2028	51,629	2,051	0	0	23,101	53,679	26,520	70%	11.09
2029	51,629	2,051	0	0	23,210	53,679	26,440	70%	11.12
2030	51,629	2,051	0	0	23,319	53,679	26,360	70%	11.16
2031	51,629	2,051	0	0	23,439	53,679	26,290	70%	11.19
2032	51,629	2,051	0	0	23,561	53,679	26,220	69%	11.22
2033	51,629	2,051	0	0	23,682	53,679	26,150	69%	11.25
2034	51,629	2,051	0	0	23,804	53,679	26,080	69%	11.28

**Note:** Columns for incineration have not been included in this table since the District has not used this management method for solid waste.

**Source(s) of information:**

Recycling, composting, incineration, waste reduction via incineration, landfill, and population - Tables VII-3 and VII-4

**Sample calculations (2017):**

Recycling + composting + waste reduction via incineration = Tons waste reduction

45,212 tons + 2,289 tons = 47,501.04 tons

Total waste reduction ÷ (total waste reduction + landfill) x 100 = Waste reduction rate

47,501 tons / (47,501 tons + 27,498.92 tons) x 100 = 63%

(Total waste reduction x 2,000 lbs) ÷ (District population x 365 days) = Per capita waste reduction rate

(47,501 tons x 2,000 pounds) / (27,185 x 365) = 9.57 lbs/day

## VIII. Cost of Financing Plan Implementation [ORC Section 3734.53(A)(9), (12) and (B)]

This section of the Plan provides information on the District's revenues and expenditures. The revenues and expenditures presented for 2017 through 2019 are based on amended budgets and actual revenues received and costs expended. The planning period includes cost projections based on these initial years.

A projection on the estimated funds needed to operate is provided for each District program. The budget is a demonstration that the District can implement the initiatives, strategies, programs and facilities detailed in Sections IV and V of this *Plan Update*. The District put forth a diligent and honest effort to prepare the budget in this section; actual revenues and costs may change, and adjustments will be made by the District as appropriate. The tables referenced throughout Section VIII of this *Plan Update* are included at the end of the section.

The District has presented certain County operations (tire program, exempt transfer station and landfill post closure) in this Plan Update for informative purposes only. These operations fall under the County Commissioners and not the District. The revenue and expenses related to these operations are therefore not included in the budget section of the Plan Update. This action is based on internal agreements between the District and County Commissioners.

### **Budget Demonstration**

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*.

The District reserves the right to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this *Plan Update* is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions.

The District is committed to implementing planned strategies, facilities, programs and/or activities in a cost-effective manner. The District is committed to improving the effectiveness and reduce the cost of all District strategies, facilities, programs and activities. The District Board is authorized to expend District funds among other uses included in the *Plan Update* when costs are reduced. Additionally, the Board is authorized to use reduced costs to provide grant funds or direct funding to evaluate, test, and/or implement new strategies, facilities, programs and activities that are in compliance with this *Plan Update* and that are not a “material change in circumstance” regarding the implementation of this *Plan Update*.

Finally, the District reserves the right to fund some of the programs identified in this *Plan Update* through its unencumbered fund balance rather than through a direct line item in the budget. This allows flexibility to the District in the event the particular program is not implemented and/or there are gaps in funding provided. The District will not spend money from its unencumbered fund balance in such a way as to deplete the balance to levels that would put the District at risk financially.

#### **A. Funding Mechanisms**

The District has prepared this Solid Waste Management *Plan Update* with the most reliable and best information available at the time of its development. There may be discrepancies between the information presented in this *Plan Update* and previous reports (i.e., Annual District Reports, Quarterly Fee Reports, etc.) submitted to Ohio EPA. Some of these discrepancies come from the differences in categories from Ohio EPA reports and the programs presented in this *Plan Update*. The District believes that all previous reports were prepared with the best information available at that time. Since this *Plan Update* was prepared using data from comprehensive survey efforts that included all industrial and commercial businesses, institutions, municipalities, compost facilities, brokers/buy backs and solid waste haulers, the data will supersede all other reports. In addition, the District has committed to comprehensive annual surveying of all sectors in Henry County with assistance from solid waste consultants.

## 1. District Disposal Fees

At this time, the District will levy no tiered disposal fees through the authority granted by Divisions B (1) to (3) of Section 3734.57 of the Ohio Revised Code. For this reason, Table VIII-1 has been omitted. The District reserves the right to levy such fees in the future should it determine that such fees are necessary for the implementation of the plan.

## 2. Generation Fee

The District does not currently impose a generation fee on any District waste streams, nor does it anticipate doing so during the planning period, therefore Table VIII-2 has been omitted. However, the District reserves the right to adjust the fees as necessary to assure appropriate funding for District programs and activities.

## 3. Contract Revenue

The District received a \$4.00 per ton contract fee for solid waste generated in the District that is disposed at designated facilities that are identified in Section VI of this Plan Update and also included below:

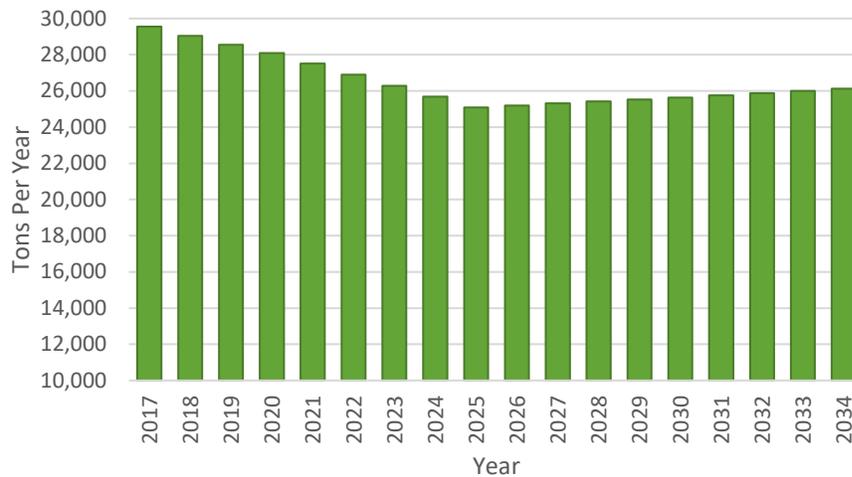
Designated Facilities	
Facility	Solid Waste Management District (SWD)
Henry County Landfill	Henry County SWD
Defiance County Landfill	Defiance, Fulton, Paulding, Williams Joint SWD
Archibold Refuse Service	Defiance, Fulton, Paulding, Williams Joint SWD
Wood County Landfill	Wood County SWD
Fulton County Transfer Station	Defiance, Fulton, Paulding, Williams Joint SWD
Williams County Landfill	Defiance, Fulton, Paulding, Williams Joint SWD
Hancock County Sanitary Landfill	Hancock County SWD
Sunny Farms Landfill	Ottawa, Sandusky, Seneca Joint SWD
Evergreen Landfill	Wood County SWD
Lima Transfer Station	North Central Ohio SWD
Stony Hollow Landfill	Montgomery County SWD
American Landfill	Stark, Tuscarawas, Wayne Joint SWD
Geneva Landfill	Ashtabula County SWD
Suburban Landfill	Coshocton, Fairfield, Licking, Perry Joint SWD
Kimble Sanitary Landfill	Stark, Tuscarawas, Wayne Joint SWD
Coshocton Landfill	Coshocton, Fairfield, Licking, Perry Joint SWD
Mahoning Landfill	Mahoning County SWD

The contract fee is divided in two separate revenue centers. For the post closure care of the Henry County Landfill, a total of \$1.00 per ton of the \$4.00 contract fee was set aside for this purpose until mid-2019. The remaining \$3.00 per ton of the \$4.00 contract fee was used by the District

to implement its solid waste management plan in 2017 up to 2020. In June of 2019, the District adjusted the contract fee from \$4.00 to \$5.00. The new split on the contract fee will be \$2.00 to the post-closure care fund (starting in 2019) and \$3.00 for District operations.

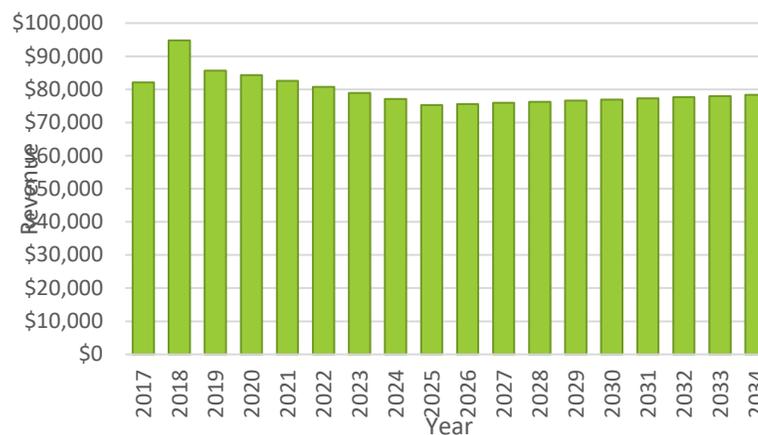
The following graph depicts the actual and projected disposal tonnage that qualifies for contract fee collection for this *Plan Update*:

**Disposal Tonnage (2017 – 2034)**



The following graph depicts the actual and projected contract fee revenue for this *Plan Update*:

**Contract Fees (2017 – 2034)**



**4. Grants**

The District applied for and received grants from Ohio EPA in 2017 and 2018. Grants are competitive and not guaranteed; therefore, grant revenue

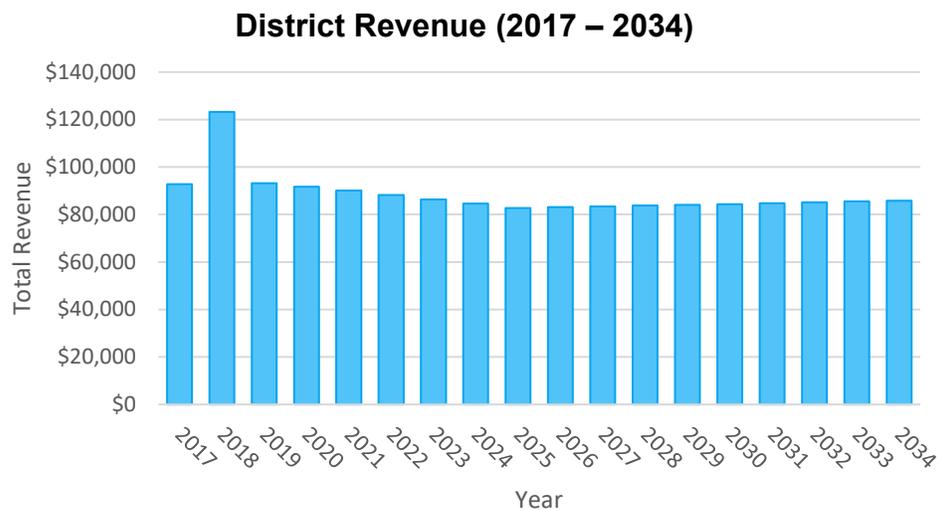
is not projected. However, the District will continue to apply for grants on an as-needed basis.

**5. Summary of District Revenues**

Table VIII-3, “Summary of Revenue Generated and Mechanisms Used,” presents the District’s actual revenues received by all funding mechanisms for 2017 and 2018. Following are descriptions of each funding mechanism used by the District throughout the planning period and the methodology used to project each amount:

Revenue Source	2020 Projected Revenue Total
<b>Contract Fees</b>	<b>\$84,262</b>
Contract fees from solid waste disposed at Ohio landfills and transfer stations that are designated by the District.	
<b>Recycling Revenue</b>	<b>\$500</b>
Reimbursements from the operation of the recycling center.	
<b>Grants (See note below)</b>	<b>\$0</b>
Grant revenue includes funds received for ODNR grants and other grants as applied for by the District.	
<b>Electronics Roundup</b>	<b>\$7,000</b>
Revenue received from electronics collected at the Electronics Round Up. This money is given to schools who are a part of the collection program.	
<b>Donations</b>	<b>\$0</b>
Donations includes funds donated by supporters of the District.	

In total for 2017, the District received \$4,504 in grant revenue. The following graph depicts the District’s total actual and projected revenue from 2017 – 2034 and includes all anticipated revenue sources identified above.



Total revenues are anticipated to increase from \$91,762 in 2020, the first year of the planning period, to \$85,856 in 2034, the final year of the planning period.

## **6. Other Funding Mechanisms**

The District reserves the right to consider other funding mechanisms, including but not limited to, generation fees, rates and charges including user fees, disposal fees and other mechanisms as identified to complement or add to the contract fees resulting from the designation if needed. These alternate fee mechanisms would allow the District to collect fees on all solid waste generated within the District or charge for services.

The District's Board of County Commissioners may choose to use the mechanisms listed above to supplement the District contract fee.

### **B. Cost of Plan Implementation**

Table VIII-4, "Anticipated Loans Secured by the District", indicates the District does not have any outstanding loans. The District reserves the right to assume debt for any purpose that is in the best interest of the District. Any new loans that may be incurred during the planning period will be evaluated to determine if a significant change in the projected expenses as it relates to projected revenues would require an amendment to the budget tables, which would require ratification, by the political subdivision of the District. An amendment to the budget tables would not be required if the changes are not significant and are consistent with this *Plan Update*.

Table VIII-5, "Estimated Cost for Plan Implementation," includes a detailed breakdown of administration, residential/commercial/industrial recycling and collection programs, residential/commercial education and awareness programs, market development support, health department funding and other programs.

Table VIII-5 presents projected budgets for the above listed categories for the entire planning period. The District understands that changes in revenues as well as expenses throughout the planning period may occur that have not been anticipated in these budgets.

The District will evaluate the funding priorities and may adjust the amount of funding that will be allocated to the various initiatives, strategies and programs of the District. If the District concludes that a change in funding is warranted for a District initiative, strategy or program, the District shall evaluate whether the affected initiative, strategy or program constitutes a material change in circumstances that requires an update of the District Plan. If the District concludes that the change in an essential program is not

material, the District may adjust funding. The District Coordinator will explain the proposed changes in expenditures to the Board. Thereafter, the adjusted funding shall be in accordance with the District Plan and shall not constitute a basis to update the District Plan.

If the District concludes that adjusted funding for one or more initiatives, strategies or programs constitutes a material change in circumstances, the changes in funding shall be implemented and the Board shall request the Policy Committee to prepare a revised or updated Plan incorporating the changes in funding.

The District Coordinator will allocate these funds with the approval of the Board of County Commissioners.

**Administration**

Administration costs include the payroll, payroll taxes and benefits, office expenses, equipment, professional services (includes plan preparation, attorney fees and other consulting), travel and other administrative expenses.

For 2020, the first year of the planning period, the following funding levels are projected for each administrative line item and include a brief description of each expense line item:

Program	Program #	2020 Budget	Annual Escalator
<b>Personnel – Salaries</b>	<b>Admin-1</b>	<b>\$19,885</b>	<b>2.5%</b>
Salaries include the cost of employing District staff, health care costs, workers compensation, unemployment, Medicare and PERS retirement for the employees of the District. The actual cost for this line item is over \$120,000. The balance of the costs not represented in the Plan Update budget is covered by the Henry County Landfill/Transfer Station Budget and/or County supplements.			
In the Plan budget demonstration is the portion of all personnel salaries that are dedicated on average for the Solid Waste District budget. Personnel time is allocated over Solid Waste, Transfer Station, and indirect (maintenance, cleaning, etc.) Time is tracked by hour for the commissioners.			
<b>Professional Services - Consultants</b>	<b>Admin-2</b>	<b>\$8,508</b>	<b>Varies</b>
The costs to contract with a qualified consulting firm to assist the District with plan implementation management, annual district reporting, annual surveying of business, future plan development, special studies and other tasks as assigned by the District Director and/or Board. This line item also includes legal assistance. Future expense projections are escalated during plan preparation years.			
<b>Supplies</b>	<b>Admin-3</b>	<b>\$1,030</b>	<b>3%</b>
Miscellaneous supplies costs needed by the District for administrative support.			
<b>Equipment, Repairs</b>	<b>Admin-4</b>	<b>\$9,000</b>	<b>3%</b>

Program	Program #	2020 Budget	Annual Escalator
Equipment and repair costs associated with District equipment. In 2018, the District used \$20,454 in grant money for the purchase of District trailers. In 2019, the District purchased a truck and trailer. For future years, the District is budgeting \$9,000 per year to cover expenses related to this category.			
<b>Advertising and Printing</b>	<b>Admin-5</b>	<b>\$1,000</b>	<b>3%</b>
Materials and advertising to promote District programs, as well as waste reduction, recycling and composting to residents, institutions and businesses.			
<b>Recycling Supplies</b>	<b>Admin-6</b>	<b>\$0</b>	<b>Flat</b>
Funding for any supplies would be through the District's unencumbered fund balance if available. Supplies may include any miscellaneous supplies necessary to carry out the District's Plan such as office supplies, signage, etc.			

For 2020, the first year of the planning period, the District is projecting to spend \$39,423 in administrative expenses.

### Residential/Commercial/Industrial Programs

Residential/commercial/industrial programs include all of the programs and services needed to implement this *Plan Update*. For 2020, the first year of the planning period, the following funding levels are projected for each program and include a brief description of each expense line item:

Program	Program #	2020 Budget	Annual Escalator
<b>Curbside Recycling</b>	<b>HC-01</b>	<b>\$0</b>	<b>Flat</b>
Expenses related to supporting curbside recycling in the District.			
<b>Drop-Off Recycling</b>	<b>HC-02</b>	<b>\$4,000</b>	<b>N/A</b>
Expenses related to supporting the communities' drop-off recycling with technical assistance, miscellaneous supplies, and unanticipated expenses.			
<b>Yard Waste Management</b>	<b>HC-03</b>	<b>\$0</b>	<b>Flat</b>
The cost of grinding operations and maintenance at the Napoleon yard waste facility (owned by the City) has been eliminated as the City no longer brings their solid waste to the landfill since it is closed (see Section V for more details).			
<b>Household Hazardous Waste Management</b>	<b>HC-04</b>	<b>\$0</b>	<b>Flat</b>
The cost of operating the District's county-wide household hazardous waste collection and disposal program. This program is covered under the drop-off at Henry County Landfill under District Facilities HC-14.			
<b>Lead Acid Battery Management</b>	<b>HC-06</b>	<b>\$0</b>	<b>Flat</b>
The cost of this program is included in HC-04.			
<b>Electronics Recycling</b>	<b>HC-07</b>	<b>\$7,000</b>	<b>Flat</b>
The cost of operating the program, money given to participating schools, and contractor costs.			
<b>Scrap Tire Management</b>	<b>HC-08</b>	<b>\$0</b>	<b>Flat</b>
The District does not incur a cost for this program.			
<b>Market Development Support</b>	<b>HC-09</b>	<b>\$0</b>	<b>Flat</b>

Program	Program #	2020 Budget	Annual Escalator
The cost of operating this program is included in Admin-1.			
<b>Education and Awareness</b>	<b>HC-10</b>	<b>\$500</b>	<b>N/A</b>
The cost of operating the general recycling awareness and education program for the District for minor expenses and supplies. The labor portion of this program is covered under the administrative line item Admin-1.			
<b>Industrial Sector Data Collection</b>	<b>HC-11</b>	<b>\$0</b>	<b>Flat</b>
The cost of operating the program and contractor costs.			
<b>Litter Collection</b>	<b>HC-12</b>	<b>\$0</b>	<b>N/A</b>
The cost of supplies for crews and disposal costs. Funding for any materials would be through the District's unencumbered fund balance if available or grant money received. Labor for this program is included in Admin-1.			
<b>Volume Based Rate Support</b>	<b>HC-13</b>	<b>\$0</b>	<b>Flat</b>
Included in Admin-1.			
<b>District Facilities</b>	<b>HC-14</b>	<b>\$0</b>	<b>Flat</b>
Supportive expenses for the District drop-off recycling center at the landfill and the exempt transfer station.			

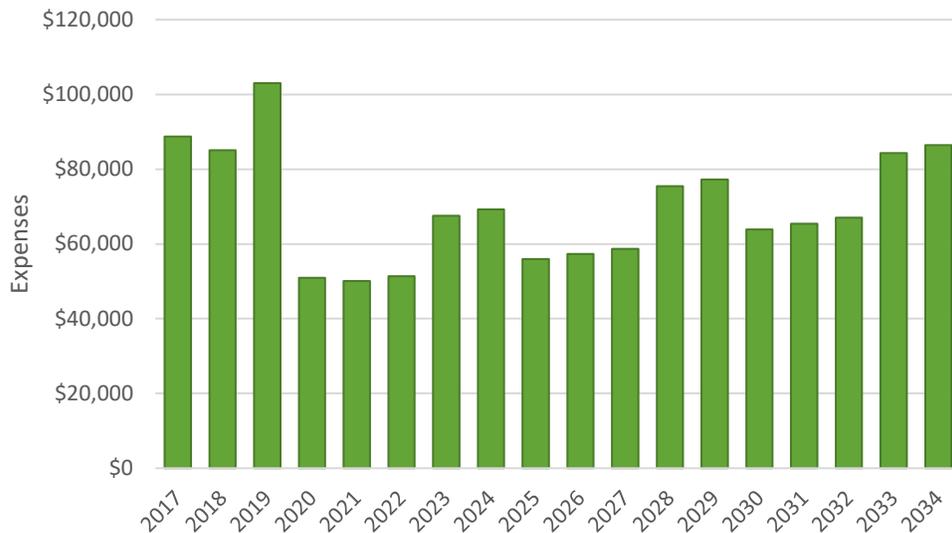
For 2020, the first year of the planning period, the District is projecting to spend \$11,500 in programmatic expenses. Certain programs are funded by the Henry County Landfill which is County-owned, not District-owned. These programs are promoted by the District but are not owned, operated, or funded by the District. These programs include:

- HC-04: Household Hazardous Waste Management
- HC-06: Lead-Acid Battery Management
- HC-08: Scrap Tire Management
- HC-14: District Facilities

### Expense Summary

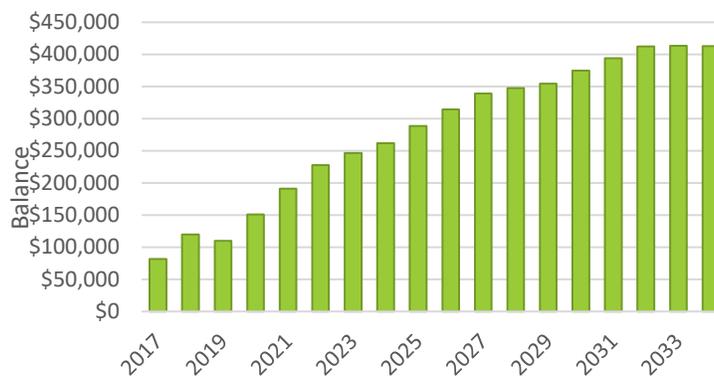
The District is projecting to spend \$50,923 in 2020, the first year of the planning period and \$86,398 in 2034, the final year of the planning period. The following chart summarizes the District's actual and projected expenses throughout the planning period.

**District Expenses (2017 – 2034)**



Based on the projected revenue and expenses detailed in Table VIII-8, the District’s excess fund balance is expected to continue to increase throughout the planning period. The following graph depicts the projected annual fund balance throughout the planning period:

**District Fund Balance (2017 – 2034)**



The District has designed a plan that meets the goals of the state of Ohio and is building a fund balance that can be utilized to develop potential new programming, not identified at this time, and/or to ensure available money for the post closure care of the landfill. The District would like to evaluate the needs of the District during the next planning cycle for available funds for post closure care of the landfill and expansion of the education program such as a position for presentations and outreach.

The District reserves the right at any time in the planning period to take money from the unencumbered fund balanced from the District to ensure the solvency of the post closure fund, which is not included in this plan, but it's related to solid waste management. This is the reason why the District

was conservative on its expense projections for the solid waste district operation, so the district reserves right to transfer money to the post closure care if needed.

In that case, if it doesn't happen, then the District may develop more money towards education and outreach programs.

**C. Funds Allocated from ORC 3734.57(B), ORC 3734.572 and ORC 3734.573**

Table VIII-6, “Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573,” presents the District’s projected costs for the ten allowed uses. The District’s budget falls into three categories: preparation and monitoring of plan implementation, implementation of the approved plan, and solid waste enforcement.

The following graph depicts the District’s annual expense to implement this *Plan Update* based on the expense distribution:



**D. Contingent Funding**

The District and Board do not consider funding to be an issue of concern during this planning period. The following contingent funding procedure includes options for increasing the District’s contract fee if warranted. The District has also reserved the right to create additional funding mechanisms, if needed, to supplement the contract. Before a discussion to increase contract fees or development of new funding mechanisms would begin, the District would first re-evaluate the estimated expenditures in Table VIII-5 to determine the minimum annual budget to sustain the District’s core operations as mandated by Ohio EPA through the Ohio Revised Code. If an increase in the contract fee would be required, the District would initiate that process.

The Board would consider increasing the contract fee or other funding options if the District's revenues and/or expenses were creating excessive budgetary shortfalls that reduced the District's fund balance to below \$75,000 without a projected short-term recovery. This excess fund amount is equal to the approximate annual expenditure amount presented in this plan and is considered vital to the District's economic stability. Therefore, if no short-term recovery was projected to alleviate the above-specified scenario that would reduce the District's ability to fund core programs to implement this *Plan Update*, the District may consider increasing the contract fee by \$0.25 per ton increments as needed throughout the planning period.

In general, the District has confidence that it can adjust to less than catastrophic changes in waste generation/disposal, and thus a loss in projected contract fee revenue. District revenues may vary from year-to-year or season-to-season depending on the waste generation. This may also be evident from the current economic conditions. The Board of County Commissioners has the responsibility for monitoring revenue and expenses, on a frequent basis, and to determine if this contingency plan needs to be implemented.

The District will begin the process to initiate a contract fee increase when District projections indicate that it will be required to spend down the reserve funds projected in this Plan to below \$75,000 and that current contract fees will not be sufficient to fund the required programs in the future.

Once the District has decided an increase in contract fees is needed, the District will set the amount of the contract fee increase and will immediately begin the process to notify all designated facilities of the increase in contract fees. Table VIII-7 does not show a specific amount to be generated by a hypothetical contract fee increase. With that said, for every \$0.25 per ton increase, the District could generate approximately \$8,100 – \$8,700 in new revenue annually.

The District may also consider other funding mechanisms as a part of this contingent funding procedure including but not limited to generation fees, rates and charges or other mechanisms. The District's Board of County Commissioners may choose to use this mechanism as a contingent funding source or as a replacement-funding source to contract fees, whichever is in the best interest of the District. Any proposed generation fee funding mechanism will require the District Policy Committee to approve along with the appropriate ratification process by the communities within the District.

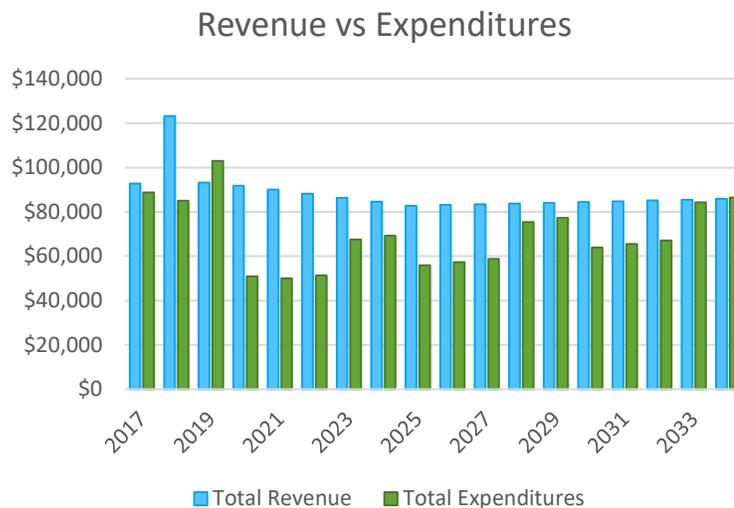
**E. Summary of Costs and Revenues**

Table VIII-8, “Summary of District Revenues and Expenditures,” includes the annual costs for each program and activity for the reference year and each year of the planning period. Total expenditures for the first year of the planning period are projected to be \$50,923 and will rise slowly over the planning period ending at \$86,398 in 2034. The District is projected to begin the planning period with a carryover balance of \$150,774 and will have an ending balance of approximately \$412,928 in 2034.

Each year of the planning period has sufficient funding for each of the programs.

The following graph depicts the actual and projected revenues vs. expenses of the District throughout the planning period:

**District Revenue and Expenses (2017 – 2034)**



The District may move funds between programs and activities as costs and revenues may increase or decrease during the planning period.

**Table VIII-1  
District Disposal Fee Schedule and Revenues Generated**

Year	Fee Schedule (\$/ton)			Tons Disposed in the District			Total District Fee Revenue
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2017	\$0.00	\$0.00	\$0.00				\$0
2018	\$0.00	\$0.00	\$0.00				\$0
2019	\$0.00	\$0.00	\$0.00				\$0
2020	\$0.00	\$0.00	\$0.00				\$0
2021	\$0.00	\$0.00	\$0.00				\$0
2022	\$0.00	\$0.00	\$0.00				\$0
2023	\$0.00	\$0.00	\$0.00				\$0
2024	\$0.00	\$0.00	\$0.00				\$0
2025	\$0.00	\$0.00	\$0.00				\$0
2026	\$0.00	\$0.00	\$0.00				\$0
2027	\$0.00	\$0.00	\$0.00				\$0
2028	\$0.00	\$0.00	\$0.00				\$0
2029	\$0.00	\$0.00	\$0.00				\$0
2030	\$0.00	\$0.00	\$0.00				\$0
2031	\$0.00	\$0.00	\$0.00				\$0
2032	\$0.00	\$0.00	\$0.00				\$0
2033	\$0.00	\$0.00	\$0.00				\$0
2034	\$0.00	\$0.00	\$0.00				\$0

Not applicable as there are no landfills or transfer stations currently in the District

**Table VIII-2  
Generation Fee Schedule and Revenues**

Year	Base Generation Fee	Tons of District Waste to be Disposed	Total Generation Fee Revenue
2017	\$0.00	29,556	\$0
2018	\$0.00	29,042	\$0
2019	\$0.00	28,554	\$0
2020	\$0.00	28,087	\$0
2021	\$0.00	27,522	\$0
2022	\$0.00	26,901	\$0
2023	\$0.00	26,290	\$0
2024	\$0.00	25,687	\$0
2025	\$0.00	25,090	\$0
2026	\$0.00	25,198	\$0
2027	\$0.00	25,307	\$0
2028	\$0.00	25,416	\$0
2029	\$0.00	25,525	\$0
2030	\$0.00	25,633	\$0
2031	\$0.00	25,754	\$0
2032	\$0.00	25,876	\$0
2033	\$0.00	25,997	\$0
2034	\$0.00	26,119	\$0

Source(s) of information: Tons to be disposed (2017-2034) - Tables VII-2 and VII-3

**Table VIII-2a  
Contract Fee Schedule and Revenues**

Year	Base Contract Fee	Tons of District Waste to be Disposed	Total Contract Fee Revenue
2017	\$3.00	29,556	\$82,128
2018	\$3.00	29,042	\$94,805
2019	\$3.00	28,554	\$85,661
2020	\$3.00	28,087	\$84,262
2021	\$3.00	27,522	\$82,565
2022	\$3.00	26,901	\$80,702
2023	\$3.00	26,290	\$78,870
2024	\$3.00	25,687	\$77,062
2025	\$3.00	25,090	\$75,270
2026	\$3.00	25,198	\$75,595
2027	\$3.00	25,307	\$75,921
2028	\$3.00	25,416	\$76,247
2029	\$3.00	25,525	\$76,574
2030	\$3.00	25,633	\$76,900
2031	\$3.00	25,754	\$77,263
2032	\$3.00	25,876	\$77,627
2033	\$3.00	25,997	\$77,991
2034	\$3.00	26,119	\$78,356

Source(s) of information: Tons to be disposed (2017-2034)

**Table VIII-3  
Summary of Revenue Generated and Mechanisms Used**

Year	Type of Revenue Mechanism and Amount Used					Total Revenue Generated
	Contract Fees	Recycling Revenues	Other Revenues (Grants)	Other Revenues (Electronics Roundup)	Other Revenues (Donations)	
2017	\$82,128	\$572	\$4,504	\$5,423	\$100	\$92,728
2018	\$94,805	\$1,234	\$20,454	\$6,770	\$0	\$123,262
2019	\$85,661	\$500	\$0	\$7,000	\$0	\$93,161
2020	\$84,262	\$500	\$0	\$7,000	\$0	\$91,762
2021	\$82,565	\$500	\$0	\$7,000	\$0	\$90,065
2022	\$80,702	\$500	\$0	\$7,000	\$0	\$88,202
2023	\$78,870	\$500	\$0	\$7,000	\$0	\$86,370
2024	\$77,062	\$500	\$0	\$7,000	\$0	\$84,562
2025	\$75,270	\$500	\$0	\$7,000	\$0	\$82,770
2026	\$75,595	\$500	\$0	\$7,000	\$0	\$83,095
2027	\$75,921	\$500	\$0	\$7,000	\$0	\$83,421
2028	\$76,247	\$500	\$0	\$7,000	\$0	\$83,747
2029	\$76,574	\$500	\$0	\$7,000	\$0	\$84,074
2030	\$76,900	\$500	\$0	\$7,000	\$0	\$84,400
2031	\$77,263	\$500	\$0	\$7,000	\$0	\$84,763
2032	\$77,627	\$500	\$0	\$7,000	\$0	\$85,127
2033	\$77,991	\$500	\$0	\$7,000	\$0	\$85,491
2034	\$78,356	\$500	\$0	\$7,000	\$0	\$85,856

**Source(s) of information:**

2017, 2018 - Quarterly Fee Reports

2018-2034 Generation Fees - Calculated from tonnage in Table VIII-2

2018-2034 Recycling Revenue and User Fee - Conservative estimate based on 2017-2018

**Table VIII-4  
Anticipated Loans Secured by the District**

Year	Loans Obtained by the District		Interest Rate	Years Remaining on Loan	Annual Debt Service
	Lending Institution	Remaining Principal			
2017	N/A	\$0.00	N/A	0	\$0.00
2018	N/A	\$0.00	N/A	0	\$0.00
2019	N/A	\$0.00	N/A	0	\$0.00
2020	N/A	\$0.00	N/A	0	\$0.00
2021	N/A	\$0.00	N/A	0	\$0.00
2022	N/A	\$0.00	N/A	0	\$0.00
2023	N/A	\$0.00	N/A	0	\$0.00
2024	N/A	\$0.00	N/A	0	\$0.00
2025	N/A	\$0.00	N/A	0	\$0.00
2026	N/A	\$0.00	N/A	0	\$0.00
2027	N/A	\$0.00	N/A	0	\$0.00
2028	N/A	\$0.00	N/A	0	\$0.00
2029	N/A	\$0.00	N/A	0	\$0.00
2030	N/A	\$0.00	N/A	0	\$0.00
2031	N/A	\$0.00	N/A	0	\$0.00
2032	N/A	\$0.00	N/A	0	\$0.00
2033	N/A	\$0.00	N/A	0	\$0.00
2034	N/A	\$0.00	N/A	0	\$0.00

Table VIII-5  
Estimated Costs for Plan Implementation

Description	Program #	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
<b>District Administration Budget</b>																			
Personnel and Benefits	Admin-1	\$43,050	\$18,865	\$19,400	\$19,885	\$20,382	\$20,882	\$21,414	\$21,949	\$22,498	\$23,061	\$23,637	\$24,228	\$24,834	\$25,454	\$26,091	\$26,743	\$27,412	\$28,097
Professional Services - Consultants	Admin-2	\$18,450	\$8,300	\$8,085	\$8,508	\$8,720	\$8,938	\$24,162	\$24,766	\$10,385	\$10,644	\$10,911	\$26,483	\$27,145	\$12,524	\$12,837	\$13,158	\$29,093	\$29,820
Supplies	Admin-3	\$650	\$1,096	\$1,000	\$1,030	\$1,061	\$1,093	\$1,126	\$1,159	\$1,194	\$1,230	\$1,267	\$1,305	\$1,344	\$1,384	\$1,426	\$1,469	\$1,513	\$1,558
Equipment, Repairs	Admin-4	\$200	\$36,547	\$55,000	\$9,000	\$9,270	\$9,548	\$9,835	\$10,130	\$10,433	\$10,746	\$11,069	\$11,401	\$11,743	\$12,095	\$12,458	\$12,832	\$13,217	\$13,613
Advertising and Printing	Admin-5	\$0	\$0	\$0	\$1,000	\$1,025	\$1,051	\$1,077	\$1,104	\$1,131	\$1,160	\$1,189	\$1,218	\$1,249	\$1,280	\$1,312	\$1,345	\$1,379	\$1,413
Recycling Supplies	Admin-6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>		<b>\$62,350</b>	<b>\$64,694</b>	<b>\$63,700</b>	<b>\$39,423</b>	<b>\$40,466</b>	<b>\$41,521</b>	<b>\$37,613</b>	<b>\$59,108</b>	<b>\$45,642</b>	<b>\$46,841</b>	<b>\$48,072</b>	<b>\$64,635</b>	<b>\$66,315</b>	<b>\$62,738</b>	<b>\$54,124</b>	<b>\$55,546</b>	<b>\$72,613</b>	<b>\$74,502</b>
<b>Residential/Commercial/Industrial Programs</b>																			
Curbside Recycling	HC-01	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drop-Off Recycling	HC-02	\$11,609	\$8,642	\$8,000	\$4,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Yard Waste Management	HC-03	\$4,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Household Hazardous Waste Management	HC-04	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lead Acid Battery Management	HC-05	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Electronics Recycling	HC-06	\$5,314	\$6,793	\$7,000	\$7,000	\$7,140	\$7,283	\$7,428	\$7,577	\$7,729	\$7,883	\$8,041	\$8,202	\$8,366	\$8,533	\$8,704	\$8,878	\$9,055	\$9,236
Scrap Tire Management	HC-07	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Market Development Support	HC-08	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Education and Awareness	HC-09	\$50	\$1,266	\$500	\$500	\$510	\$520	\$531	\$541	\$552	\$563	\$574	\$586	\$598	\$609	\$622	\$634	\$647	\$660
Industrial Sector Data Collection	HC-10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Litter Collection	HC-11	\$5,294	\$3,768	\$3,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Volume Based Rate Support	HC-12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Facilities	HC-13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>		<b>\$26,367</b>	<b>\$20,468</b>	<b>\$19,300</b>	<b>\$11,500</b>	<b>\$9,650</b>	<b>\$9,803</b>	<b>\$9,959</b>	<b>\$10,118</b>	<b>\$10,281</b>	<b>\$10,446</b>	<b>\$10,615</b>	<b>\$10,787</b>	<b>\$10,963</b>	<b>\$11,142</b>	<b>\$11,325</b>	<b>\$11,512</b>	<b>\$11,702</b>	<b>\$11,896</b>
<b>Totals</b>		<b>\$88,717</b>	<b>\$85,062</b>	<b>\$103,000</b>	<b>\$50,923</b>	<b>\$50,108</b>	<b>\$51,324</b>	<b>\$67,572</b>	<b>\$69,226</b>	<b>\$65,922</b>	<b>\$67,287</b>	<b>\$68,687</b>	<b>\$75,423</b>	<b>\$77,278</b>	<b>\$63,881</b>	<b>\$65,449</b>	<b>\$67,058</b>	<b>\$84,316</b>	<b>\$86,398</b>

**Table VIII-6  
Revenues and Allocations in Accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573**

Year	Total Annual Revenue (\$)	Allocations of ORC 3734.57 and ORC 3734.573 Revenue For the Following Purposes:										Total Budget Allocation (\$)	Year-End Balance (\$)	
		1	2	3	4	5	6	7	8	9	10			
Beginning Balance												\$ 77,561.30		
2017	\$92,728	\$18,450	\$70,267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$88,717	\$81,572
2018	\$123,262	\$8,085	\$76,977	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85,062	\$119,773
2019	\$93,161	\$8,300	\$94,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$103,000	\$109,934
2020	\$91,762	\$8,508	\$42,415	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,923	\$150,774
2021	\$90,065	\$8,720	\$41,388	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,108	\$190,730
2022	\$88,202	\$8,938	\$42,386	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,324	\$227,608
2023	\$86,370	\$24,162	\$43,410	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$67,572	\$246,407
2024	\$84,562	\$24,766	\$44,460	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$69,226	\$261,742
2025	\$82,770	\$10,385	\$45,538	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,922	\$288,590
2026	\$83,095	\$10,644	\$46,643	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,287	\$314,398
2027	\$83,421	\$10,911	\$47,776	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,687	\$339,132
2028	\$83,747	\$26,483	\$48,939	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75,423	\$347,457
2029	\$84,074	\$27,145	\$50,133	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,278	\$354,252
2030	\$84,400	\$12,524	\$51,357	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$63,881	\$374,772
2031	\$84,763	\$12,837	\$52,612	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65,449	\$394,086
2032	\$85,127	\$13,158	\$53,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$67,058	\$412,154
2033	\$85,491	\$29,093	\$55,222	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,315	\$413,330
2034	\$85,856	\$29,820	\$56,577	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,398	\$412,788

**Notes:**

- 1 - Preparation and monitoring of plan implementation.
- 2 - Implementation of approved plan.
- 3 - Financial assistance to boards of health for solid waste enforcement.
- 4 - Financial assistance to defray the costs of maintaining roads and other public services related to the location or operation of solid waste facilities.
- 5 - Contracts with boards of health for collecting and analyzing samples from water wells adjacent to solid waste facilities.
- 6 - Out-of-state waste inspection program.
- 7 - Financial assistance to local boards of health to enforce ORC 3734.03 or to local law enforcement agencies having jurisdiction within the District for anti-littering.
- 8 - Financial assistance to local boards of health for employees to participate in Ohio EPA's training and certification program for solid waste and facility inspectors. \$100,000 —
- 9 - Financial assistance to local municipalities and townships to defray the added cost of roads and services related to the operation of solid waste facilities. \$90,000 —  
\$80,000 —
- 10 - Payment of any expenses that are agreed to awarded or ordered to be paid under section 3734.35 of the Revised Code and any administrative expenses. \$70,000 —

**Table VIII-7  
Contingent Funding Sources**

Year	Amount of Contingent Funding for Each Source		Total
	Generation Fee Revenue	Total Tons	
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			

See Narrative in Section VIII

**Note:** The generation fee can be adjusted up or down to meet contingent needs.

Table VIII-8  
Summary of District Revenues and Expenditures

Description	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
	\$77,561	\$81,572	\$119,773	\$109,934	\$150,774	\$190,870	\$227,748	\$246,547	\$261,882	\$288,730	\$314,538	\$339,272	\$347,597	\$354,392	\$374,912	\$394,226	\$412,294	\$413,470	
Beginning Balance																			
Contract Fees	\$ 82,128	\$ 94,865	\$ 85,661	\$ 84,262	\$ 82,585	\$ 80,702	\$ 78,870	\$ 77,062	\$ 75,270	\$ 75,585	\$ 75,921	\$ 76,247	\$ 76,574	\$ 76,900	\$ 77,263	\$ 77,627	\$ 77,991	\$ 78,356	
Recycling Revenues	\$ 572	\$ 1,234	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Other Revenues (Grants)	\$ 4,504	\$ 20,454	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Other Revenues (Electronics Roundup)	\$ 5,423	\$ 6,770	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	
Other Revenues (Donations)	\$ 100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Total Revenue</b>	<b>\$92,728</b>	<b>\$123,262</b>	<b>\$93,161</b>	<b>\$91,762</b>	<b>\$90,065</b>	<b>\$88,202</b>	<b>\$86,370</b>	<b>\$84,562</b>	<b>\$82,770</b>	<b>\$83,095</b>	<b>\$83,421</b>	<b>\$83,747</b>	<b>\$84,074</b>	<b>\$84,400</b>	<b>\$84,763</b>	<b>\$85,127</b>	<b>\$85,491</b>	<b>\$85,856</b>	
<b>District Administration Budget</b>																			
Description	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Personnel and Benefits	\$ 43,050	\$ 18,865	\$ 19,400	\$ 19,885	\$ 20,382	\$ 20,882	\$ 21,414	\$ 21,949	\$ 22,488	\$ 23,081	\$ 23,637	\$ 24,228	\$ 24,834	\$ 25,454	\$ 26,091	\$ 26,743	\$ 27,412	\$ 28,097	
Professional Services - Consultants	\$ 18,450	\$ 8,085	\$ 8,300	\$ 8,508	\$ 8,720	\$ 8,938	\$ 9,162	\$ 9,391	\$ 9,625	\$ 9,864	\$ 10,114	\$ 10,373	\$ 10,641	\$ 10,918	\$ 11,204	\$ 11,499	\$ 11,803	\$ 12,116	
Supplies	\$ 650	\$ 1,095	\$ 1,000	\$ 1,030	\$ 1,061	\$ 1,093	\$ 1,126	\$ 1,159	\$ 1,194	\$ 1,230	\$ 1,267	\$ 1,305	\$ 1,344	\$ 1,384	\$ 1,426	\$ 1,469	\$ 1,513	\$ 1,558	
Equipment, Repairs	\$ 200	\$ 36,547	\$ 55,000	\$ 9,000	\$ 9,270	\$ 9,548	\$ 9,835	\$ 10,130	\$ 10,433	\$ 10,746	\$ 11,069	\$ 11,401	\$ 11,743	\$ 12,095	\$ 12,458	\$ 12,832	\$ 13,217	\$ 13,613	
Advertising and Printing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Recycling Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Subtotal</b>	<b>\$62,350</b>	<b>\$64,594</b>	<b>\$83,700</b>	<b>\$39,423</b>	<b>\$40,458</b>	<b>\$41,521</b>	<b>\$37,613</b>	<b>\$59,108</b>	<b>\$45,842</b>	<b>\$46,841</b>	<b>\$48,072</b>	<b>\$64,635</b>	<b>\$66,315</b>	<b>\$52,738</b>	<b>\$54,124</b>	<b>\$55,546</b>	<b>\$72,613</b>	<b>\$74,502</b>	
<b>Residential/Commercial/Industrial Programs</b>																			
Description	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Curbside Recycling	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Drop-Off Recycling	\$11,609	\$8,642	\$8,000	\$4,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	
Yard Waste Management	\$4,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Household Hazardous Waste Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Lead Acid Battery Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Electronics Recycling	\$5,314	\$6,793	\$7,000	\$7,000	\$7,000	\$7,283	\$7,428	\$7,577	\$7,729	\$7,883	\$8,041	\$8,202	\$8,366	\$8,533	\$8,704	\$8,878	\$9,055	\$9,236	
Scrap Tire Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Market Development Support	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Education and Awareness	\$50	\$1,266	\$500	\$500	\$510	\$520	\$531	\$541	\$552	\$563	\$574	\$586	\$598	\$609	\$622	\$634	\$647	\$660	
Industrial Sector Data Collection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Litter Collection	\$5,284	\$3,768	\$3,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Volume Based Rate Support	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
District Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Subtotal</b>	<b>\$26,367</b>	<b>\$20,468</b>	<b>\$10,300</b>	<b>\$11,500</b>	<b>\$9,510</b>	<b>\$9,803</b>	<b>\$9,959</b>	<b>\$10,118</b>	<b>\$10,281</b>	<b>\$10,446</b>	<b>\$10,615</b>	<b>\$10,787</b>	<b>\$10,963</b>	<b>\$11,142</b>	<b>\$11,325</b>	<b>\$11,512</b>	<b>\$11,702</b>	<b>\$11,896</b>	
<b>Total Expenditures</b>	<b>\$88,717</b>	<b>\$85,062</b>	<b>\$103,000</b>	<b>\$50,923</b>	<b>\$49,968</b>	<b>\$51,324</b>	<b>\$67,572</b>	<b>\$69,226</b>	<b>\$55,922</b>	<b>\$57,287</b>	<b>\$58,687</b>	<b>\$75,423</b>	<b>\$77,278</b>	<b>\$63,881</b>	<b>\$65,449</b>	<b>\$67,058</b>	<b>\$84,315</b>	<b>\$86,388</b>	
Difference	\$4,011	\$38,200	\$-839	\$40,840	\$40,087	\$36,878	\$18,799	\$15,336	\$26,848	\$25,808	\$24,734	\$8,324	\$6,796	\$20,500	\$19,314	\$18,068	\$1,176	\$-542	
Ending Balance	\$81,572	\$119,773	\$109,934	\$150,774	\$190,870	\$227,748	\$246,547	\$261,882	\$288,730	\$314,538	\$339,272	\$347,597	\$354,392	\$374,912	\$394,226	\$412,294	\$413,470	\$413,470	

## **IX. District Rules [ORC Section 3734.53(C)]**

### **A. Existing Rules**

According to Ohio Revised Code Section 3734.53(C), “the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code.” The District reserves the authority for the Board to adopt rules under the provision of Ohio Revised Code.

The District does not have any existing rules. There are no current plans to adopt new rules at the time of the development of this *Plan Update*.

### **B. Proposed Rules**

The District reserves the right to adopt rules under division (G) of section 343.01 and under division (c) of section 3734.53 of the Revised Code. Such rules shall comply with the legislative grant of authority to the District to promulgate such rules and to regulate solid waste services, facilities and operation of the District in accordance with the Plan or amended Plan of the District and/or as authorized by applicable statutes, governmental regulations, local ordinances and rules of the District as now existing or hereafter enacted or amended.

The District may adopt rules in the future that pertain to the following provisions:

- Siting procedures and criteria contained in Section VI.
- Other areas of the plan update that are in the best interest of the District.

Any rule promulgated by the District shall be designed to promote the health, safety and welfare of the residents of the District, effective and efficient administration and operation of the District, to comply with state requirements and/or to implement the Solid Waste Management Plan and amended Plan of the District. The District may conduct all reviews, investigations, evaluations, studies, and hearings as the District deems necessary and appropriate to determine the character, degree, and scope of any proposed rule.

Rule adoption shall follow the procedures listed in Section C before becoming final.

### **Rule Making Authority - ORC 343.01**

The solid waste management plan provides authority to the Board of County Commissioners (Board) to adopt, publish, and enforce all rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

#### **ORC 343.01(G)(1)**

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

- (1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities located within the solid waste management district, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code. However, rules adopted by a board under division (G)(1) of this section may be adopted and enforced with respect to solid waste disposal facilities in the solid waste management district that are not owned by a county or the solid waste management district only if the board submits an application to the director of environmental protection that demonstrates that there is insufficient capacity to dispose of all solid wastes that are generated within the district at the solid waste disposal facilities located within the district and the director approves the application. The demonstration in the application shall be based on projections contained in the plan or amended plan of the district. The director shall establish the form of the application. The approval or disapproval of such an application by the director is an action that is appealable under section 3745.04 of the Revised Code.

In addition, the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:

- (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;

- (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
- (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
- (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
- (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;
- (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years.

Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

**ORC 343.01(G)(2)**

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734. of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary

engineer or, in the case of a joint district, a county sanitary engineer designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

**ORC 343.01(G)(3)**

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district's solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

**ORC 343.01(G)(4)**

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

### **Rule Making Authority - ORC 3734.53**

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

- (1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:
  - (a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;
  - (b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;
  - (c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;
  - (d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;
  - (e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;
  - (f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-

district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

- (2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;
- (3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;
- (4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

**C. Rule Approval Process**

Proposed rules shall be adopted and enforced by the Board of County Commissioners as provided in Section 343.01(G).



**APPENDIX A**

**RESOLUTION FOR DISTRICT FORMATION**



RESOLUTION FOR DISTRICT FORMATION

RESOLUTION

IN THE MATTER OF CREATING  
A "SINGLE COUNTY SOLID WASTE  
DISTRICT" FOR HENRY COUNTY, OHIO

APPROVAL

On this 27th day of February, 1989, Mr. Phillips moved the adoption of the following RESOLUTION:

WHEREAS, Henry County has received official notification that the C-2 Exemption has been approved for Henry County Landfill by Ohio EPA, and

WHEREAS, It is necessary for Henry County Commissioners to pass approval for formation of a "Single County Solid Waste District" for Henry County, Ohio, as per ORC 3734, now therefore be it

RESOLVED, That the Board of Henry County Commissioners do hereby approve of creation of a "SINGLE COUNTY SOLID WASTE DISTRICT" for Henry County, Ohio, as per ORC 3734, effective immediately, since Henry County received their C-2 Exemption. (This will cover the geographical boundary of Henry County, Ohio)

Mr. Kolbe seconded the resolution and the roll being called upon for its adoption, the vote resulted as follows:

Edward A. Hoefel YEA

David L. Kolbe YEA

Walter F. Phillips YEA

Attest:

Reward H. Cisaman  
Clerk



**APPENDIX B**

**PUBLIC NOTICES FOR PUBLIC HEARINGS AND  
PUBLIC COMMENT**



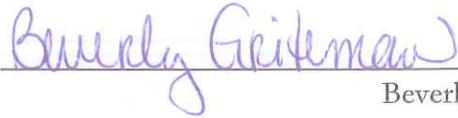
STATE OF OHIO  
COUNTY OF HENRY

Sally Heaston, being first duly sworn, states that she is the General Manager of The Bryan Publishing Company, owner of The Northwest Signal, a daily newspaper, published and of general circulation in the county of Henry aforesaid, and that the annexed notice was published in one issue in said paper, on the 8th day of January, 2020.



Sally Heaston

Subscribed and sworn to before me this  
9th day of January, 2020



Beverly Griteman  
Notary Public,  
State of Ohio  
My Commission Expires  
February 13, 2021

Printer's Fee: \$218.70

Notary Fee: \$2.50

**PUBLIC NOTICE**  
**HENRY COUNTY SOLID WASTE MANAGEMENT DISTRICT**

**Public Comment Period for Draft Solid Waste Management Plan**

The Henry County Solid Waste Management District (District) is establishing a 30-day written comment period (Monday, January 13, 2020, until Tuesday, February 11, 2020) on the draft solid waste management plan (Ohio Revised Code Section 3734.55). The District has prepared a draft solid waste management plan as required by Section 3734.54 of the Ohio Revised Code. The draft plan is available for review on the District's Website at: <http://www.henrycountyohio.com/landfill.htm> or at the following locations:

Henry County Office Complex  
1853 Oakwood Avenue  
Napoleon, OH 43545

Henry County Landfill  
L-622 Twp. Road 11  
(between roads L & M)  
Malinta, OH 43535

Please call 419-256-7343 with any questions about the Plan Update or the opportunity to review a copy.

Written comments should be sent to Mr. Michael Imbrock, District Coordinator, Henry County Solid Waste Management District, P.O. Box 96, Malinta, OH 43535.

The draft solid waste plan includes a solid waste facility inventory, projections and strategies, facilities and programs to be used, an analysis of progress made toward achieving state waste reduction goals, cost to finance the plan, and District rules. This draft plan is an update to a previously approved solid waste plan. This plan includes the following programs: Curbside Recycling, Drop-Off Recycling, Yard Waste Management, Household Hazardous, Waste Management, Lead-Acid Battery Management, Electronics Recycling, Scrap Tire Management, Market Development Support, Education and Awareness, Industrial Sector Data Collection, Litter Collection, Volume-Based Rate Support, and District Facilities.

The District achieves the 25% residential/commercial waste reduction goal and 50% industrial waste reduction goal in this draft plan. In 2017, the District reduced the residential/commercial sector waste stream by 36% and the industrial sector waste stream by 80%.

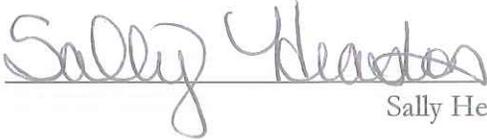
The draft plan includes a demonstration of access to capacity that determines there is more than fifteen years of landfill capacity available to the District. Under this plan, the Board of Commissioners is authorized to designate facilities in accordance with Section 343.014 of the Ohio Revised Code.

Prior to the plan update, the District funded plan programs, District operations, and the post-closure care for the Henry County Landfill through a contract fee of \$4.00 per ton for solid waste generated in-District and sent to facilities designated by the District. \$3.00 of this fee was used for District operations and programs, and \$1.00 of this fee was used for the post-closure care of the Henry County Landfill. The portion of the fee used for the post-closure care of the landfill changed in June 2019 from \$1.00 to \$2.00 per ton for a final contract fee of \$5.00 per ton of solid waste generated in-District and sent to designated facilities.

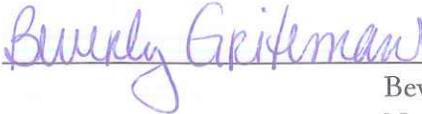
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STATE OF OHIO  
COUNTY OF HENRY

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Sally Heaston

Subscribed and sworn to before me this  
9th day of January, 2020

  
Beverly Griteman  
Notary Public,  
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My Commission Expires  
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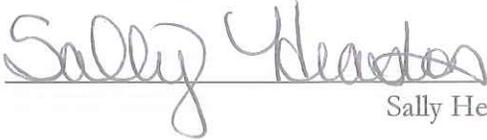
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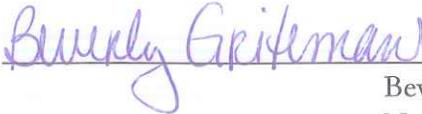
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**APPENDIX C**

**RESOLUTIONS AND CERTIFICATION  
STATEMENTS**



## CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Henry 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 3.0.

Representation	Signature for Yes Vote	Signature for No Vote
County Commissioner		
Largest City		
Health District		
Townships		
Industry		
General Interest of Citizens		
Public		
Total Votes	4	0

Date of Resolution: 4-18-19

Policy Committee Chairperson Signature: 

## Resolution Adopting the Solid Waste Management Plan

### Resolution # 2020-01

A RESOLUTION DECLARING THAT THE AMENDED SOLID WASTE MANAGEMENT PLAN FOR THE HENRY COUNTY SOLID WASTE MANAGEMENT DISTRICT HAS BEEN ADOPTED.

Whereas, the Henry County Solid Waste Management District (District) completed the draft amended Solid Waste Management Plan ("Plan") and submitted it to the Ohio Environmental Protection Agency for review and comment on April 25, 2019 and the Ohio Environmental Protection Agency provided comments in a non-binding advisory opinion on May 31, 2019.

Whereas, the District's Policy Committee has reviewed the non-binding advisory opinion received from the Ohio Environmental Protection Agency and taken these comments into consideration and incorporated changes into the amended Plan as appropriate;

Whereas the District has conducted a 30-day comment period from January 13, 2020 to February 11, 2020 and a public hearing held on February 12, 2020 to provide the public an opportunity to have comment on the Plan;

**NOW, THEREFORE, BE IT RESOLVED** that the District Policy Committee:

1. Adopts the amended Plan as the District Plan in the form submitted for public comment and the public hearing.
2. Certifies that, to the best of its knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the District's Plan, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the fifteen-year period covered by the Plan, are accurate and are in compliance with the requirements of the District Solid Waste Management Plan Format Revision 3.0.
3. Directs that copies of the adopted Plan be delivered to the County Commissioners and to the legislative authority of each municipal corporation and township under the jurisdiction of the District for ratification.

This resolution shall be in effect immediately upon its adoption

Voting for the Resolution:

[Signature]

[Signature]

Jeff Rudge

Ann [Signature]

Jon Smith

Bob [Signature]

Mike Marengel

COMMISSIONERS

Public Member

CITY OF NAPOLEON

Campbell Soup / Industrial Generators

Henry County Health Department

Henry Soil & Water District / Public Rep.

INDUSTRIAL & COMMERCIAL

Total Votes for the resolution: 7

Total Votes against the resolution: 0

February 12, 2020



## **APPENDIX D**

# **IDENTIFICATION OF CONSULTANTS RETAINED FOR PLAN PREPARATION**



## Identification of Consultants for Plan Preparation

Consulting Firm: GT Environmental, Inc.  
2400 Corporate Exchange Drive  
Suite 150  
Columbus, Ohio 43231

Project Manager: James A. Skora  
Materials Management and Sustainability  
Business Unit Manager  
(330) 603-0138





**APPENDIX E**  
**DISTRICT MAP**







**APPENDIX F**

**INDUSTRIAL SURVEY RESULTS**



**Appendix F**  
**Henry County Solid Waste Management District**  
**Amount of Industrial Waste Recycled by Standard Industrial Classification (SIC) Category (Tons) as Reported on Industrial Surveys**

Type of Waste	20	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	Industrial Recyclables Reported from Brokers and Processors Surveyed	Total
Cardboard	377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,568	<b>2,945</b>
Ferrous Metals	1,049	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,724	<b>3,773</b>
Wood	1,735	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<b>1,750</b>
Food	16,672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>16,672</b>
Non-Ferrous Metals	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297	<b>333</b>
Paper	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	<b>148</b>
Plastic	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	463	<b>535</b>
Commingled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	202	<b>202</b>
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yard Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc.	10,973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>10,973</b>
Rubber	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>4</b>
<b>Total</b>	<b>30,991</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>6,344</b>	<b>37,335</b>

**Source(s) of information:**  
 CY 2017 Industrial Survey Responses

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Wood	1,735	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	<b>1,750</b>
Food	16,672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>16,672</b>
Non-Ferrous Metals	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	297	<b>333</b>
Paper	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	<b>148</b>
Plastic	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	463	<b>535</b>
Commingled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	202	<b>202</b>
Glass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yard Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc.	10,973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>10,973</b>
Rubber	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>4</b>
General Solid Waste	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>30,991</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>6,344</b>	<b>37,335</b>

**Source(s) of information:**  
 CY 2017 Industrial Survey Responses



**APPENDIX G**

**SURVEY INSTRUMENTS**



## HENRY COUNTY SOLID WASTE MANAGEMENT DISTRICT 2017 RECYCLING ACTIVITIES SURVEY

Complete and submit this survey no later than March 31, 2018. For assistance completing this form or any questions related to the survey, contact Brandy Gonzalez at 419-256-7343. The survey can be returned by email to [solidwaste@henrycountyohio.com](mailto:solidwaste@henrycountyohio.com) or mail to Henry County Solid Waste PO Box 96, Malinta, OH 43535.

Company Information			
Name:		County:	
Address:		City:	Zip:
Contact Name:		Title:	
Phone:		Email:	

Materials recycled from Henry County	Indicate Units in Pounds, Tons, Cubic Yards or Gallons	Residential or Commercial	Industrial	Facility location where recycled if not in-house
Appliances / "White Goods"	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Household Hazardous Waste	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Used Motor Oil	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> glns			
Electronics	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Scrap Tires	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Dry Cell Batteries	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Lead Acid Batteries	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Food	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Glass	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Ferrous Metals	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Non-Ferrous Metals	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Corrugated Cardboard	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
All Other Paper	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Plastics	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Textiles	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Wood	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Rubber	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Commingled Recyclables	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Yard Waste	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Other	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Other	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			
Other	<input type="checkbox"/> lbs <input type="checkbox"/> tons <input type="checkbox"/> yd <sup>3</sup>			

Please provide any additional information, comments, suggestions, questions etc.