II. Executive Summary

The Henry County Solid 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 fifteen year planning period beginning in 2014 and ending in 2028. This *Plan Update* includes a description of District programs and projections for solid waste generation, recycling and disposal for fifteen years. 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 to the Plan Format.

- Section I – includes basic information about the District and an important section on determining when material changes would require an amendment to the *Plan Update*.

- Section II – is an Executive Summary and includes brief narrative descriptions of each section in the *Plan Update*.

- Section III – includes an inventory of facilities, activities, and haulers used by the District in the reference year (2010).

- Section IV – includes 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 – includes projections of population, waste generation and waste reduction for each year of the planning period.

- Section VI – includes the District's management of facilities and programs to be used by the District throughout the planning period.

- Section VII – presents how the District meets the state waste reduction and recycling goals.

- Section VIII – includes 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 October 31, 2007 and includes a fifteen year planning period. This *Plan Update* begins with the planning year 2014 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 fees as appropriate. The Policy Committee members include:

Policy Committee Member	Representing
Thomas H. Von Deylen	County Commissioner
Jeff Rathge	City of Napoleon Representative
Kent Badenhop	Township Representative
Jon Lindsay	Health Department Representative
Aaron McCoy	Industrial Representative
Norman Norden	Public Member
Marvin Behnfeldt	Public Member

Board of Directors of the Henry County Solid Waste Management District

The Board is responsible for implementing the solid waste plan developed by the Policy Committee.

Commissioner
Thomas H. Von Deylen
Richard C. Myers
Robert E. Hastedt

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….or board of directors…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:

- Facility designations, flow control of waste
- Waste generation
- Capacity availability
- Strategies for waste reduction and/or recycling
- Availability of revenue for plan implementation
- Procedures to be followed for plan implementation
- Timetable for implementation of programs and/or activities

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 (2010) of the *Plan Update.*

Inventories include the following:

- Landfills
- Transfer Facilities
- Incinerators and Waste-to-Energy 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 2010 reference year population of 28,215 was determined by using the Ohio Department of Development's 2010 Population Estimates by County, City, Village, and Township.

2. Waste Generation

Residential and commercial waste generation was 26,550 tons including 15,909 tons landfilled (see Table III-1 and Table III-3) and 10,641 tons recycled, including composting (see Table IV-5). Based on the District population, this is 5.16 pounds per person per day of residential/commercial waste generation (see Table IV-8).

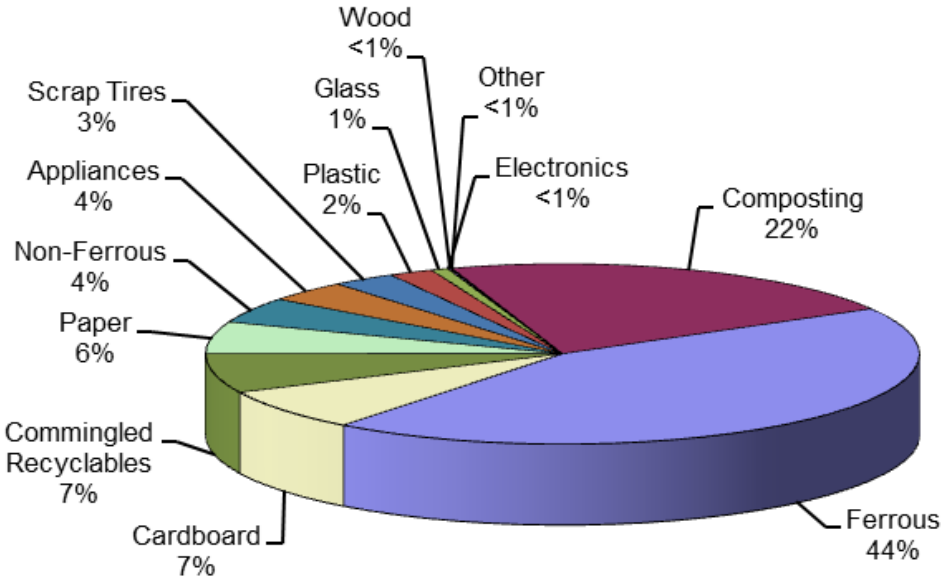
Industrial waste generation was 46,094 tons. This includes 15,177 tons landfilled (see Table III-1 and Table III-3) and 30,917 tons recycled (see Table IV-6). Based on the District population, this is 8.95 pounds per person per day of industrial waste generation (see Table IV-8).

3. Reference Year Waste Reduction

Residential/commercial waste reduction that occurred in the District during the reference year is summarized in Table IV-5. The residential/commercial waste reduction includes residential recycling activities such as curbside and drop-off collection, District sponsored special collection events such as the Household hazardous waste collection and electronics collection, commercial recycling completed by commercial entities operating within the District, and composting.

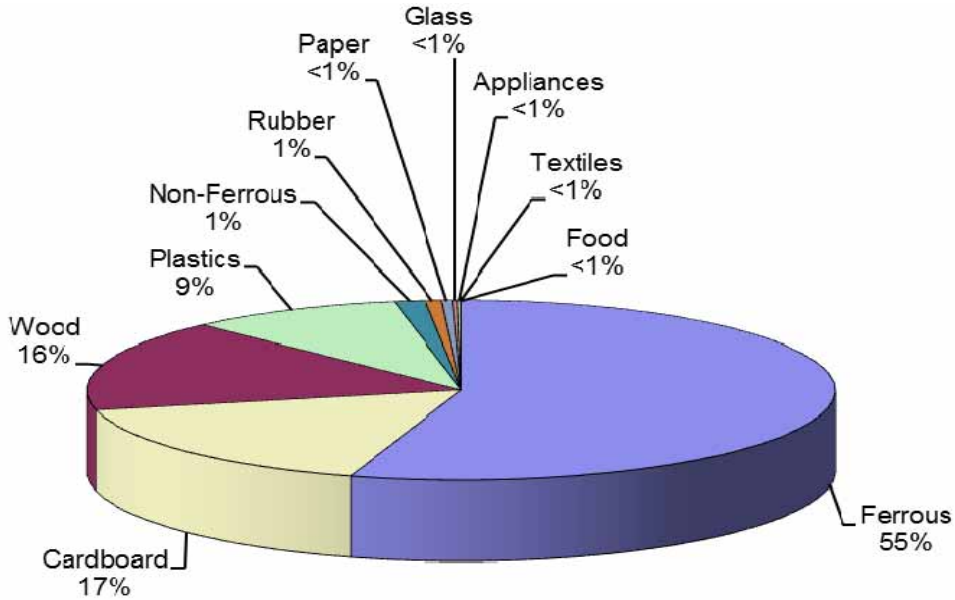
The following graph depicts the residential and commercial waste reduction totals as a percentage for 2010:

Figure II-1 – 2010 Residential/Commercial Waste Reduction



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 2010.

Figure II-2 – 2010 Industrial Waste Reduction



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

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 (2014 – 2028). New programs and changes to existing programs are presented in this section.

1. Population Projections

The District anticipates population will continue to grow over the fifteen-year planning period by 1.26%. The population projection for future years is based on the Ohio Department of Development's Office of Strategic Research July 2010 document *2010 Projected Percent Population Change 2010 to 2030*. The District is projecting a total population of 28,821 by 2028, which is an increase of approximately 600 from the 2010 reference year population.

2. Waste Generation Projections

Residential/Commercial Sector

The total residential/commercial waste generation estimate for 2010 is 26,550 tons (see Table V-2). Residential/commercial waste generation is projected to increase throughout the planning period consistent with the rate of population increase and projected changes in generation rates. Beginning in 2014, the first year of the planning period, residential/commercial waste is projected to be 29,423 tons. This is expected to increase to 31,199 tons in 2028, an 17.5% increase from the 2010 reference year.

Industrial Sector

Industrial waste generation is projected for SIC codes 20, and 22-39. Table V-3 presents the industrial waste generation projections from the reference year through the end of the planning period. Projections were based on the Ohio Department of Job and Family Services' (ODJFS) 2018 industry and occupational projections for the Northwest Economic Development Region which includes Henry County. Due to the economic downturn, the District projects industrial waste generation will decrease from 2010 – 2018 at a rate of -1.69% annually. This is the annual average rate of decrease in manufacturing employment according to ODJFS for the period beginning in 2008 and ending in 2018. The District projects a conservative 1% annual increase in manufacturing employment from 2019 to 2028 to reflect economic recovery. Industrial generation is projected to be 44,426 tons in

2028, which is a 1,668 ton decrease from the reference year in 2010. This is a 3.62% decrease from 2010 – 2028.

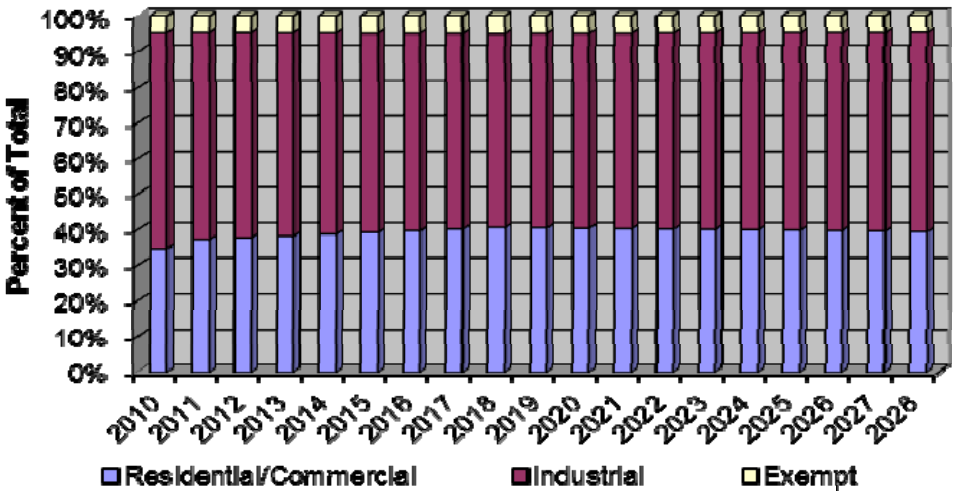
Total Waste Generation

The total waste generation estimate for the 2010 reference year is 76,211 tons (see Table V-4). Detailed estimates are as follows:

- Residential/Commercial Waste 26,550 tons
- Industrial Waste 46,094 tons
- Exempt Waste 3,567 tons
- Generation rate (pounds per person per day) 14.80

Figure II-3 depicts the waste generation per sector as a percentage of the total waste generation.

Figure II-3 – District Total Waste Generation (2010 – 2028)



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 *2009 State Plan.*

Residential/Commercial Waste Reduction/Recycling and Education Strategies

The District projects that the residential/commercial waste reduction strategies will increase recycling approximately 0.12% annually over the planning period. The reasons for the projected increase include the following:

- Population increase of 0.12% annually throughout the planning period (2012 – 2021);
- Continued education and awareness program;
- District support for communities to develop, implement, improve, or re-establish a curbside recycling program

This *Plan Update* continues the existing programs listed in Section IV and includes several new and/or revised programs. Specific changes to existing programs and details of the new programs listed above are provided in Section V.

Industrial/Commercial Waste Reduction/Recycling and Education Strategies

The District projects industrial recycling will decrease at an annual rate of -1.69% from 2010 – 2018. Following 2018, the downward trend is projected to end and industrial generation is projected to increase at a rate of 1% from 2019 – 2028 annually as the economy continues to recover from the economic recession.

This *Plan Update* continues the existing programs listed in Section IV. Specific changes to existing programs and details of the new programs are provided 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 2014 – 2028.

1. District Methods for Management of Solid Waste

The net tons to be managed by the District in 2010 are calculated to be 76,211 tons. The landfill total in Table VI-1 is calculated by subtracting recycling and yard waste composted from the net tons to be managed. The District projects 76,046 tons of solid waste will need to be managed in 2014 and by the end of the planning period in 2028 the District will need to manage 79,192 tons. The projected tons increase is due to the anticipated increase in residential/commercial and exempt waste generation.

2. Demonstration of Access to Capacity

During the 2010 reference year, eight landfills managed 34,653 tons of solid waste generated by District residents, businesses and industries (see Table VI-4A). The landfill located within the District, the Henry County Landfill, managed approximately 18,000 tons in 2010 or more than 50% of the waste that was landfilled.

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, 2028. The eight landfills presented in the following table have permitted capacity to manage 49.5 million cubic yards of solid waste throughout the planning period. All of the landfills, except the Sunny Farms Landfill and the Henry County Landfill have at least 15 years of available capacity. Using the projected landfill air space needs of the District for the planning period (833,565 cubic yards), the Defiance County Sanitary Landfill, listed above, could manage the District's total landfill needs for the entire planning period (2014 – 2028). This landfill has a life expectancy of 87.2 years.

3. 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*.

4. Identification and Designation of Facilities

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 is not designating any additional facilities in this *Plan Update*. The District did conduct a designation process in 2010-2011 which resulted in the 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

** The District designated this facility in 2012.*

5. Siting Strategy for Facilities

The District's siting strategy is detailed both in scope and context. The full version of the process is included in Section VI.

6. Contingencies for Capacity Assurance and District Program Implementation

The District does not anticipate any capacity assurance or program implementation issues during this planning period. Even though the Henry County Landfill is scheduled to close in 2013, there are 4 other landfills used by the District that have ample capacity available throughout the planning period.

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

1. Compliance with Goal #2

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, in the reference year, a 40% waste reduction rate in the residential/commercial sector and a 67% 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.

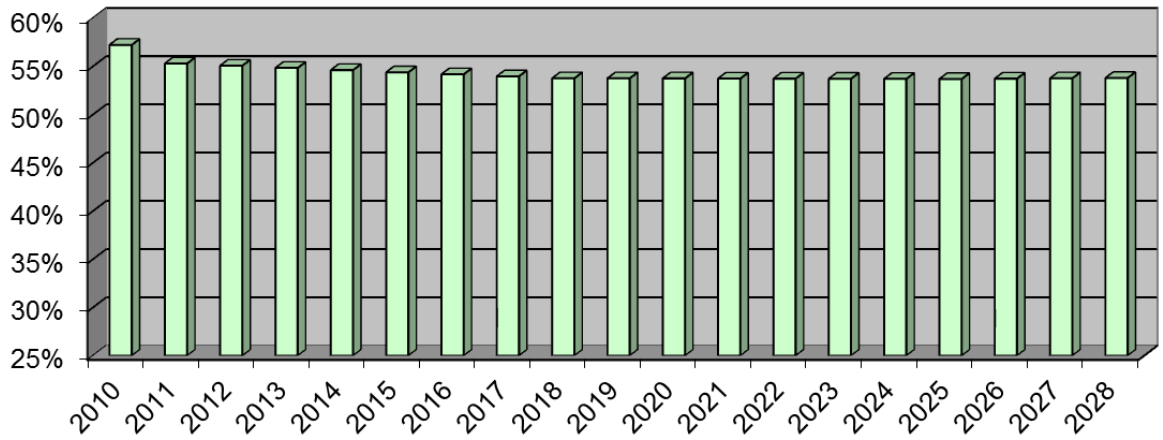
2. Demonstration of Compliance with Goal #2

In the 2010 reference year, approximately 40% of the District's residential/commercial waste stream was reduced (see Table VII-3). This percentage reflects tonnage that was diverted from landfill disposal by recycling and composting. 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.

The industrial sector had a waste reduction rate of approximately 67% in 2010, and will remain steady throughout the planning period (see Table VII-4).

The District's total waste reduction rate for the reference year was 57% (see Table VII-5). Total waste reduction will decrease to 54% by 2028. The projected decrease is primarily based on the reduction of overall waste generation from the industrial sector coupled with projected increases in waste generation from the residential sector. The following graph depicts all sectors waste reduction rate throughout the planning period.

Total District Waste Reduction Percentage (2010 – 2028)



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:

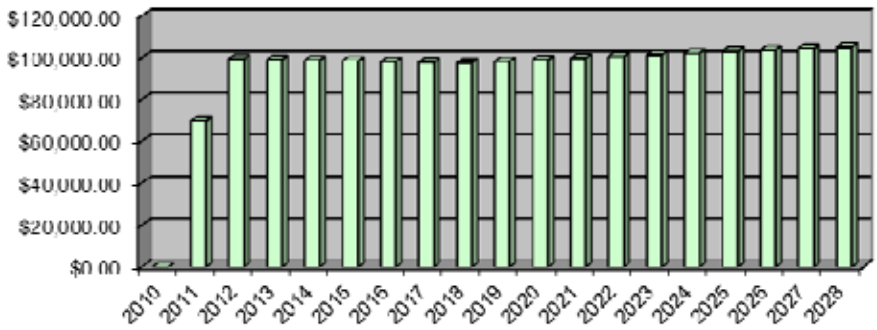
Designated Facilities	
Facility	**Solid Waste Management District**
Henry County Landfill	Henry County Solid Waste Management District
Defiance County	Defiance, Fulton, Paulding, Williams Joint Solid Waste

Designated Facilities	
Landfill	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

The contract fee will financially support two functions. A total of $1.00 per ton of the $4.00 contract fee will go toward post closure care of the Henry County Landfill. The remaining $3.00 per ton of the $4.00 contract fee will be used by the District to implement its solid waste management plan. For the purposes of this Plan Update, the District is only showing $3.00 per ton in contract fee revenue.

The following chart depicts the contract fee revenue projections from 2010-2028:

2010 – 2028 Contract Fees



2. Cost of Plan Implementation

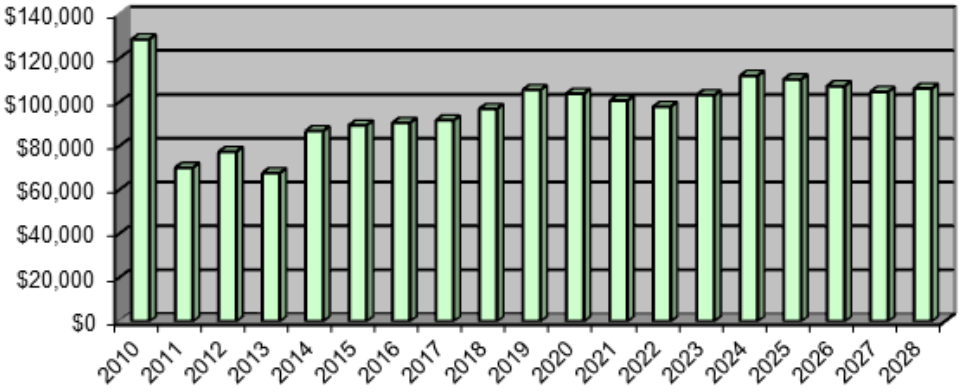
Section VIII includes the strategies, facilities, activities and

programs that the District will use to implement the *Plan Update*. The following assumptions have been made regarding the estimated costs for the *Plan Update.*

- Combined, salary and benefits are projected to increase 2.0% annually;
- Supply expenditures, drop-off recycling, yard waste management, household hazardous waste management, electronics recycling, industrial data collection, litter collection, and support for District facilities are projected to increase 0.09% annually;
- Some programmatic expenses are not projected to increase annually as noted.

The District is projecting to spend $86,888 in 2014, the first year of the planning period and $106,240 in 2028, the final year of the planning period. The following chart summarizes the District's actual and projected expenses throughout the planning period.

2010 – 2028 District Expenses



3. Contingent Funding

The Policy Committee and District Board of Directors 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 Directors may choose to use this mechanism as a contingent funding source or as a replacement-

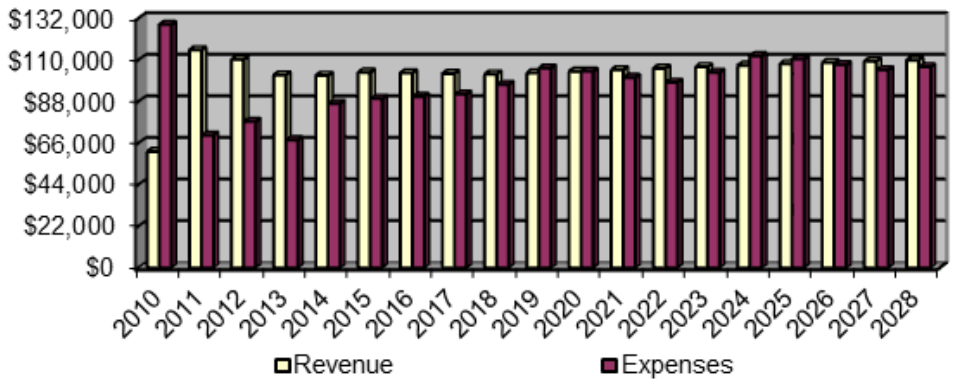
funding source to contract fees, whichever is in the best interest of the District. Any proposed generation fee funding mechanism will require the District Policy Committee approval and ratification by the communities within the District.

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. Total expenditures for the first year of the planning period are projected to be $86,888 and will increase to $106,240 in 2028.

The following graph presents the District's actual and projected revenues and expenses throughout the planning period.

Figure II-6 – District Revenue and Expenses (2010 – 2028)



The District is projected to begin the planning period with a carryover balance of $115,090 and will have an ending balance of approximately $186,329 in 2028. Each year of the planning period has ample funding for each of the programs.

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 Waste Management District		
District ID #	Reference Year:	Planning Period:
(for OEPA use only)	2010	2014 - 2028
Plan Status (underline one)		Reason for Plan Submittal:
D RD **DR** Approved (date) / / OI (date) / / DA		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: Mr. Michael Imbrock, District Coordinator		
Street: P.O. Box 96		
City: Malinta	State: Ohio	Zip: 43535
Phone: (419) 256-7343	Fax: (419) 256-7343	

Table ES-3
Plan Data Summary

Plan Data		Reference Year 2010	2018 (year 5)	2023 (year 10)	2028 (year 15)
Population		**28,215**	**28,609**	**28,791**	**28,821**
Generation	**Industrial**	46,094	40,219	42,270	44,426
	Res/Comm	26,550	29,966	30,657	31,199
	Exempt	3,567	3,567	3,567	3,567
Total Generation (tons)		**76,211**	**73,751**	**76,494**	**79,192**
Waste Reduction	**Industrial Source**	0	0	0	0
	Industrial Recycling	30,917	26,976	28,352	29,798
	Res/Comm Source	0	0	0	0
	Res/Comm Recycling	8,332	8,412	8,463	8,513
	Yard Waste Composting	2,309	2,331	2,345	2,359
	MSW Composting	0	0	0	0
	Incineration	0	0	0	0
Total Waste Reduction (tons)		**41,558**	**37,719**	**39,160**	**40,671**
Disposal	**In-District Landfills**	17,995	0	0	0
	Out of District Landfills	16,658	36,032	37,335	38,522
Total Landfill (tons)		**34,653**	**36,032**	**37,335**	**38,522**
Waste Reduction Rate	**Industrial**	**67%**	**67%**	**67%**	**67%**
	Res/Comm	**40%**	**36%**	**35%**	**35%**

Table ES-4
Existing Disposal Facilities

District Name: Henry County Waste Management District				
Name	**County**	**Reference Year 2010**	**Total Tons Managed in 2010**	**Years Remaining**
In-District Facilities				
Henry County Landfill	Henry	17,995	19,251	1.95
Out-of-District Facilities				
Hancock County Sanitary Landfill	Hancock	364	136,719	40.1
Evergreen Recycling & Disposal	Wood	6,127	277,714	34
Wood County Landfill	Wood	935	34,326	17.8
Defiance County Sanitary Landfill	Defiance	6,617	86,505	87.15
Williams County Landfill	Williams	2,467	170,119	***
Sunny Farms Landfill	Seneca	77	1,025,423	2.85
Out-of-State				
Pollution Control	Lake (IN)	71	N/A	18+
Total (Average Years)		**34,653**	**1,750,058**	**29**

*** Denotes life exceeding 100 years due to limited waste receipts in 2009. Figure not included in Average Years Remaining.

Source(s) of information:
Facilities, 2010 Tonnage, and Years Remaining - Table VI-4A
Total Tons Managed in 2010 - OEPA 2010 Facility Data Report