

BERKS COUNTY

**MUNICIPAL SOLID WASTE
MANAGEMENT PLAN REVISION**

BERKS COUNTY, PENNSYLVANIA



FINAL

July 2024

**BERKS COUNTY
MUNICIPAL SOLID WASTE MANAGEMENT PLAN
REVISION
BERKS COUNTY, PENNSYLVANIA**

EXECUTIVE SUMMARY

County Municipal Solid Waste Management Plans are required to be revised every 10 years in accordance with the Pennsylvania Department of Environmental Protection (PADEP) Municipal Solid Waste Management Regulations. The Plan must include descriptions of the origin, content, and weight of municipal solid waste currently generated in the planning area as well as projections for municipal solid waste generation during the course of the planning period. The Plan must include an evaluation of available disposal capacity for municipal solid wastes generated in Berks County and must demonstrate the availability of disposal capacity for waste generated from the planning area during the planning period. The Plan must include an evaluation of the county’s recycling programs, including efforts put forth to achieve the statewide goal of 35% recycling by the county.

Waste Generation and Disposal Practices

The Berks County Municipal Solid Waste Management Plan Revision (Plan Revision) contains descriptions and estimates of municipal solid waste generation. A municipal survey may be conducted at a later time to gain input on the concerns and needs of the municipalities with respect to waste collection and recycling.

According to waste disposal reports filed with the PADEP from 2014 to 2023, the majority of municipal solid waste from Berks County was disposed of at six landfills. Four of these landfills are operational in Berks County (New Morgan Landfill Co. – Conestoga Landfill, Western Berks Landfill & Recycling Center, F.R.&S. – Pioneer Crossing Landfill and the Delaware County Solid Waste Authority – Rolling Hills Landfill), one is operational in Schuylkill County - the Commonwealth Environmental Systems Landfill and one in Chester County - Lanchester Landfill. This information is consistent with our 2014 Municipal Solid Waste Management Plan Revision.

The meaning of “municipal waste” in this document includes only that portion named “municipal”, as shown on the PADEP Waste Destination Reports. The meaning of “municipal solid waste” and “municipal/special handling waste” in this document includes municipal, construction and demolition, regulated medical, sewage, ash and asbestos, as shown on the PADEP Waste Destination Reports. The meaning of “total solid waste” in this document includes all portions of municipal, special handling and residual wastes, as shown on the PADEP Waste Destination Reports.

MUNICIPAL SOLID WASTE STATISTICS AND PROJECTIONS

Year	Population	Municipal Waste Disposal (tons) (a)	Municipal Waste Generation (tons) (b)	Recycled Tons	Recycling Rate	Municipal and Special Handling Wastes (tons) (c)	
2014	412,925	272,502	456,177	183,675	40%	364,703	
2015	413,297	286,747	493,905	207,157	42%	378,871	
2016	413,669	301,316	515,049	213,733	41%	407,791	
2017	414,041	302,216	511,589	209,373	41%	421,444	
2018	414,414	322,704	533,963	211,259	40%	407,803	
2019	414,787	310,045	505,103	195,058	39%	401,384	
2020	428,849	311,663	514,295	202,632	39%	407,416	
2021	430,865	291,743	517,452	225,709	44%	370,170	
2022	430,449	280,904	533,528	252,624	47%	335,839	
2023	432,558	321,196	573,820	252,624	44%	369,285	
Planning Period "Projections"	2024	434,678	310,239	565,239	255,000	45%	389,127
	2025	436,851	311,790	567,290	255,500	45%	391,072
	2026	439,079	313,380	570,380	257,000	45%	393,067
	2027	441,318	314,978	572,978	258,000	45%	395,072
	2028	443,569	316,585	576,085	259,500	45%	397,086
	2029	445,831	318,199	579,199	261,000	45%	399,112
	2030	448,105	319,822	581,822	262,000	45%	401,147
	2031	450,211	321,325	584,825	263,500	45%	403,032
	2032	452,327	322,836	587,336	264,500	45%	404,927
	2033	454,453	324,353	591,353	267,000	45%	406,830

- a - PADEP Waste Destination Report values for municipal waste component (excludes all other waste components such as sewage sludge, construction, etc.) for Berks County. Years 2024 through 2033 are based on projections.
- b - Municipal Waste Generation: Equals sum of Municipal Waste Disposal and Reported Recycling.
- c - Municipal and Special Handling Wastes includes other components such as sewage sludge, construction, etc., **excluding residual waste.**

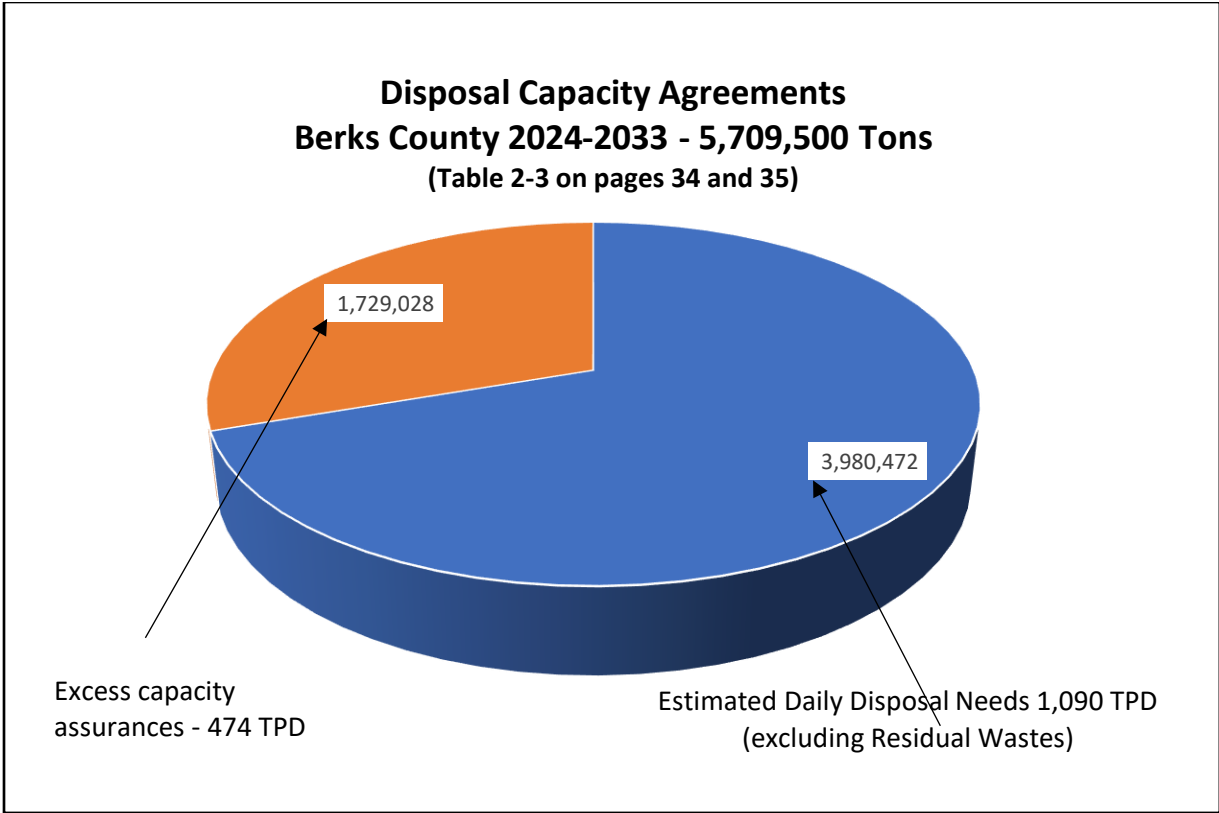
Waste Projections and Disposal Capacity

The projected total capacity required for this ten-year planning period is approximately 3.98 million tons. This figure includes municipal, construction and demolition (C&D), sewage sludge, regulated medical and chemotherapeutic waste (RMW), ash residue and asbestos waste types, but does not include materials that have been removed from the waste stream as a result of recycling and waste reduction or residual wastes. It is estimated that residual wastes to be disposed of over the ten-year planning period will total 2.19 million tons. During the past five (5) years residual waste was primarily disposed of at the following five (5) disposal facilities: Western Berks, Pioneer Crossing, Conestoga, Fairless and Rolling Hills. These five (5) disposal facilities combined, have permitted ADV totaling 27,733 TPD. The Fairless landfill has a permitted ADV of 18,333 TPD and accepted 10% of the total amount of residual waste generated in Berks County, over the past five years average. In describing the content of waste, PADEP regulations require that the plan shall specifically address sewage sludge, infectious and chemotherapeutic waste, ash from resource recovery facilities, construction/demolition waste other than waste from demolition of an industrial site and other municipal solid waste. Therefore, Berks County will use 3.98 million tons as its estimate of municipal solid waste in this Plan revision. The County of Berks has entered into fourteen (14) Disposal Capacity Agreements with waste disposal facilities guaranteeing more than 5.7 million tons of capacity, during this planning period, an excess of 1.7 million tons.

FACILITIES PROVIDING CAPACITY ASSURANCE

Owner	Facility Name (Location)	Type of Facility
New Morgan Landfill Company, Inc. d/b/a Conestoga Landfill	Conestoga Landfill 420 Quarry Road Morgantown, Pa. 19543	MSW landfill
Delaware County Solid Waste Authority	Rolling Hills Landfill 583 Longview Road Boyertown, Pa. 19512	MSW landfill
Waste Management of Pennsylvania, Inc.	Western Berks Landfill 455 Poplar Neck Road Birdsboro, Pa. 19508	MSW landfill
Waste Management of Pennsylvania, Inc.	Alliance Sanitary Landfill 398 S. Keyser Ave. Taylor, Pa. 18517	MSW landfill
Waste Management of Pennsylvania, Inc.	Cumberland County Landfill 135 Vaughn Road Shippensburg, Pa. 17257	MSW landfill
Waste Management of Pennsylvania, Inc.	Fairless Landfill 1000 New Ford Mill Road Morrisville, Pa. 19067	MSW landfill

Owner	Facility Name (Location)	Type of Facility
Waste Management of Pennsylvania, Inc.	Lancaster Landfill 2487 Cloverleaf Road Elizabethtown, Pa. 17022	Construction & Demolition Debris landfill
Waste Management of Pennsylvania, Inc.	Grand Central Sanitary Landfill 1963 Pen Argyl Road Pen Argyl, Pa. 18072	MSW landfill
Lancaster County Solid Waste Management Authority	LCSWMA Resource Facility 1911 River Road Bainbridge, Pa. 17502	Resource Recovery Facility
Lancaster County Solid Waste Management Authority	Susquehanna Resource Management Complex (SRMC)	Resource Recovery Facility
Keystone Landfill, Inc. and L&D Management, Inc.	Commonwealth Environmental Systems, L.P. 99 Commonwealth Road Hegins, Pa. 17938	MSW landfill
York County Solid Waste Authority	York County Resource Recovery Center 2700 Blackbridge Road York, Pa. 17406	Resource Recovery Facility
Waste Connections	Bethlehem Landfill 2335 Applebutter Road Bethlehem, Pa. 18015	MSW landfill
Casella Waste Systems, Inc.	McKean County Landfill 19 Ness Lane Kane, Pa. 16735	MSW landfill



Recycling Programs and Goals

Projections calculated for this Plan revision take recycling into consideration, as required by PADEP. For the purpose of this Plan revision, we are analyzing recyclable materials that have been reported when calculating the County Recycling Rate, using the actual total municipal waste disposal rate, reported to PADEP. Prior to 2006, recycling in Berks County had fallen short of PADEP’s recycling goal of 35%. The County’s recycling rate was between 16% and 21% from 2000 to 2005. In 2006, recycling reporting greatly improved which allowed Berks County to meet the 35% goal, simply by developing a better reporting system and improving communications with our municipalities, haulers and MRFs. Twenty-two (22) municipalities in Berks County are currently mandated to recycle and have programs in place. Fifteen (15) of those municipalities are currently mandated to recycle under Act 101 and have curbside programs in place. An additional seven (7) are mandated under Act 140 are also in compliance, with regulations including ordinances and education in place. Fifty-one (51) municipalities in Berks County are not yet mandated to implement recycling programs. Of these 51 non-mandated municipalities, seventeen (17) have voluntary curbside programs in place and seven (7) have drop-off programs, which includes those operated by landfills. In Berks County, 63% of all municipalities, mandated or not, have some form of recycling program in place.

For the calendar year 2022, Berks County reported recovery of recyclables at a rate of approximately 47%. With the creation of new recycling programs, the expansion of existing programs, and increased/better reporting requirements, Berks County has surpassed the PADEP goal of 35% recycling. In addition, the Berks County Solid Waste Authority (Authority) has

developed free programs for the collection of household hazardous waste, pharmaceuticals, electronics, tires and paper shredding for County residents. The Authority conducts one-day collection events in the spring and fall of each year for the collection of hazardous waste and paper shredding. A full-time center is open three days a week for the collection of electronics and tires. The Berks County District Attorney operates a medication drop-box program at twenty-nine (29) local police stations, for the proper collection and disposal of unwanted medications. The Authority also operates a recycling center for corrugated cardboard, mixed paper, aluminum and tin cans and plastic bottles and containers, for all residents of Berks County.

County, Authority and Municipality Obligations

This Plan revision calls for the Authority and/or County to play an expanded role in developing new municipal recycling programs during this 10-year planning period. Each mandated municipality will be asked to review their program to reach the recycling targets on an annual basis. If additional assistance is requested by the municipality, the Authority and/or the County can offer assistance with their bidding documents, help with grant writing, or encouraging municipalities to work together and share services, all of which can help to reduce overall costs of their programs. Different approaches may need to be developed for each municipality. These approaches will be consistent with their unique needs, geographic constraints and assets. The County and the Authority have seen that recycling rates can easily increase through cooperation between the County, the municipalities and the private sector, as well as through better reporting of recyclables by haulers and others responsible for collection and/or processing of recyclables. Yard waste composting has increased significantly throughout the County with eighteen new drop-off locations being permitted over the past decade.

Monitoring Disposal Capacity

As area landfills reach final permitted capacity and begin closure operations, modifications to the Plan may be considered to add additional disposal capacity or make other modification to the Plan. The Authority has been charged with monitoring landfills that provide disposal capacity to the County. As part of this monitoring responsibility, the Authority and/or the County can perform technology assessments and feasibility studies which could include the feasibility of a County controlled landfill, transfer station, or processing facility. The County and the Authority will continue to look out for the best interests of County residents, businesses and industries in regard to environmentally sound, regulatory compliant and cost-effective waste management methods.

Conclusion

The County has executed fourteen (14) Disposal Capacity Agreements, guaranteeing excess capacity for municipal solid waste generated in Berks County, throughout this planning period. The County has exceeded the 35% recycling diversion rate by continuing to meet with our municipalities to determine needs and assistance needed to expand recycling programs, improved reporting requirements, by working with private recyclers to expand recycling markets and acceptable materials and expanding Authority and/or County recycling programs to increase materials and expand types of services offered.

**BERKS COUNTY
MUNICIPAL SOLID WASTE MANAGEMENT PLAN REVISION
BERKS COUNTY, PENNSYLVANIA**

Table of Contents

<u>CHAPTER 1 - DESCRIPTION OF THE WASTE</u>	<u>PAGE</u>
1.1: Introduction	11
1.2: Origin of Wastes	11
1.2.1: Residual Waste Generation	16
1.2.2: Commercial/Industrial and Institutional Waste Generation	18
1.2.3 Community Activities	19
1.2.4 Special Handling Wastes	19
1.2.5 Residual Waste	27
1.3 Weight and content of waste	28
1.3.1 Disposal of Municipal Solid Waste	29
<u>CHAPTER 2 – DESCRIPTION OF FACILITIES</u>	
2.1: Landfills	33
2.2: Landfills Located in Berks County	36
2.2.1: Delaware County Solid Waste Authority – Rolling Hills Landfill	36
2.2.2: Conestoga Landfill	36
2.2.3: Western Berks Landfill	37
2.2.4: Pioneer Crossing Landfill	38
2.2.5: Other Landfills	38
2.3: Closed Disposal Facilities	38
2.4: Other Facilities	38
2.4.1: Waste-To-Energy Facilities	38
2.4.2: Transfer Stations	39
<u>CHAPTER 3 - ESTIMATED FUTURE CAPACITY</u>	
3.1: Estimated Future Capacity at Facilities	40
3.2: Estimated Future Waste Generation	40
3.2.1: Residential Waste Projections	44
3.2.2: Commercial/Industrial Waste Projections	44
3.2.3: Institutional Waste Projections	45
3.2.4: Other Waste Types	45
3.3: Estimated Total Capacity Required	48
3.3.1: Variables Affecting Total Capacity Requirements	48
3.4: Need for Capacity Assurance	49

CHAPTER 4- DESCRIPTION OF RECYCLING PROGRAMS **PAGE**

4.1: Introduction	53
4.2: Recyclables for Possible Consideration	54
4.2.1: Standard Materials	54
4.2.2: Yard Waste	54
4.2.3: Food Waste Composting	57
4.3: Potential Benefits of Recycling	57
4.4: Existing Recycling Activities	59
4.4.1: Mandated Municipalities	59
4.4.2: Non-Mandated Municipalities	66
4.4.3: Curbside Collection	66
4.4.4: Municipal Drop-Off Centers	68
4.4.5: Recycling Facilities Provided by Landfills or Other Private Entities	68
4.4.6: Private Composting Facilities	72
4.4.7: Special Waste Collections	74
4.4.8: Commercial and Institutional Establishments Recycling	75
4.4.9: Summary of Existing Recycling Activities	75
4.5: Integration of Recycling with Waste Management Systems	76
4.6: Increased Recycling	76
4.6.1: Options for Standard Materials	77
4.6.2: Options for Yard Waste	78
4.7: Options for Processing, Storage and Sale of Recyclables	80
4.8: Options for Inter-municipal Cooperation	80
4.9: Schedule for Implementation of Recycling Programs	81
4.10: Estimated Costs of a Recycling Program	81
4.11: Consideration of Existing Recycling Businesses	82
4.12: Recycling Education Efforts	82
4.13: Waste Reduction Strategies	82

CHAPTER 5 - SELECTION AND JUSTIFICATION OF MUNICIPAL SOLID WASTE MANAGEMENT PROGRAM

5.1: Introduction	84
5.2: Financing of Selected Programs	84
5.3: Recycling and Waste Reduction Programs	84
5.4: Processing and Disposal Plan	84

CHAPTER 6 - LOCATION OF FACILITIES AND PROGRAMS

6.1: Municipal Solid Waste	85
6.2: Authority operated Recycling Programs	87

CHAPTER 7 - IMPLEMENTING ENTITY IDENTIFICATION

7.1: Berks County	91
7.2: Berks County Solid Waste Authority	91
7.3: Berks County Planning Commission	91

	<u>PAGE</u>
CHAPTER 8 - <u>PUBLIC FUNCTION</u>	92
CHAPTER 9 - <u>IMPLEMENTING DOCUMENTS</u>	92
CHAPTER 10 - <u>ORDERLY EXTENSION</u>	92
CHAPTER 11 - <u>METHODS OF DISPOSAL OTHER THAN BY CONTRACTS</u>	92
CHAPTER 12 - <u>NON-INTERFERENCE</u>	92
CHAPTER 13 - <u>PUBLIC PARTICIPATION</u>	93
CHAPTER 14 - <u>OTHER INFORMATION</u>	94

<u>TABLES:</u>	<u>PAGE</u>
TABLE 1: Municipal Solid Waste Component	2
TABLE 1-1: Berks County Municipalities	13
TABLE 1-2: Total Waste Stream	14
TABLE 1-3: Berks County Population Trends	16
TABLE 1-4: Berks County Recycling Rate	17
TABLE 2-1: Disposal Facilities Receiving Wastes Originating in Berks County Five-Year Average of Tons of Waste Disposed (2019 - 2023)	31
TABLE 2-2: Disposal Facilities Most Utilized for Waste Generated in Berks County, 2019 - 2023	32
TABLE 2-3: Status of Disposal Facilities Providing Capacity Assurances	34-35
TABLE 3-1: Historical and Current Waste Generation Rates	41
TABLE 3-2: Actual Waste Disposal Rates	42
TABLE 3-3: Estimated Municipal Solid Waste Stream Generation and Disposal Quantities over 10-Year Planning Period (2024 - 2033)	43
TABLE 3-4: Municipal Solid Waste Stream Origin and Projected Disposal Quantities over 10-Year Planning Period (2024 -- 2033)	47
TABLE 3-5: Facilities Providing Capacity Assurance	34 and 50
TABLE 3-6: Breakdown of Estimated Municipal Solid Waste Stream Generation and Disposal Quantities over the 10-year Planning Period (2024 - 2033)	51
TABLE 4-1: Curbside and Drop-Off Recycling Programs Implemented in Berks County PADEP Permitted - Municipal Yard Waste Sites in Berks County	60-65
APPENDIX A: Disposal Capacity Agreements and County Resolution authorizing execution of Agreements	
APPENDIX B: List of 2023 Community Activities	
APPENDIX C: List of Waste Water Treatment Plants in Berks County	
APPENDIX D: List of Licensed Septic Haulers servicing Berks County	
APPENDIX E: List of possible infectious waste generators in Berks County	
APPENDIX F: Sample Inter-municipal Agreement	
APPENDIX G: Municipal Ordinances – Berks County Municipalities	
APPENDIX H: WARM / Re-TRAC Report	
APPENDIX I: Solid Waste Advisory Committee Meeting Minutes	
APPENDIX J: Proof of advertisement – Disposal Capacity Assurance, Meetings, Municipal and PADEP Notification	
APPENDIX K: County Ordinance 5-92 and Articles of Incorporation of the Authority	
APPENDIX L: Public comments and responses to Plan Revision	

CHAPTER 1 – DESCRIPTION OF THE WASTE

Waste Generation and Composition

1.1 Introduction

County Municipal Solid Waste Management Plans are required to describe the origin, content, and weight of municipal solid waste currently generated in the planning area, as well as, projections for waste generation during the course of the planning period. The planning area for this Plan revision is Berks County, which is located in southeastern Pennsylvania and is approximately 864 square miles in size. The County's location is illustrated in Figure 1-1. Currently, the County is composed of 73 municipalities: one city (Reading), 44 townships, and 28 boroughs. Table 1-1 lists the 2020 Census Bureau's population for those municipalities.

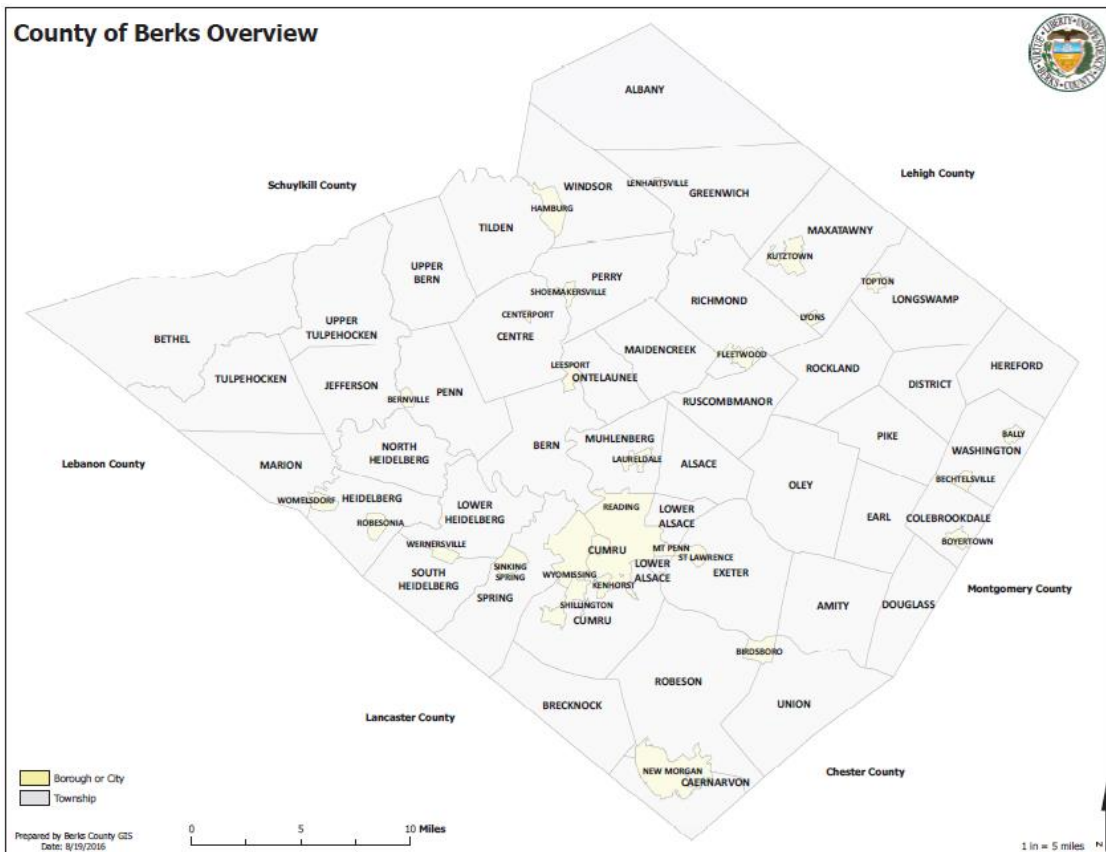
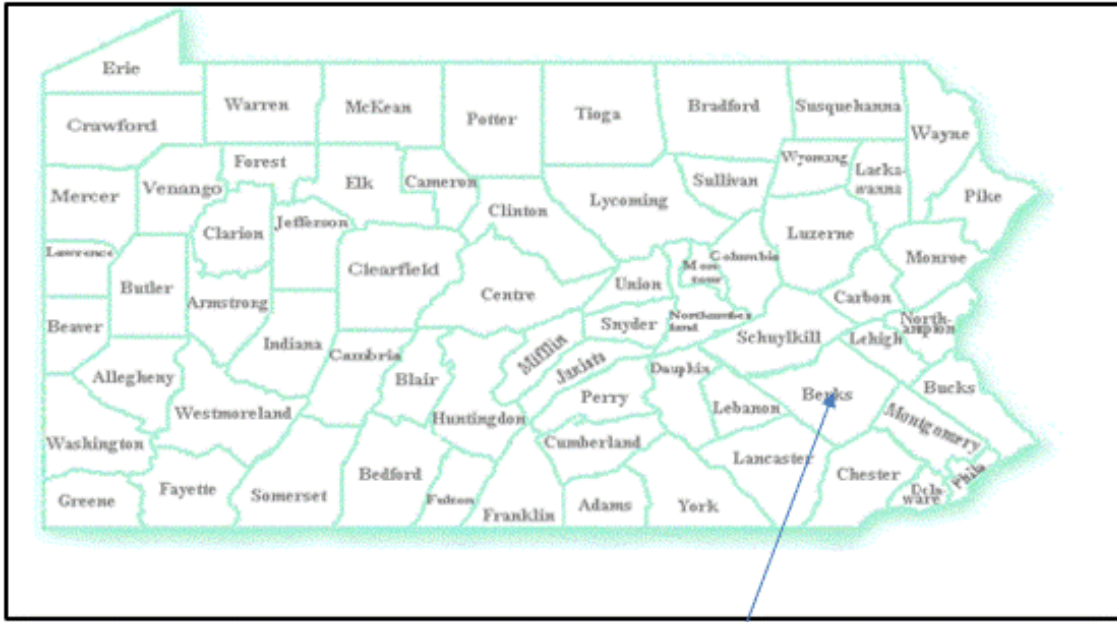
1.2 Origin of Wastes

Waste generation information has changed since implementation of the 1990 Plan and 2005 and 2014 revisions. This is due to factors such as increase in population, increase in residential development, and changes in commercial and industrial services, but also due to changed socio-economic factors, such as increased per capita income.

This Plan revision includes all of the fractions of municipal solid waste, but is also required to take into consideration the volumes of residual waste that would likely be disposed of in the facilities utilized by the County. In this discussion, the waste types are broken out into the same categories, or components, as they are reported by PADEP. These components are:

- Municipal (includes residential, commercial/industrial, and institutional)
- Sewage Sludge and Septage
- Regulated Medical and Chemotherapeutic Waste
- Construction and Demolition
- Ash Residue
- Asbestos
- Residual

FIGURE 1-1 LOCATION MAP BERKS COUNTY, PA



**TABLE 1-1
BERKS COUNTY MUNICIPALITIES**

Municipality	2020 Census Population	Municipality	2020 Census Population
Adamstown Borough	22	Marion Township	1,833
Albany Township	1,660	Maxatawny Township	7,181
Alsace Township	3,834	Mohnton Borough	2,927
Amity Township	13,396	Mount Penn Borough	3,240
Bally Borough	1,228	Muhlenberg Township	21,915
Bechtelsville Borough	884	New Morgan Borough	54
Bern Township	6,706	North Heidelberg Township	1,220
Bernville Borough	905	Oley Township	3,810
Bethel Township	4,059	Ontelaunee Township	2,598
Birdsboro Borough	5,106	Penn Township	2,122
Boyertown Borough	4,264	Perry Township	2,475
Brecknock Township	4,602	Pike Township	1,595
Caernarvon Township	4,234	City of Reading	95,112
Centerport Borough	314	Richmond Township	3,603
Centre Township	4,130	Robeson Township	7,538
Colebrookdale Township	5,112	Robesonia Borough	2,035
Cumru Township	15,619	Rockland Township	3,646
District Township	1,378	Ruscombamanor Township	3,998
Douglass Township	3,670	St. Lawrence Borough	1,892
Earl Township	3,097	Shillington Borough	5,475
Exeter Township	25,466	Shoemakersville Borough	1,360
Fleetwood Borough	4,049	Sinking Spring Borough	4,286
Greenwich Township	3,428	South Heidelberg Township	7,663
Hamburg Borough	4,270	Spring Township	28,407
Heidelberg Township	1,731	Tilden Township	3,603
Hereford Township	2,962	Topton Borough	2,041
Jefferson Township	2,369	Tulpehocken Township	3,415
Kenhorst Borough	3,001	Union Township	3,886
Kutztown Borough	4,162	Upper Bern Township	1,606
Laureldale Borough	4,277	Upper Tulpehocken Township	1,856
Leesport Borough	1,954	Washington Township	4,443
Lenhartsville Borough	180	Wernersville Borough	2,776
Longswamp Township	5,567	West Reading Borough	4,553
Lower Alsace Township	4,716	Windsor Township	2,489
Lower Heidelberg Township	6,230	Womelsdorf Borough	2,892
Lyons Borough	439	Wyomissing Borough	11,114
Maidencreek Township	9,169		

Source: U.S. Census Bureau, 2020

Total Berks County Population (Year 2020) = 428,849

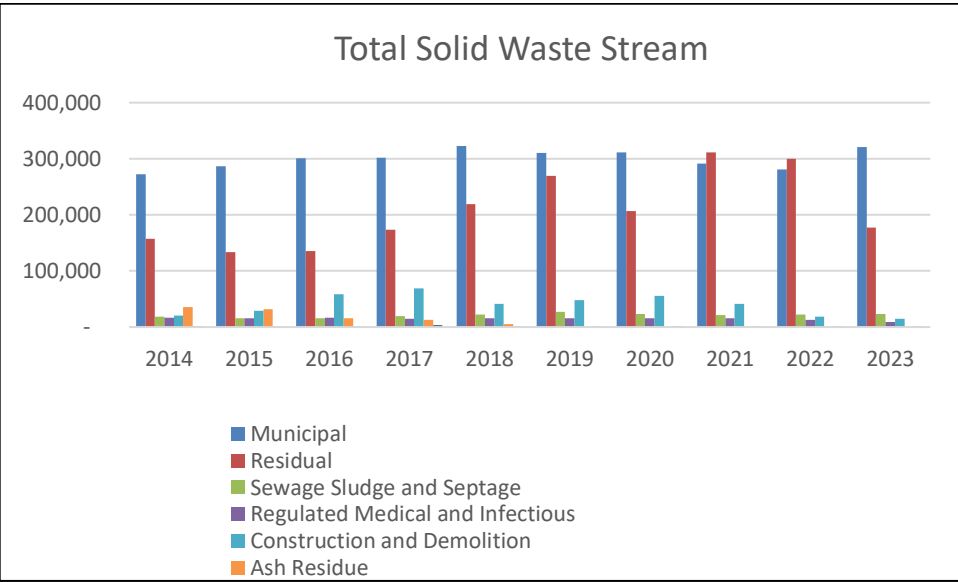
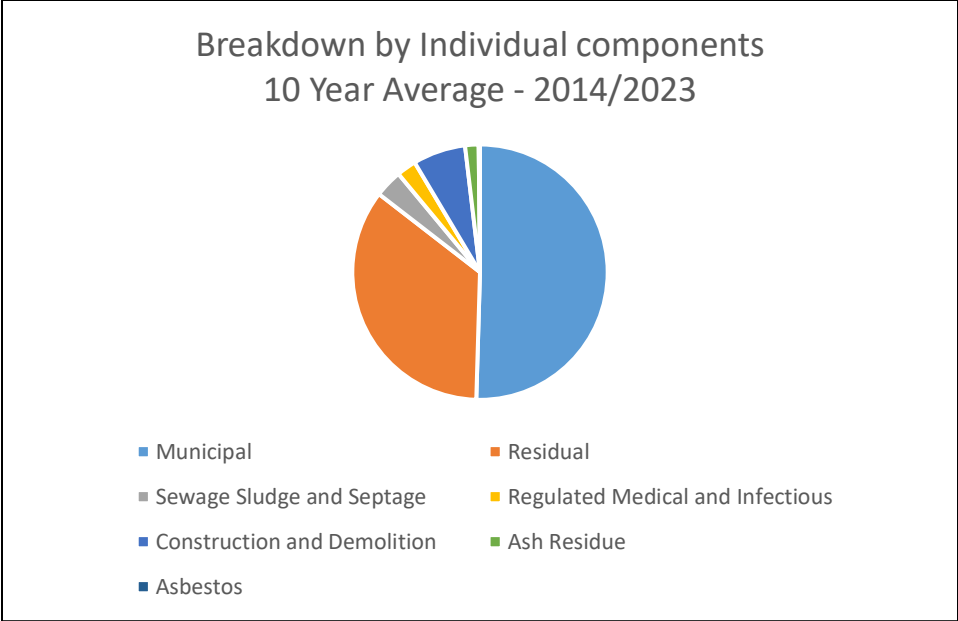
TABLE 1-2

**TOTAL SOLID WASTE STREAM
BREAKDOWN BY INDIVIDUAL COMPONENTS
(in tons)**

Year	Municipal	Residual	Sewage Sludge and Septage	Regulated Medical and Infectious	Construction and Demolition	Ash Residue	Asbestos	Total Solid Waste
2014	272,502	157,288	18,810	16,323	20,102	35,463	1,504	521,991
2015	286,747	133,213	15,330	15,474	28,914	32,222	184	512,084
2016	301,316	135,108	15,411	16,315	58,456	15,746	546	542,898
2017	302,216	173,743	19,034	15,002	68,769	12,759	3,665	595,188
2018	322,704	218,741	22,377	15,219	41,230	5,622	651	626,544
2019	310,045	269,225	27,163	15,928	47,882	-	367	670,609
2020	311,663	206,413	23,419	15,367	55,668	-	1,298	613,828
2021	291,743	310,967	21,103	15,237	41,672	20	395	681,137
2022	280,904	300,232	22,356	13,273	18,985	-	321	636,071
2023	321,196	177,233	23,075	9,005	15,063	-	947	546,518
Total	3,001,036	2,082,162	208,078	147,143	396,741	101,830	9,878	5,946,868
Average 2014-2023								
	300,104	208,216	20,808	14,714	39,674	10,183	988	594,687
Average 2019-2023								
	303,110	252,814	23,423	13,762	35,854	4	666	629,633
Percentage of Total Waste Stream, Average 2014 - 2023								
	50.5%	35.0%	3.5%	2.5%	6.7%	1.7%	0.2%	100.0%
Percentage of Total Waste Stream, Average 2019 - 2023								
	48.1%	40.2%	3.7%	2.2%	5.7%	0.0%	0.1%	100.0%
Average Annual Growth Rate								
10 Years	2.0%	5.2%	3.3%	-5.7%	6.2%	-9.3%	101.6%	0.9%
5 Years	0.2%	1.2%	1.4%	-9.0%	-13.6%	-20.0%	63.3%	-2.2%

Table 1-2 is based on the PADEP Waste Destination Reports for waste generated in Berks County and shows the breakdown of wastes by individual components from 2014 through 2023. In addition, Table 1-2 shows the 5-year and 10-year average annual growth rates of each of these components.

These percentages represent the ratio of each individual component to the total solid waste stream, and are based on the most recent 5-year average (2019 – 2023) and 10-year average (2014-2023) of reported disposal quantities on the PADEP Waste Destination Report.



Based on the data presented in Table 1-2, the average annual growth rate of total solid waste disposed from Berks County is up 1% over the last 10 years and down 2.2% over the last 5 years; these rates represent the averages for all waste types originating in Berks County and disposed of in Pennsylvania disposal facilities. This growth rate changed significantly from the 2014 Plan, which looked at waste disposal from 2004 through 2013, which showed an 11% increase over that ten-year time period and a 3.4% increase over the five-year period from 2009 through 2013. It is especially interesting to note the fluctuation over the past ten years in most types of waste. These changes do not necessarily reflect solely an increase/decrease in waste generation; rather, they also reflect the effects of better reporting requirements instituted by PADEP and of more wastes being disposed of at in-state facilities instead of out-of-state disposal facilities.

Figure 1-2 also shows the breakdown of wastes into individual components. Figure 1-2 further breaks down the growth rates into individual components of the total solid waste stream.

The municipal solid waste types, or municipal solid waste stream, include the municipal, sewage sludge, regulated medical, construction, ash residue and asbestos waste components as categorized by the PADEP Waste Destination Reports. Table 3-3, shown on page 43 of this document, presents the municipal solid waste stream (i.e., excluding the residual waste component) including the portions of the municipal solid waste stream comprised by the various waste components. This Table also projects those waste streams over the next ten years.

1.2.1 Residential Waste Generation

Berks County had a 2020 Census population of 428,849, which placed it as the ninth largest county in Pennsylvania in terms of total population. Berks County has experienced significant growth in population in the past ten years. Berks County’s growth of 17,407 people since 2010 was the eleventh largest increase among all counties in Pennsylvania. The Year 2020 population represents a 4.2% increase since 2010. This increase is considerably less than the population change that occurred from 2000 to 2010, when the population grew by 10%, but is still significant. Refer to Table 1-3, below.

Based on the Census data and other population projections prepared by planning agencies, the population growth for Berks County is assumed to be .47% per year for the purposes of this Plan revision.

**TABLE 1-3
BERKS COUNTY POPULATION TRENDS**

Year	Population	Change in Population	
2000	373,638		
2000-2010		37,804	10.1%
2010	411,442		
2010-2020		17,407	4.2%
2020	428,849		
2020-2025		7,698	1.8%
2025 "Projected"	436,547		
2025-2030		10,356	2.4%
2030 "Projected"	446,903		
2030-2035		10,601	2.4%
2035 "Projected"	457,504		

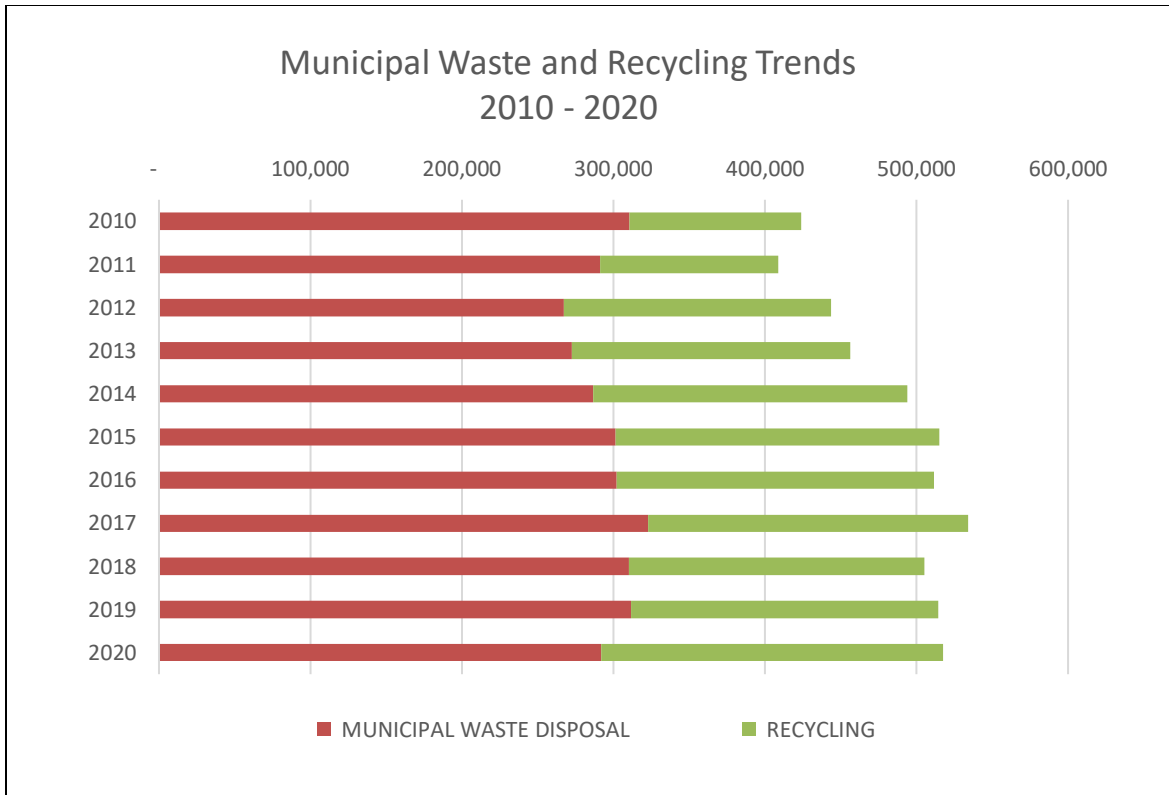
Source: U.S. Census Bureau

As a result of solid waste planning and educational efforts, Berks County has seen a steady increase in the recycling rate. Between the years 2010 and 2020, population in the County increased by 4.2%. Waste generation increased by 106,885 tons while municipal solid waste disposal accounted for only 4,099 tons (1.3%). The recycling rate increased 19% from 20% in 2010 to 39% in 2020. See Table 1-4 below.

The most obvious benefits of the planning process have been the implementation of recycling programs to reduce the volume of waste, the securing of waste disposal capacity at state-of-the-art disposal facilities to guarantee the long-term handling of the waste generated in Berks County and the protection of the environment.

**TABLE 1-4
BERKS COUNTY RECYCLING RATE
(all recyclable materials in tons)**

YEAR	MUNICIPAL WASTE DISPOSAL	RECYCLING	RECYCLING PERCENTAGE (Municipal Waste))	MUNICIPAL WASTE GENERATION	POPULATION
2010	307,564	99,846	25%	407,410	411,442
2011	310,430	113,341	27%	423,770	411,812
2012	291,168	117,517	29%	408,685	412,183
2013	267,248	176,453	40%	443,701	412,554
2014	272,502	183,675	40%	456,177	412,925
2015	286,747	207,157	42%	493,905	413,297
2016	301,316	213,733	41%	515,049	413,669
2017	302,216	209,373	41%	511,589	414,041
2018	322,704	211,259	40%	533,963	414,414
2019	310,045	195,058	39%	505,103	414,787
2020	311,663	202,632	39%	514,295	428,849



1.2.2 Commercial/Industrial and Institutional Waste Generation

Berks County has historically had a diverse economy that provides a wide variety of jobs for its residents. According to the U.S. Census, the civilian labor force in the County as of January 2021 was 211,376 similar to our last plan period. For this same time period, the unemployment rate was approximately 7.8%, up from 6.4% during our last plan period.

The manufacturing sector, which in 2022 employed approximately 16% of the County’s workforce, according to the Pennsylvania Department of Labor and Industry as presented in the Berks County Workforce Investment Report, February 2022 edition, remains the major source of employment in Berks County. Other large employment sectors include health care, retail trade and accommodations and food service. As of 2017-2021, the per capita income of Berks County was \$34,519, which is lower than the state average of \$68,957 and is also lower than the national average of \$70,784. Berks County median household income was \$69,272, which has grown by 21% since 2012. Like the residential sector, the commercial/industrial and institutional sectors also account for portions of the various municipal solid waste types disposed of in the County. The commercial/industrial and institutional sectors account for that portion of municipal solid wastes generated by nonresidential establishments. Together, these wastes are similar in composition to the residential portion of the waste stream, and, combined, the commercial/industrial and institutional sectors historically account for approximately 46% of the municipal solid waste stream in the County. Therefore, quantifying all of these wastes as “commercial” for the purpose of this Plan revision is recommended. Table 3-4, shown on page 47 of this document, provides estimates of future waste generation from these sectors.

Federal, state, or local government facilities operate in a variety of locations throughout Berks County. The County, along with the townships, boroughs, and the City of Reading, own and occupy office buildings used for daily government operations.

1.2.3 Community Activities

Community activities in the County include those sponsored by numerous organizations, including the County, municipalities, local community groups, local restaurant organizations, agricultural groups and historical societies. Some of the sponsored events include the Berks County Fair, a summer concert series, the Berks Jazz Fest, the Kutztown Festival, Halloween parades, Professional Baseball and Hockey games, the PA Dutch Festival, craft shows and performing arts events. Well in excess of 750 community activities were held in 2023, as documented on the Reading & Berks County Pennsylvania's American Region website and listed in Appendix B. Although actual weights were not documented, these events attract large crowds to specific locations resulting in the generation of unique waste streams.

1.2.4 Special Handling Wastes

Special handling wastes are defined as including sewage sludge and septage, Ash, Asbestos, regulated medical, and construction and demolition wastes. These waste categories are included in the municipal solid waste stream, as discussed in this Plan revision. These wastes are further described in the following subsections.

Construction and Demolition Wastes

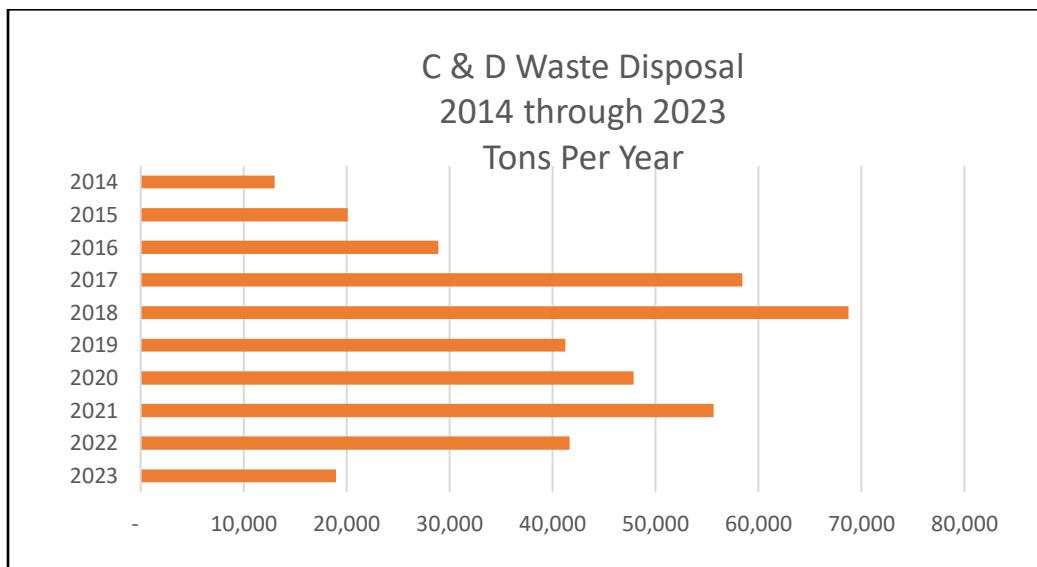
Construction and demolition (C&D) wastes are those that result from the construction or demolition of buildings and other structures. This waste type can include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard or green waste, related to land development or construction type projects. As previously indicated PADEP reports these wastes separately from municipal solid waste on destination reports.

Construction and Demolition Waste (C&D) is considered a subset of municipal solid waste in Pennsylvania and therefore, it is included as a waste type that must be considered in the County planning process. An average composition is difficult to define because the waste varies with the specific activity. For instance, new home construction produces a different waste stream than remodeling or demolition. Economic and seasonal conditions affect the construction industry in climates similar to Pennsylvania. While the volume of municipal solid waste in general remains relatively constant, the volume of C&D material fluctuates. For this and other reasons, projecting generation rates and quantities for an extended period is difficult and not totally reliable. However, due to the small quantities of this waste, we believe these figures, are adequate for this 10-year planning period.

In 2023, Pennsylvania landfills reported the disposal of 15,063 tons of C&D waste originating in Berks County. This tonnage was down significantly from 2020, when this was reported at 55,668 tons, but is comparable to 2014, when this waste was reported to be 20,101 tons. Unlike MSW, C&D waste is not consistently collected and transported by municipalities or through ongoing arrangements with private garbage haulers. Much of it is handled by construction/demolition

contractors, or homeowners and businesses that generate the waste. For a variety of reasons, C&D waste does not always make its way to a proper disposal facility. Some of the material is burned on construction sites and is never accounted for. Another common method used by homeowners and contractors is illicit dumping. In fairness, some C&D material that is not destined for a landfill may actually be put to a beneficial re-use. Bricks and concrete and other masonry materials can appropriately be used for clean fill, both onsite or at other locations and facilities. It is also common for contractors to recover and store materials that might have a beneficial re-use in a future project. For these reasons C&D waste is a difficult type of waste to confidently quantify with any great degree of accuracy.

The volume of C&D wastes generated in Berks County and disposed of in Pennsylvania disposal facilities over the past five and ten years has remained fairly stable at 5.7% and 6.7%.



C&D wastes are typically more variable than the generation of municipal solid waste. The fluctuation in figures for C&D waste disposal, and thus generation, is associated with the new real estate development and redevelopment observed in the County, as well as C&D material recycling. A significant volume of material may be recycled at area transfer stations and/or recycling/processing facilities and therefore not included in the PADEP Waste Destination Reports. These facilities can achieve recycling rates of up to 98% of acceptable materials, such as metal, lumber, plywood, particle board, plastic and vinyl, concrete, stone, rock, and cardboard. These facilities have a huge impact on the amount of construction and demolition waste being diverted from area landfills.

Zwicky Recycling and Processing Center located in Fleetwood, Berks County, accepts C & D waste generated in Berks County, as well as the surrounding area. They process C & D Waste through their facility using machines and man-power to create a finished product that will either be recycled, used as a bio-mass-fuel in local cement kilns, used as clean fill, daily cover for area landfills or other beneficial re-uses. The use of bio-mass-fuel is a form of renewable energy that takes organic materials and burns them to create electricity and other forms of power. Using these refined

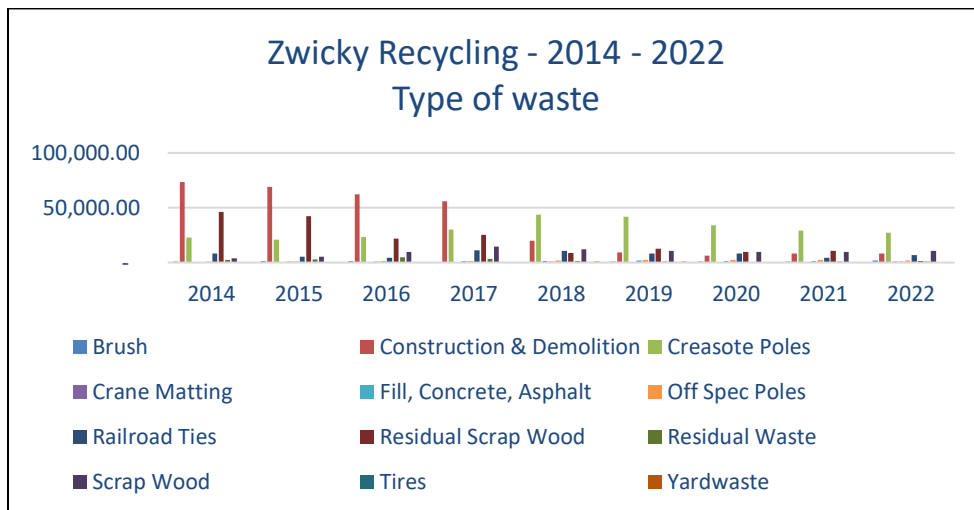
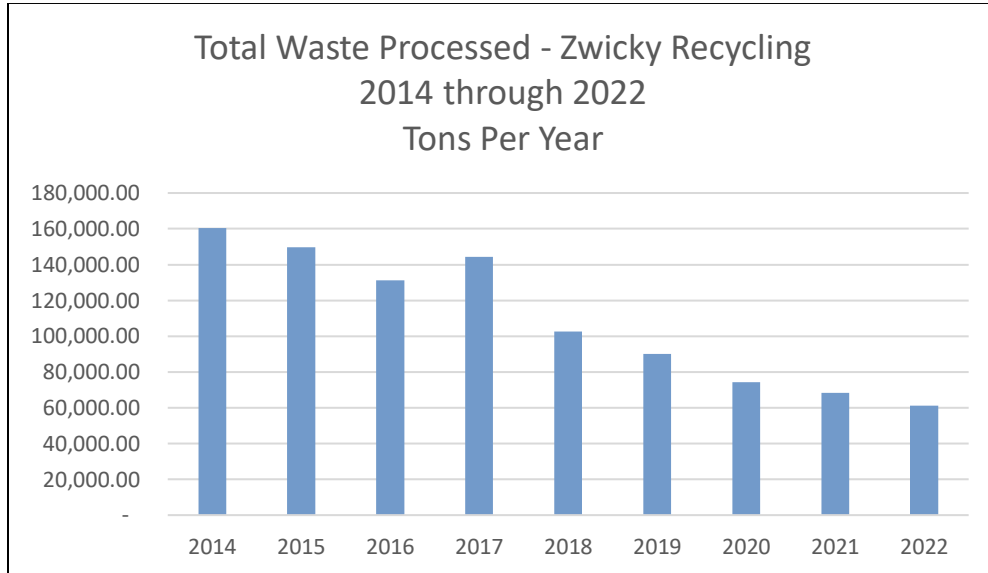
recycled products keeps Berks County cleaner with less air pollution and reuses thousands of tons of waste each year that would otherwise be disposed of in a landfill. As there will always be a demand for bio-mass-fuels, Zwicky’s facility plays an important role in diverting recyclable and reusable materials from area landfills. They are currently reusing nearly 98% of all C & D waste brought to their facility and sending out approximately 2% of that material to area landfills. During 2023, 16,282.44 tons of materials generated in Berks County were processed for beneficial reuse at their facility. These materials were not reported for recycling in reTRAC, by Berks County, since these materials are being used as a beneficial reuse. Yard waste which is processed by Zwicky is reported through reTRAC, since that is composted and classified as recycling. Below is the breakdown on the type of material generated in Berks County that was processed in 2023:

TYPE OF MATERIAL	TONNAGE - 2023
Brush	696.07
Construction & Demolition Debris	4,187.87
Creosote Poles	793.80
Fill, Concrete and Asphalt	874.86
Off-spec Poles	13.47
Railroad Ties	2,277.14
Residual Scrap Wood	403.89
Residual Waste	668.71
Scrap Wood	6,347.96
Yard Waste	18.67
Total	16,282.44

Below is the breakdown of material from Berks County processed at the Zwicky facility from January 1, 2014 through December 31, 2022. (Data from 2013 and prior was included in our 2014 Plan Revision.)

TYPE OF MATERIAL	TONNAGE – 2014-2022
Brush	5,320.52
Construction & Demolition Debris	82,696.26
Creosote Poles	4,415.17
Fill, Concrete and Asphalt	4,601.28
CRANE MATTING	126.30
Railroad Ties	9,929.85
Residual Scrap Wood	9,565.78
Residual Waste	7,716.76
Scrap Wood	41,212.04
Yard Waste	3,287.98
Total	168,871.94

The tonnages below include all waste processed through the Zwicky facility, not just waste generated in Berks County. Information on the County where this waste is generated is currently tracked by Zwicky, however, this information is not readily available at this time.



In addition to C & D waste, Zwicky is also permitted to accept municipal solid waste. Some select types of municipal solid waste are used as additives, to increase the BTUs for certain bio-mass-fuel customers. The Zwicky facility will continue working to increase the BTU value of their product, in an attempt to match coal, to be able to offer their product as a viable alternative. With this new plan for the future, the recycling of C & D waste could strengthen the world’s energy production.

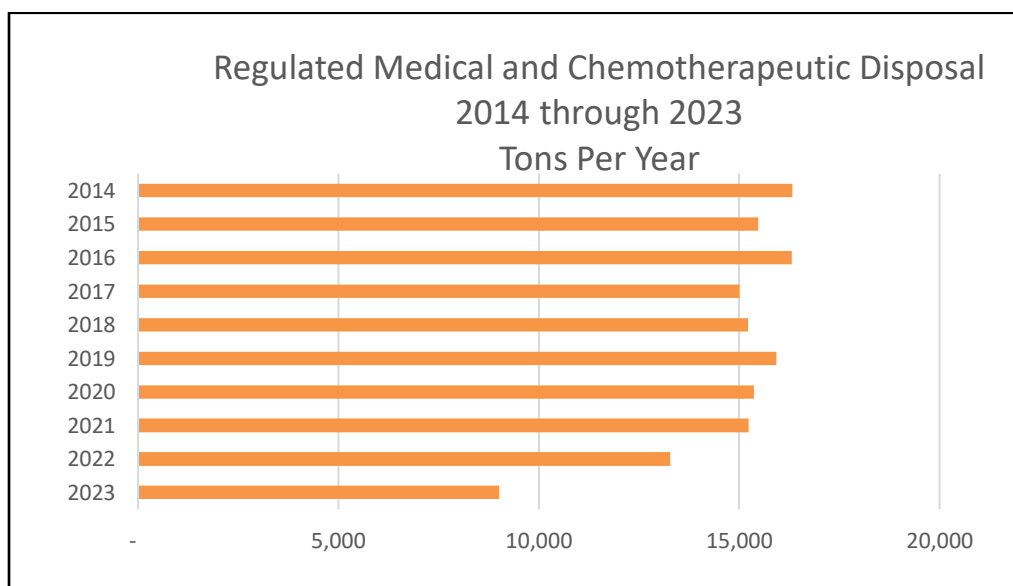
Regulated Medical and Chemotherapeutic Wastes

Regulated Medical and Chemotherapeutic Waste, (RMW), is the portion of the waste stream that may be contaminated by blood, body fluids, or other potentially infectious material, thus posing a significant risk of transmitting infection. RMW are those wastes generated at hospitals, medical offices, or other medical-related facilities (including veterinary offices) that could cause adverse health effects to humans in the case of accidental and uncontrolled exposure. RMW includes cultures of biological agents or vaccines, pathological wastes, human blood and body fluid waste or items that have been in contact with these fluids, animal wastes, used sharps (needles), or mixtures of the above. Regulated medical wastes also result from the production or use of agents used for the purpose of killing or stopping the growth of malignant cells.

Table 1-2, shown on page 14 of this document, shows the volume of RMW wastes generated in Berks County and disposed of in Pennsylvania facilities over the past ten years (2014 - 2023). The amount of RMW generated in Berks County and being disposed of in Pennsylvania has remained stable at 2.5% over the past ten-year reporting period, however it decreased by approximately 2% from the 2014 Planning period, when it represented 4.4%.

Two hospitals along with numerous skilled nursing, personal care and assisted living facilities are found throughout the County. Due to the nature of their operations, a portion of the municipal solid waste generated in these facilities falls into a special category known as regulated medical and regulated medical and infectious waste. Berks County is home to two (2) Hospitals and 3,300 medical facilities including Medical Centers, Rehabilitation Centers, Surgical Centers, Urgent Cares, Dental Clinics, Dialysis Centers, Home Health Organizations, Funeral Directors and Veterinary Clinics and Hospitals. Appendix E provides further detail on these facilities.

From 2014 to 2023, the RMW generated in Berks County were disposed of at either the Pioneer Crossing Landfill or the Conestoga Landfill both located in Berks County or at out of state facilities, which are unknown.



Sewage Sludge and Septic Wastes

Sewage sludge is defined as liquid or solid sludge or other residues from a municipal sewage collection and treatment system and liquid or solid sludges and other residues from septic and holding tank pumping from commercial, institutional, or residential establishments.

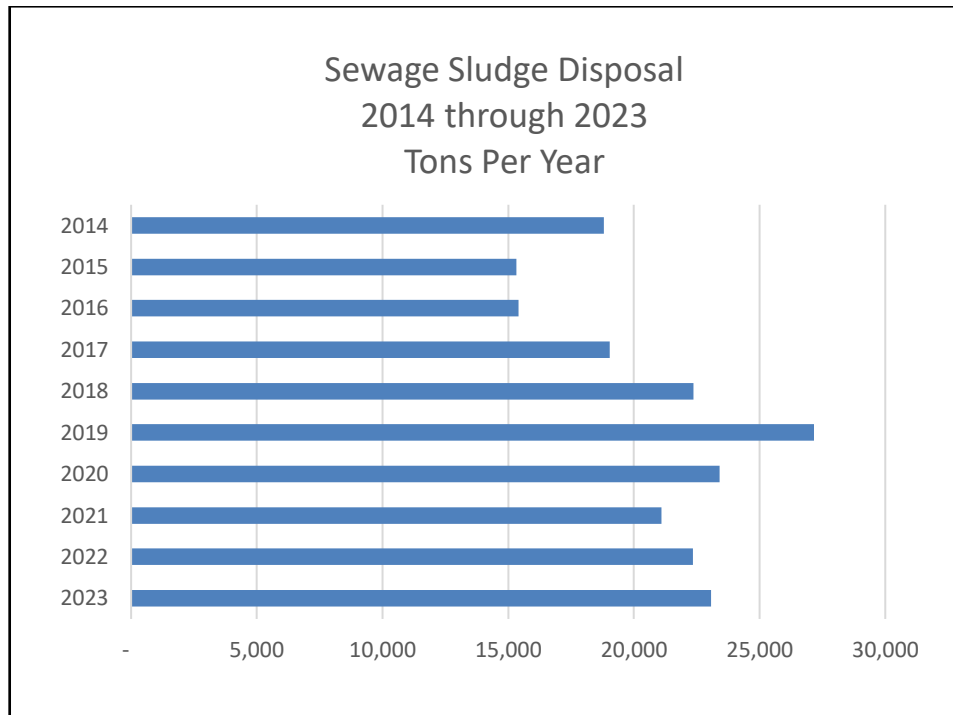
No new survey was completed to gather data from water and wastewater treatment plants in the County, as the volumes of sludge generated and disposed of by these facilities is well known and established and is available by the PADEP on the Waste Destination Reports.

Sewage sludge and septic wastes are considered a subset of municipal solid waste in Pennsylvania and therefore, it is included as a waste type that must be considered in the County planning process. Berks County is home to forty-four (44) Public Waste Water Treatment Plants, of which ten (10) are major plants and thirty-four (34) are minor. There are also eighty-six (86) Non-Public Plants, one (1) major, seventy (70) minor and fifteen (15) individual Plants. As of 2023, thirty-two (32) licensed septic haulers also serviced Berks County. Appendix C provides a listing of the Waste Water Treatment Plants serving Berks County and Appendix D lists the 2023 licensed septic haulers, believed to be servicing Berks County. This information was obtained from the PADEP website:

<http://cedatareporting.pa.gov/Reportserver/Pages/ReportViewer.aspx?/Public/DEP/CW/SSRS/WMS Permitted Facilities>.

<https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/Municipal-Residual-Waste--Transportation/Pages/default.aspx>

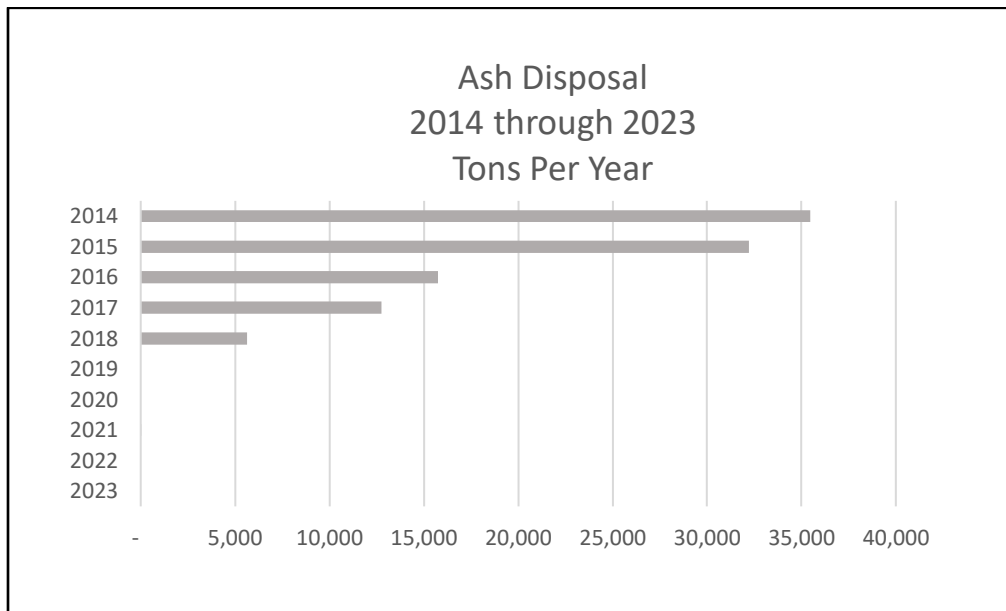
As shown in the chart below, the volume of sewage sludge and septage generated in Berks County and disposed of at Pennsylvania landfills has steadily decreased over the past five years. The annual average sewage sludge disposal rate in Berks County over the last ten years (2014– 2023) is determined to be 3.5%. It does not include sewage sludges that may have been disposed either out of state, which is highly unlikely given the existing transportation market for these materials in the County, or by other means, such as land application.



Ash

Ash is defined as the powdery residue left after the burning of a substance. Ash is considered a subset of municipal solid waste in Pennsylvania and therefore, it is included as a waste type that must be considered in the County planning process.

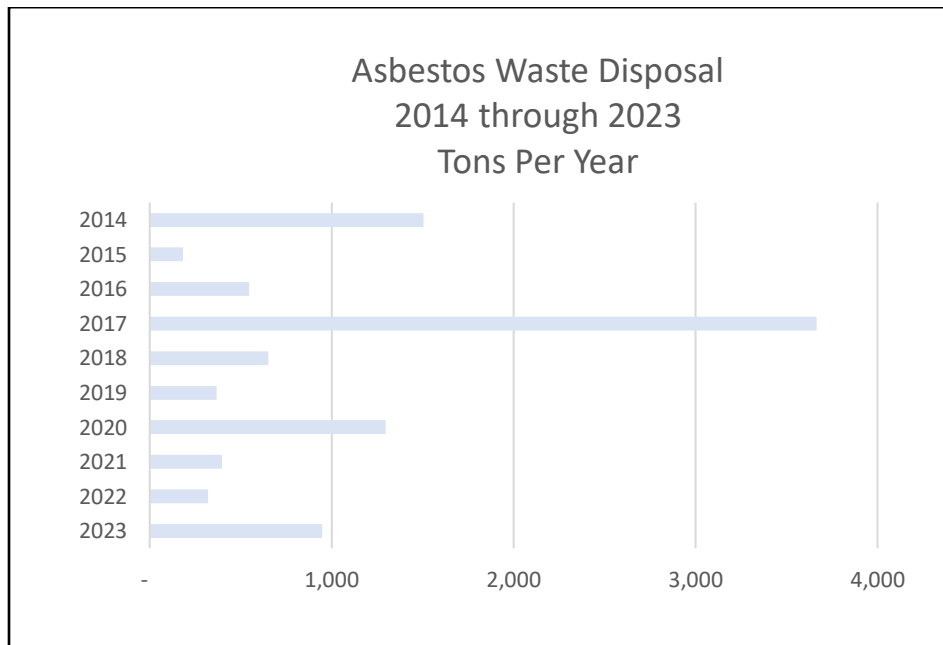
As shown in the chart below, the volume of ash generated in Berks County and disposed of at Pennsylvania landfills has entirely been eliminated over the past five years. The annual average ash disposal rate in Berks County over the last five years (2019– 2023) was determined to be 0%. Prior to 2019, the Ash was being generated from the Evergreen Community Power Plant in Reading Pa. that opened in 2008 and closed in 2018. This does not include ash that may have been disposed of at disposal facilities outside of Pennsylvania. In 2021, 20 tons of ash was reportedly disposed of at the Cumberland County Landfill, but the exact source is unknown.



Asbestos

Asbestos is defined as a heat-resistant fibrous silicate mineral that can be woven into fabrics, and is used in fire-resistant and insulating materials such as brake linings. Asbestos is considered a subset of municipal solid waste in Pennsylvania and therefore, it is included as a waste type that must be considered in the County planning process.

As shown in the chart below, the volume of asbestos generated in Berks County and disposed of at Pennsylvania landfills has shown a fairly steady flow in the past ten years, other than the spikes we saw in 2017 and 2020, for unknown reasons. The annual average asbestos disposal rate in Berks County over the last ten years (2014– 2023) is determined to be .2%.



1.2.5 Residual Waste

Residual waste is defined in Pennsylvania as “garbage, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility, if it is not hazardous.” All counties in Pennsylvania have a residual waste component that must be dealt with and Berks County is no different with a variety of industries and a strong agricultural sector. In 2023, the amount of residual waste originating in Berks County and disposed of in Pennsylvania disposal facilities was 177,233 tons or 33% of the total solid waste stream, which is a significant decrease from the past five years.

The largest generators of residual waste historically have been coal-fired electric utilities, paper mills, foundries, printing and ink operations, and the iron and steel industry.

As shown in the chart below, disposal of residual wastes generated in Berks County over the past ten years, continues to increase, with the exception of 2023. This table shows that the residual waste component represents 35% of the total solid wastes disposed of (averaged from 2014 – 2023). The prior planning period (2004-2013) showed residual waste accounting for just 18% of the total waste disposed of. This rate is for residual wastes disposed of at Pennsylvania facilities; it does not include residuals generated in Berks County that may have been shipped to out of state facilities.



1.3 Weight and Content of Wastes

This Plan revision contains estimates of the municipal solid waste generation, including sewage sludges resulting from water and wastewater treatment facilities, construction and demolition (C&D), Regulated Medical and Chemotherapeutic Waste (RMW), ash residue, and asbestos wastes. In addition, as per PADEP guidelines, residual waste quantities projected for the planning period have been included in decisions presented in this document. While these wastes are not considered “municipal” solid waste, because they are generated by industries, they are considered herein for planning purposes because they are accepted as “municipal-like residual wastes” as determined by PADEP and will occupy space in many of the same disposal facilities that accept municipal solid waste from the County.

Similarly, projections calculated for this Plan revision take recycling into consideration, as required by PADEP.

1.3.1 Disposal of Municipal Solid Waste

In Pennsylvania, the municipal solid waste stream includes the municipal, sewage sludge, construction, regulated medical and chemotherapeutic, ash residue, and asbestos waste components as reported by PADEP. These waste components originate primarily from the residential, commercial, and institutional sectors of the County, and are herein referred to as total municipal solid waste.

Berks County Data

To quantify the disposal of total municipal solid waste, estimates were based on the quantity of wastes originating in Berks County and disposed of at Pennsylvania disposal facilities and on population, housing and occupation data from Berks County, over the past ten years.

Actual waste disposal quantities from 2014 through 2023 were obtained from the PADEP Waste Destination Reports. This data represents wastes originating in Berks County and disposed of in Pennsylvania municipal solid waste disposal facilities. With the exception of residual and some special handling wastes, waste generated in Berks County is disposed of almost exclusively within the County or adjacent counties (discussed more in Chapter 3). Therefore, the PADEP Waste Destination Reports are appropriate.

Population data was obtained from the U.S. Department of Commerce, Bureau of the Census, for years 2010 and 2020. Population estimates for other years were also obtained from that office and the Berks County Planning Commission.

Based on that data, the annual per capita municipal waste component disposal rate was estimated. The average of the most recent ten (10) year period (i.e., 2014 – 2023) is .71 tons per person per year (the equivalent of 3.91 pounds per person per day). This disposal rate is for the municipal waste component only and does not include other portions of the municipal solid waste stream or residual wastes. (Refer to Table 3-2 on page 42)

As stated in Chapter 1, total waste generation estimates must take into consideration the volumes of all solid waste components that would likely be disposed of in facilities utilized by the County. Therefore, the quantity of the total municipal solid waste stream components, as well as the quantity of residual wastes, that will be required to be disposed of over the 10-year planning period was also estimated. (Refer to Table 3-6 on page 50).

PADEP Statewide Estimates

The calculation of the annual per capita municipal solid waste stream generation rate of .89 tons per person per year, not including residual waste, is comparative to the state-wide average of 0.8 tons per person per year (roughly 4.4 lbs./person/day), used by the PADEP. Therefore, the .8 tons per person per year, which is derived from the EPA's Advancing Sustainable Management report, which was released in 2020, has been updated to .89 tons per person per year for this planning period.

CHAPTER 2 – DESCRIPTION OF FACILITIES

This section provides a description of the facilities that received waste generated in Berks County over the past five years, 2019 - 2023, as reported on PADEP Waste Destination Reports. The volumes and percentages included in this text include the categories of total solid waste (i.e., all waste components (including municipal, sewage sludge, construction, ash residue, asbestos wastes components and residual waste) as they appear on the Waste Destination Reports. Table 2-1 on the next page presents a breakdown of the facilities that received waste generated in Berks County over the past five years. These facilities include landfills and resource recovery facilities. The majority of wastes originating in Berks County are disposed of in landfills located in Berks County.

According to waste disposal reports filed with the PADEP from 2019 to 2023, fifteen landfills and five waste-to-energy (WTE) facilities in Pennsylvania received waste originating in Berks County (refer to Table 2-1). Eighty percent of the municipal solid waste generated in Berks County was disposed of at the following landfills, all of which are located in Berks County: Delaware County Solid Waste Authority - Rolling Hills Landfill (formerly Colebrookdale); Conestoga Landfill; Western Berks Landfill and F.R. & S. Inc. - Pioneer Crossing Landfill. Eleven other landfills and five WTE facilities within Pennsylvania provided disposal capacity for the remaining waste that was generated in Berks County, although the majority of those facilities provided disposal capacity for less than 1,000 tons per year of municipal solid wastes (i.e., excluding residual wastes) that was generated in Berks County. Refer to Table 2-1 for a comparison of waste types received at these facilities.

**TABLE 2-1
DISPOSAL FACILITIES RECEIVING WASTES ORIGINATING IN BERKS COUNTY
FIVE-YEAR AVERAGE OF TONS OF WASTE DISPOSED (2019- 2023)**

Disposal Facility	Municipal	Residual	Sludge	Regulated Medical	Construction Demolition	Ash	Asbestos	Total Solid Waste	%
WESTERN BERKS LANDFILL & RECYCLING CENTER	63,309	86,683	385	0	15,019	0	506	165,903	26%
PIONEER CROSSING LANDFILL	69,259	56,932	21,822	0	2,009	0	0	150,021	24%
CONESTOGA LANDFILL	42,211	45,927	472	13,761	5,283	0	136	107,790	17%
DELAWARE COUNTY SOLID WASTE AUTHORITY	60,512	23,762	597	0	5,757	0	0	90,629	14%
COMMONWEALTH ENVIRONMENTAL SYSTEMS LANDFILL	36,402	1,116	144	0	1,382	0	0	39,044	6%
FAIRLESS LANDFILL	140	25,159	0	0	17	0	0	25,316	4%
CHESTER COUNTY SWA LANCHESTER LANDFILL	13,020	3,513	0	0	5,760	0	7	22,300	4%
CUMBERLAND COUNTY LANDFILL	1,158	7,773	3	0	563	4	0	9,501	2%
LCSWMA SRMC	6,783	0	0	0	20	0	0	6,803	1%
YORK COUNTY RESOURCE RECOVERY CENTER	3,057	0	0	0	0	0	0	3,058	0%
LCSWMA RESOURCE FACILITY	1,165	606	0	0	0	0	0	1,771	0%
GRAND CENTRAL SANITARY LANDFILL INC	3,014	84	0	1	7	0	0	3,107	0%
Covanta Plymouth Renewable Energy	1,065	594	0	0	0	0	0	1,659	0%
IESI PA BETHLEHEM LANDFILL CORP	1,030	0	0	0	16	0	0	1,046	0%
ALLIANCE SANITARY LANDFILL	828	8	0	0	0	0	0	836	0%
WHEELABRATOR FALLS INC	0	564	0	0	0	0	0	564	0%
CHRIN BROTHERS SANITARY LANDFILL	156	0	0	0	22	0	4	182	0%
LYCOMING COUNTY RESOURCE MANAGEMENT SERVICES	0	73	0	0	0	0	0	73	0%
MODERN LANDFILL	0	16	0	0	0	0	11	27	0%
CLINTON COUNTY SOLID WASTE AUTHORITY	0	0	0	0	0	0	1	1	0%
Total Pennsylvania Facilities	303,110	252,811	23,423	13,762	35,854	4	666	629,630	19%
Total Berks County Facilities	235,291	213,305	23,276	13,761	28,068	0	643	514,343	81%

Source: PA DEP Bureau of Land Recycling & Waste Mgt., Division of Reporting & Fee Collection, County Waste Destinations Report.

Only facilities that disposed of more than 1,000 tons per year of Total Solid Waste generated in Berks County are described in Table 2-2 of this Plan revision. The WTE facilities are discussed in Section 2.3.1. The PADEP does not maintain records on volumes of materials delivered to out-of-state facilities.

**TABLE 2-2
DISPOSAL FACILITIES MOST UTILIZED FOR WASTE GENERATED IN BERKS COUNTY
(2019 – 2023)**

Disposal Facilities	Municipal and Special Handling Wastes (a)		Total Solid Waste (b)	
	Tons	%	Tons	%
WESTERN BERKS LANDFILL & RECYCLING CENTER	79,220	21%	165,903	26%
PIONEER CROSSING LANDFILL	93,089	25%	150,021	24%
CONESTOGA LANDFILL	61,863	16%	107,790	17%
DELAWARE COUNTY SOLID WASTE AUTHORITY	66,867	18%	90,629	14%
COMMONWEALTH ENVIRONMENTAL SYSTEMS LANDFILL	37,927	10%	39,044	6%
FAIRLESS LANDFILL	157	0%	25,316	4%
CHESTER COUNTY SWA LANCHESTER LANDFILL	18,787	5%	22,300	4%
CUMBERLAND COUNTY LANDFILL	1,728	0%	9,501	2%
LCSWMA SRMC	6,803	2%	6,803	1%
YORK COUNTY RESOURCE RECOVERY CENTER	3,057	1%	3,058	0%
LCSWMA RESOURCE FACILITY	1,165	0%	1,771	0%
GRAND CENTRAL SANITARY LANDFILL INC	3,023	1%	3,107	0%
COVANTA PLYMOUTH RENEWABLE ENERGY	1,065	0%	1,659	0%
IESI PA BETHLEHEM LANDFILL CORP	1,046	0%	1,046	0%
Total Tons	375,797		627,947	

Source: PADEP Waste Destination Reports, average 2019 – 2023.

- a Municipal Solid Waste includes the municipal, sewage sludge, construction, ash residue and asbestos waste components; excludes residual wastes.
- b Total Solid Waste includes all waste components (i.e., all municipal solid waste types plus residual wastes).

2.1 Landfills

The 1990 Municipal Solid Waste Management Plan stated that Berks County executed agreements with Browning Ferris, Inc. (i.e., Conestoga Landfill) and the Delaware County Solid Waste Authority (i.e. Rolling Hills Landfill) to provide short-term and long-term landfill capacity, to Berks County. The 2005 Municipal Solid Waste Management Plan Revision stated that Berks County entered into disposal capacity agreements with ten (10) disposal facilities to provide adequate capacity for the life of that Plan revision. The 2007 Plan revision stated that Berks County had executed a Disposal Capacity Agreement with Western Berks Landfill, LLC to also provide ten years of disposal capacity to Berks County. The 2014 Plan revision stated that Berks County had extended those three Disposal Capacity Agreements in December of 2013 for a period expiring in 2025 or 10 years from the date of approval of the 2014 Solid Waste Management Plan Revision by PADEP. The execution of those three agreements with Browning Ferris, Inc, the Delaware County Solid Waste Authority and Western Berks Landfill, LLC was to provide landfill capacity for municipal solid waste, for that planning period. In March of 2024 the County and the Authority executed new Disposal Capacity Agreements with fourteen (14) disposal facilities for a period commencing on October 7, 2024 and continuing in effect for the term of the forthcoming Berks County Municipal Solid Waste Management Plan. The execution of these agreements was to establish the availability of disposal capacity for municipal solid waste for this current planning period.

The following landfill descriptions include references to the maximum daily volume (MDV), which is the maximum amount of waste that the facility is permitted to receive on a given day and the average daily volume (ADV), which is the daily tonnage a facility can receive averaged over the quarter.

Specific permit limits are provided for information purposes and are not intended to limit the facility from applying for and receiving permit modifications that may change the volume of waste the facility receives. Based on this and other information available for the landfills, the status of disposal facilities providing capacity assurance to Berks County is presented in Table 2-3, below.

**TABLE 2-3
Status of Disposal Facilities Providing Capacity**

Disposal Facility Name	Estimated remaining capacity (as of 1/1/2023) (Tons)	Estimated remaining Landfill Life (as of 1/1/2023)	Permit expiration date	ADV (Tons)	Yearly capacity available to Berks (Tons)	Comments
DCSWA - Rolling Hills Landfill	11 mil tons	2042	1/6/2025	3,200	120,000	
New Morgan Landfill Co. - Conestoga Landfill	9.67 mil tons	2030	9/1/2027	5,210	100,000	No expansion application has currently been filed
Western Berks Refuse Authority Landfill	233,520	2024	8/23/2026	1,000	30,000	4,000,000 CY expansion currently being evaluated
Commonwealth Environmental Systems, L.P.	7.43 mil tons	2034	1/31/2027	4,750	55,000	No current expansion application on file
LCSWMA Resource Recovery Facility	N/A	N/A	3/30/2029	1,200	500	No plans for expansion at this facility
Susquehanna Resource Management Complex	N/A	NA	11/29/2032	985	500	LCSWMA current lease will expire in 2032
Alliance Sanitary Landfill	22.23 mil tons	2040	10/31/2030	4,250	30,000	
Cumberland County Landfill	5.10 mil tons	2041	11/6/2027	2,950	60,000	Site has availability for future expansion of ten additional years.

Disposal Facility Name	Estimated remaining capacity (as of 1/1/2023) (Tons)	Estimated remaining Landfill Life (as of 1/1/2023)	Permit expiration date	ADV (Tons)	Yearly capacity available to Berks (Tons)	Comments
Fairless Landfill	17.6 mil tons	2027	3/30/2026	18,333	30,000	24.6-million-ton expansion being reviewed by PADEP, to extend the life of landfill until January 2035.
Grand Central Sanitary Landfill	3.71 mil tons	2027	8/1/2028	2,750	30,000	Current capacity will expire in 2027. Expansion is anticipated.
Lancaster Landfill	396,000	2026	12/31/2031	1,000	30,000	
York	N/A	N/A	5/5/2033	1,344	5,000	
Bethlehem Landfill	815,118	2029	2033	1,800	48,000	Phase V expansion permit under review
McKean County Landfill	32.9 million CY	30+ years	1/1/2031	6,000	80,000	2027 - Western expansion - 30+ Million CY

2.2 Landfills Located in Berks County

2.2.1 Delaware County Solid Waste Authority – Rolling Hills Landfill

The Delaware County Solid Waste Authority- Rolling Hills Landfill operates under PADEP Solid Waste Permit No. 100345. The Rolling Hills Landfill was formerly known as the Colebrookdale Landfill. This facility was described in the original 1990 Plan and 2005 and 2014 Plan revisions and is still used to provide capacity for municipal solid waste generated in Berks County. As mentioned above, the 1990 plan and 2005 and 2014 Plan revisions stated that Berks County executed agreements with Delaware County Solid Waste Authority on October 12, 1989 and extended the Agreement on January 22, 2004, July 25, 2013 and again on December 9, 2013, to ensure capacity for prior Plan revisions. The December 9, 2013 extension extended the Agreement through December 31, 2025, or ten (10) years from the date of adoption of the 2014 Plan revision, which was October 6, 2014. The execution of the agreement was to provide landfill capacity for municipal solid waste.

In 2023, the PADEP Waste Destination Reports indicate that this facility received 98,711 tons, approximately 18% of the total solid waste generated in the County. This was a decrease of 42,250 tons from 2014, when they received 140,961 ton, representing 27% of the total solid waste generated in the County. In the past five years, this facility received an average of 90,600 tons per year or 15%, of the total solid waste generated in the County.

The Rolling Hills Landfill has a permitted area of 213.8 acres with a disposal area of 156.7 acres. The facility operates under a permitted MDV of 3,840 tons and an ADV of 3,200 tons. The facility reports that the ADV in 2022 was approximately 2,180 tons, thus the facility accepts waste at a rate substantially lower than its permitted ADV. According to the facility's 2022 Annual Operation Report, the remaining landfill capacity is approximately 11 million tons. The remaining landfill life at 2,180 TPD is 19.2 years, or through approximately 2042, with their most recent expansion.

2.2.2 Conestoga Landfill

This facility, described in the original 1990 Plan and 2005 and 2014 revisions, operates under PADEP Solid Waste Permit No. 101509, and is still used to provide capacity for municipal solid waste generated in Berks County. As mentioned above, the 1990 Plan and 2005 and 2014 Plan revisions stated that Berks County executed an agreement with Browning Ferris, Inc. (then the owner of the Conestoga Landfill) on October 12, 1989. The County and the Authority entered a number of subsequent amendments to the 1989 Agreement related to the Conestoga Landfill, including letter agreements entered on April 1, 2003 and December 9, 2013, that memorialized the provision of disposal capacity for waste generated in Berks County during the previous two planning periods. The December 9, 2013 extension, extended the Agreement through the remaining term of the 2014 Plan revision. The execution of the agreement was to provide landfill capacity for municipal solid waste for the County.

In 2023, PADEP Waste Destination Reports indicate that this facility received 91,602 tons, or 17%, of the total solid waste generated in the County. In the past five years, this facility received an average of 107,790 tons per year, or approximately 17%, of the total solid waste generated in the County.

The Conestoga Landfill has a permitted area of 426 acres. The facility operates under a permitted MDV of 10,000 tons, and an ADV of 5,210 tons. The facility reports that the ADV in 2022 was approximately 4,216 tons, thus the facility accepts waste at a rate substantially lower than its permitted ADV. The 2022 Annual Operation Report, reported the remaining landfill capacity was approximately 9.67 million tons and the estimated remaining landfill life was 7.5 years (i.e., until 2030). The existing permit is set to expire in March 2028.

2.2.3 Western Berks Landfill

This facility, described in the original 1990 Plan and 2007 and 2014 Plan revisions operates under PADEP Solid Waste Permit No. 100739, and is still used to provide capacity for solid waste generated in Berks County. As mentioned above, the 2007 and 2014 Plan revisions stated that Berks County had executed an agreement with Western Berks Community Landfill and Recycling Center, LLC on April 3, 2007 to provide disposal capacity assurance for municipal solid waste generated in Berks County. The execution of that agreement was to provide landfill capacity for municipal solid waste for the County over 10-Years (2007 – 2017). On December 9, 2013 that Agreement was extended through December 31, 2025, or ten (10) years from the date of adoption of the 2014 Plan revision.

In 2023, PADEP Waste Destination Reports indicate that this facility received 148,211 tons, or nearly 27%, of the total solid waste generated in the County. This was similar to 2014 when it received 107,049 tons, or 21%, of the total solid waste generated in the County. In the past five years, this facility received an average of 165,903 tons per year, or nearly 26%, of total solid waste generated in the County.

The Western Berks Landfill has a permitted area of 110 acres. The facility operates under a permitted MDV of 1,250 tons and an ADV of 1,000 tons. The 2022 Annual Operation Report reported the remaining landfill capacity was approximately 562,000 tons and the estimated remaining landfill life is approximately 2.26 years (i.e., until 2024). Western Berks Landfill is scheduled to close in June of 2024. Once closed the intention is to pursue a Phase 1 and Phase 2 Expansion Permit for submission to PADEP. That expansion would be for approximately 4,000,000 CY.

2.2.4 Pioneer Crossing Landfill

The Pioneer Crossing Landfill has a permitted area of 215 acres. This facility operates under PADEP Solid Waste Permit No. 100346 with a permitted MDV of 1,975 tons and an ADV of 1,550 tons. In 2023, PADEP Waste Destination Reports indicated that this facility received 141,184 tons, or 26% of the total solid waste generated in the County. This was an increase of 83,913 tons from 2014 when they received 57,271 tons or approximately 11%, of the total solid waste generated in the County. Over the past five years, this facility received an average of 150,021 tons per year, or approximately 24%, of the total solid waste generated in the County.

The 2022 Annual Operation Report reported the remaining landfill capacity was approximately 2.13 million tons and the estimated remaining landfill life is approximately 5.5 years (i.e., until 2027). Their existing permit expiration date is December 17, 2033. They anticipate applying for an expansion to include an additional 35 years of capacity, in the Spring of 2024.

2.2.5 Other Landfills

A total of twenty disposal facilities that have received solid waste generated in Berks County in the past five years are included in Table 2-1, shown on page 31 of this document.

2.3 Closed Disposal Facilities

The 1990 Plan and 2005 and 2014 Plan revisions included six former landfills previously utilized for disposal of waste generated in Berks County. These facilities are no longer in operation and are therefore not included in this Plan revision. Those facilities include Grows North, Tullytown Resource Recovery, Pine Grove, Shade Township Waste Management and Advanced Disposal Green.

2.4 Other Facilities

Other facilities that are utilized to dispose of wastes generated in the County include waste-to-energy (WTE) facilities and transfer stations. These are discussed in the following sections.

2.4.1 Waste-To-Energy Facilities

The York County Resource Recovery Facility was added to the Berks County Plan as part of our 2013 Plan revision. The York County Resource Recovery Center received only 3.2 tons of waste generated in Berks County in 2023 and the LCSWMA SRMC received 1,412 tons. The Lancaster Resource Recovery Facility also received waste generated in Berks County over the past five years (ranging from 584 to 4,688 tons per year), consisting of primarily municipal solid waste, with 23% of it being residual waste. In addition, the Covanta Plymouth Renewable Energy, Lycoming County Resource, Tullytown Resource Recovery, and Wheelabrator Falls Inc., have all received minor amounts of waste generated in Berks County, over the past ten years. Historically, very little of the municipal solid waste generated in Berks County has been managed at WTE facilities.

2.4.2 Transfer Stations

There are currently three (3) transfer stations operating in Berks County, which include Berks Transfer Station located at 59 Willow Creek Road in Reading, Berky's Transfer Station located at 15 Breezy Park Drive in Fleetwood and the Clifford Hill Sanitation and Leck Waste Transfer Station located at 780 Nobel Street in Kutztown.

Because of the presence of multiple landfill facilities in and around Berks County, transfer stations managed a small percentage of waste generated in Berks County. Nothing in the Plan or this Plan revision prohibits the transfer of municipal solid waste at a transfer station permitted by PADEP.

Each and every application for a solid waste transfer facility proposed to be located in Berks County shall be copied and reviewed by the Berks County Planning Commission.

CHAPTER 3 - ESTIMATED FUTURE CAPACITY

3.1 Estimated Future Capacity at Facilities

The need for capacity assurance was recognized by the County and on June 22, 2023 an advertisement for capacity assurance appeared in the Pa. Bulletin, as well as the August 2023 edition of the Waste Advantage Magazine. Eleven landfills and three waste-to-energy facilities responded to our advertisement and in March of 2024, the Authority and the County entered into Disposal Capacity Agreements with those facilities, providing capacity through 2034 or 10 years from the date of adoption or approval of this Plan revision.

As indicated in Chapter 2, Table 2-2, on page 32 of this document, there are fourteen (14) disposal facilities that accept the majority of waste generated in Berks County for disposal. Eleven of the disposal facilities among the most utilized for waste generated in Berks County, have executed ten-year Disposal Capacity Agreement with Berks County and have future capacity of over one hundred eleven million tons as well as adequate permitted life, or expansion possibility, to serve the needs of Berks County for the duration of this planning period.

3.2 Estimated Future Waste Generation

Solid waste disposal reports and population figures from the past five and ten years were used to determine the trend in per capita waste generation rates. Table 3-1 shows the generation rates that were calculated for the County, for the municipal solid waste component, that is, wastes generated by residential households and commercial and institutional establishments; this component excludes all other components of the waste stream (i.e., C&D, sewage sludge, etc.), but does include recovered recyclables. Estimated waste generation rates for those other components of the municipal solid waste stream are included in Table 3-2, shown on page 42 of this document.

Table 3-3 shows the estimated generation and disposal quantities over this planning period for both the municipal solid waste and total solid waste components and is shown on page 43. The municipal solid waste component includes all of the following components: municipal, sewage sludge, construction, regulated medical and chemotherapeutic, ash and asbestos wastes, but excludes residual wastes.

**TABLE 3-1
HISTORICAL AND CURRENT WASTE GENERATION RATES
Tons Per Year**

YEAR	MUNICIPAL WASTE DISPOSAL	RECYCLING	MUNICIPAL WASTE GENERATION	POPULATION	GENERATION #PERSON/DAY (municipal waste only)
2014	272,502	183,675	456,177	412,925	6.05
2015	286,747	207,157	493,905	413,297	6.55
2016	301,316	213,733	515,049	413,669	6.82
2017	302,216	209,373	511,589	414,041	6.77
2018	322,704	211,259	533,963	414,414	7.06
2019	310,045	195,058	505,103	414,787	6.67
2020	311,663	202,632	514,295	428,849	6.57
2021	291,743	225,709	517,452	430,865	6.58
2022	280,904	252,624	533,528	430,449	6.79
2023	321,196	252,624	573,820	432,558	7.27

**TABLE 3-2
ACTUAL WASTE DISPOSAL RATES
Tons Per Year**

Year	Population	Municipal Waste	C & D	Regulated Medical	Sewage	Ash	Asbestos	Municipal and Special Handling Wastes	Pounds person/day
2014	412,925	272,502	20,102	16,323	18,810	35,463	1,504	364,703	4.84
2015	413,297	286,747	28,914	15,474	15,330	32,222	184	378,871	5.02
2016	413,669	301,316	58,456	16,315	15,411	15,746	546	407,791	5.40
2017	414,041	302,216	68,769	15,002	19,034	12,759	3,665	421,444	5.58
2019	414,414	322,704	41,230	15,219	22,377	5,622	651	407,803	5.39
2019	414,787	310,045	47,882	15,928	27,163	-	367	401,384	5.30
2020	428,849	311,663	55,668	15,367	23,419	-	1,298	407,416	5.21
2021	430,865	291,743	41,672	15,237	21,103	20	395	370,170	4.71
2022	430,449	280,904	18,985	13,273	22,356	-	321	335,839	4.28
2023	432,558	321,196	15,063	9,005	23,075	-	947	369,285	4.68
5 Year Ave.	427,502	303,110	35,854	13,762	23,423	4	666	376,819	4.83
10 Year Ave.	420,585	300,104	39,674	14,714	20,808	10,183	988	386,471	5.04
Estimated Per Capita Disposal - Five (5) year average (#/person/day)		3.89	0.46	0.18	0.30	0.00	0.01	4.83	
Estimated Per Capita Disposal – Ten (10 year) average (#/person/day)		3.91	0.52	0.19	0.27	0.13	0.01	5.03	

**TABLE 3-3
ESTIMATED MUNICIPAL SOLID WASTE STREAM GENERATION AND DISPOSAL
QUANTITIES OVER 10-YEAR PLANNING PERIOD (2024 2033)**

Year	Population (b)	Municipal and Special Handling Waste Disposal (tons) (a)	Municipal and Special Handling Waste Generation (tons) (a) (c)	Recycled Tons (d)	Total Solid Wastes Disposal (tons) (e)	
2014	412,925	364,703	548,378	183,675	521,991	
2015	413,297	378,871	586,028	207,157	512,084	
2016	413,669	407,791	621,523	213,733	542,898	
2017	414,041	421,444	630,817	209,373	595,188	
2018	414,414	407,803	619,062	211,259	626,544	
2019	414,787	401,384	596,443	195,058	670,609	
2020	428,849	407,416	610,047	202,632	613,828	
2021	430,865	370,170	595,879	225,709	681,137	
2022	430,449	335,839	588,463	252,624	636,071	
2023	432,558	369,285	621,909	252,624	546,518	
Planning Period "Projections"	2024	434,678	389,127	644,127	255,000	603,711
	2025	436,851	391,072	646,572	255,500	606,729
	2026	439,079	393,067	650,067	257,000	609,824
	2027	441,318	395,072	653,072	258,000	612,934
	2028	443,569	397,086	656,586	259,500	616,060
	2029	445,831	399,112	660,112	261,000	619,202
	2030	448,105	401,147	663,147	262,000	622,360
	2031	450,211	403,032	666,532	263,500	625,284
	2032	452,327	404,927	669,427	264,500	628,224
	2033	454,453	406,830	673,830	267,000	631,177

Years 2014 – 2023 are actual weights as reported by PADEP.

Years 2024 – 2033 are estimates for this planning period

Notes:

- a - Includes municipal solid waste stream components: municipal, C&D, RMW, sewage sludge, ash and asbestos wastes. Using a disposal rate of 4.90 pounds/person/day throughout this planning period. Excludes residual wastes.
- b - Based on Year 2020 US Census Bureau population estimates and population growth rate of 0.47% per year.
- c - Calculated adding the Municipal Solid Waste Disposal and Recycling Tons.
- d - The recycling rate accounts for all recyclables from residential, commercial and institutional sources.
- e - Calculated using a generation rate of approximately 7.62 pounds/person/day throughout this planning period. Including residual waste.

Total waste generation is required by Act 101 to include all municipal solid waste components, but is also required to take into consideration the volumes of residual waste that would likely be disposed of in facilities utilized by the County. Therefore, the projected quantity of residual waste generation over this planning period is also discussed in this Plan revision.

It should be noted that, in the last ten (10) years the municipal solid waste stream (i.e., municipal, sewage sludge, construction, regulated medical and chemotherapeutic, ash residue and asbestos wastes, per PADEP Waste Destination Reports), made up approximately 60% of the total solid waste disposed of. During 2019 through 2023 however, the municipal solid waste stream made up approximately 65% of the total solid waste disposed (refer to Table 1-2 shown on page 14 of this document). This number has dropped significantly since our 2014 Plan revision when it was reported at 82%.

Using population data and the per capita waste generation rate estimates described previously, total municipal solid waste generation projections for the County over this 10-year planning period have been estimated. In addition, the quantities of the recyclable portion of the municipal solid waste stream have been estimated based on historic recycling rates in the County and the PADEP goal of 35% recycling. These projections are shown in Table 3-3. (Refer to Table 3-6, shown on page 50 of this document, for a further breakdown of the generation projections by individual components of the municipal solid waste stream.)

The total municipal solid waste to be disposed of over this 10-year planning period is estimated to be approximately 3.98 million tons. This includes the municipal solid waste stream (i.e., wastes originating from residential, commercial and institutional establishments), which includes the following waste components: municipal, sewage sludge, construction, regulated medical and chemotherapeutic, ash residue and asbestos wastes; but does not include residual wastes or recyclables.

3.2.1 Residential Waste Projections

Based on the evaluation of current data, including 2020 census data for demographic, economic, housing and social characteristics, the current proportion of residential-generated waste in the municipal solid waste stream is estimated to be 54% (refer to Table 3-4, shown on page 47 of this document). A breakdown of the municipal solid waste stream into fractions from residential sources, and projected disposal quantities is provided in Table 3-6, shown on page 50 of this document.

3.2.2 Commercial/Industrial Waste Projections

Based on the evaluation of current data, including 2020 census data for demographic, economic, housing and social characteristics, the current proportion of commercial/industrial generated waste in the municipal solid waste stream is estimated to be 34% (refer to Table 3-4, shown on page 47 of this document). A breakdown of the municipal solid waste stream into fractions from commercial/industrial sources, and projected disposal quantities provided in Table 3-6, shown on

page 50 of this document.

3.2.3 Institutional Waste Projections

Based on the evaluation of current data, including 2020 census data for demographic, economic, housing and social characteristics, the current proportion of institutional-generated waste in the municipal solid waste stream is estimated to be 12% (refer to Table 3-4, shown on page 47 of this document). A breakdown of the municipal solid waste stream into fractions from institutional sources, and projected disposal quantities is provided in Table 3-6, shown on page 50 of this document.

3.2.4 Other Waste Types

The PADEP requires Counties to project the volumes of special handling wastes for the planning period. These waste types include construction and demotion, regulated medical and chemotherapeutic, sewage sludge, ash residue, asbestos and residual wastes and are also generated by residential, commercial, industrial, and institutional sources. They are discussed individually here to give a sense of the individual portions generated.

Construction and Demolition Waste Projections

The PADEP Waste Destination Report show that construction and demolition wastes generated in Berks County, being disposed of at Pennsylvania disposal facilities, make up less an 6% of our waste stream (2019-2023 Waste Destination Reports). This increased significantly from our 2014 Plan revision when it represented on 2.9%. However, this does not include the C & D waste that is processed at the Zwicky Processing Center and numerous transfer stations, which certainly has a huge diversion from area landfills and skews this number greatly.

Regulated Medical and Chemotherapeutic Waste

The wastes included in the medical sector are managed separately from typical municipal solid wastes. These wastes, often called Regulated Medical and Chemotherapeutic Waste (RMW) in Pennsylvania, are separately quantified. The PADEP waste receipts show that RMW currently makes up approximately 2% of the Berks County waste stream disposed of in PA Disposal Facilities for both the five and ten-year period. (Refer to Table 1-2, shown on page 14 of this document).

Sludge Generation Projections

The PADEP waste receipts show that sludge and septage wastes make up approximately 4% of the waste stream disposed of in PA Disposal Facilities (2019-2023 Waste Destination Reports). (Refer to Table 1-2, shown on page 14 of this document). This has remained stable since our 2014 Plan revision.

Ash

The PADEP waste receipts show that no ash generated in Berks County was disposed of in PA Disposal facilities during the past five years (2019-2023 Waste Destination Reports).

This decrease, since our 2014 Plan revision, is due to the closing of the Evergreen Power Plant in 2018.

Asbestos

The PADEP waste receipts show that asbestos make up far less than 1% (approximately .1%) of the waste stream disposed of in PA Disposal Facilities (2019-2023 Waste Destination Reports). (Refer to Table 1-2 on page 14 of this document). This has remained stable since our 2014 Plan revision.

Residual Waste Projections

The PADEP waste receipts show that residual wastes make up approximately 40% of the waste stream disposed of in PA Disposal Facilities (2019-2023 Waste Destination Reports). This represents a significant increase from our last planning period when it was 18%. It is therefore estimated that, over this ten-year planning period, residual wastes to be disposed of will total 2.19 million tons. This value, added to the 6.58 million tons of municipal solid waste, (8.77 million tons of total solid waste minus 2.60 million tons of recyclables) results in a total of 6.17 million tons over this ten-year planning period.

**TABLE 3-4
MUNICIPAL SOLID WASTE STREAM ORIGIN AND PROJECTED DISPOSAL QUANTITIES
10-YEAR PLANNING PERIOD (2024 - 2033) BERKS COUNTY, PA**

Municipal and Special Handling Waste - Disposal Tons Per Year					
Year	Municipal and Special Handling Wastes (a)	Residential Fraction	Commercial Fraction	Institutional Fraction	
2014	364,703	196,939	123,999	43,764	
2015	378,841	204,574	128,806	45,461	
2016	407,791	220,207	138,649	48,935	
2017	421,444	227,580	143,291	50,573	
2018	407,803	220,214	138,653	48,936	
2019	401,384	216,748	136,471	48,166	
2020	407,416	220,004	138,521	48,890	
2021	370,170	199,892	125,858	44,420	
2022	335,839	181,353	114,185	40,301	
2023	369,285	199,414	125,557	44,314	
Planning Period "Projections"	2024	389,127	210,128	132,303	46,695
	2025	391,072	211,179	132,965	46,929
	2026	393,067	212,256	133,643	47,168
	2027	395,072	213,339	134,324	47,409
	2028	397,086	214,427	135,009	47,650
	2029	399,112	215,520	135,698	47,893
	2030	401,147	216,619	136,390	48,138
	2031	403,032	217,638	137,031	48,364
	2032	404,927	218,660	137,675	48,591
	2033	406,830	219,688	138,322	48,820
10 Year Planning Period	3,980,472	2,149,455	1,353,360	477,657	

Notes:

Includes municipal, C&D, RMW, sewage sludge, ash residue and asbestos wastes. Excludes recycled materials and residual wastes.

Based on data presented in Table 3-6, Estimated Solid Waste Generation and Disposal Quantities.

- Residential Sector - 54% of municipal solid waste types. Waste Characteristics by Generation Source.
- Commercial - 34% of municipal solid waste types.
- Institutional - 12% of municipal solid waste types

3.3 Estimated Total Capacity Required

As shown in Table 3-3 on page 43 of this document, the projected total capacity required for this planning period is approximately 3.98 million tons of municipal solid waste. This figure includes municipal, sewage sludge, construction, regulated medical and chemotherapeutic, ash residue and asbestos waste types, but does not include materials that have been removed from the waste stream as a result of recycling and waste reduction or residual waste. As indicated in Section 3.2.4, it is estimated that residual wastes to be disposed of over the ten-year planning period will total 2.19 million tons. This value, added to the 3.98 million tons of municipal solid waste, results in a disposal capacity of 6.17 million tons over the ten-year planning period. In order for the disposal capacity required by the County to demonstrate a “worst case” scenario, the 6.17 million tons will be used for planning purposes, however disposal capacity agreements will be secured for the 3.98 million tons of municipal solid waste only, residual waste, as outlined in Title 25, Chapter 272.23 (a) 2.

3.3.1 Variables Affecting Total Capacity Requirements

The variables that affect the capacity required by the County for municipal solid waste generated by its residents and businesses have been factored into the calculations and projections contained in this report. These variables include the rate of population growth, the rate of expanded development in the County, and the success of the County’s recycling and waste reduction programs. Population projections used in this Plan revision are based on the most accurate and recent available data, from 2020 census.

Real and probable data has been utilized to represent the volume of recyclable materials that the County will recover during this planning period. The County has established recycling programs and will continue to assist municipalities in improving these programs by assisting with Countywide reports from haulers, trash and recycling bid specifications to encourage more competition and grant writing. The County has surpassed the state goal of 35% recycling and the County is committed to working to continue increasing our recycling rate. Continued improvement in recycling and waste reduction efforts will decrease the volume of waste that requires disposal. See Chapter 4 for additional detail.

3.4 Need for Capacity Assurance

In March of 2024 the County and the Authority executed Capacity Agreements with fourteen (14) Disposal Facilities. Copies of the executed disposal capacity agreements are included in Appendix A, along with the County’s Resolution authorizing the execution of the agreements. An evaluation of the capacity offered by these facilities, based on the remaining life of the facility and the County’s annual waste disposal projections, was conducted. Based on this evaluation, the County has sufficient capacity available for the ten-year planning period. Section 7.b of these Agreements includes an extension clause intended to allow for reasonable extension of the Agreements in the unlikely event that this Municipal Waste Management Plan may expire prior to a new Municipal Waste Management Plan being finalized and approved by the PADEP, to allow for guaranteed municipal waste disposal capacity. See Table 3-5 below.

**TABLE 3-5
FACILITIES PROVIDING CAPACITY ASSURANCE
Berks County, PA**

Owner	Facility Name (Location)	Type of Facility
Delaware County Solid Waste Authority	Rolling Hills Landfill	Landfill
New Morgan Landfill Company, Inc. d/b/a Conestoga	Conestoga Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Western Berks Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Alliance Sanitary Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Cumberland County Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Fairless Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Grand Central Landfill	Landfill
Waste Management of Pennsylvania, Inc.	Lancaster Landfill	Landfill
Keystone Landfill, Inc. and L&D Management, Inc.	Commonwealth Environmental Systems, L.P.	Landfill
Waste Connections, Inc.	Bethlehem Landfill	Landfill
Casella Waste Systems, Inc.	McKean County Landfill	Landfill
York County Solid Waste Authority	York Resource Recovery Facility	WTE
Lancaster County Solid Waste Management Authority	LCSWMA Resource Recovery Facility	WTE
Lancaster County Solid Waste Management Authority	Susquehanna Resource Management Complex (SRMC	WTE

**TABLE 3-6
Breakdown of Estimated Municipal Solid Waste Stream Generation and Disposal Quantities Over 10-year Planning Period**

				Generation (tons) b										
Year	Population	Recycling Tons	Recycling %	Municipal Waste and Recycling	Municipal Waste	C & D	Infectious	Sewage	Ash	Asbestos	Total Municipal and Special Handling Wastes Generation	Total Municipal and Special Handling Wastes less Recycling	Residual Waste	
2014	412,925	183,675	40%	456,177	272,502	20,102	16,323	18,810	35,463	1,504	548,378	364,703	157,288	
2015	413,297	207,157	42%	493,905	286,747	28,914	15,474	15,330	32,222	184	586,028	378,871	133,213	
2016	413,669	213,733	41%	515,049	301,316	58,456	16,315	15,411	15,746	546	621,523	407,791	135,108	
2017	414,041	209,373	41%	511,589	302,216	68,769	15,002	19,034	12,759	3,665	630,817	421,444	173,743	
2018	414,414	211,259	40%	533,963	322,704	41,230	15,219	22,377	5,622	651	619,062	407,803	218,741	
2019	414,787	195,058	39%	505,103	310,045	47,882	15,928	27,163	-	367	596,443	401,384	269,225	
2020	428,849	202,632	39%	514,295	311,663	55,668	15,367	23,419	-	1,298	610,047	407,416	206,413	
2021	430,865	225,709	44%	517,452	291,743	41,672	15,237	21,103	20	395	595,879	370,170	310,967	
2022	430,449	252,624	47%	533,528	280,904	18,985	13,273	22,356	-	321	588,463	335,839	300,232	
2023	432,558	252,624	44%	573,820	321,196	15,063	9,005	23,075	-	947	621,909	369,285	177,233	
Planning Period "Projections"	2024	434,678	255,000	45%	565,239	310,239	41,139	15,241	21,483	-	1,026	644,127	389,127	214,584
	2025	436,851	255,500	45%	567,290	311,790	41,345	15,317	21,590	-	1,031	646,572	391,072	215,657
	2026	439,079	257,000	45%	570,380	313,380	41,555	15,395	21,700	-	1,036	650,067	393,067	216,757
	2027	441,318	258,000	45%	572,978	314,978	41,767	15,473	21,811	-	1,041	653,072	395,072	217,862
	2028	443,569	259,500	45%	576,085	316,585	41,980	15,552	21,922	-	1,047	656,586	397,086	218,974
	2029	445,831	261,000	45%	579,199	318,199	42,195	15,632	22,034	-	1,052	660,112	399,112	220,090
	2030	448,105	262,000	45%	581,822	319,822	42,410	15,711	22,146	-	1,057	663,147	401,147	221,213
	2031	450,211	263,500	45%	584,825	321,325	42,609	15,785	22,251	-	1,062	666,532	403,032	222,252
	2032	452,327	264,500	45%	587,336	322,836	42,809	15,859	22,355	-	1,067	669,427	404,927	223,297
	2033	454,453	267,000	45%	591,353	324,353	43,011	15,934	22,460	-	1,072	673,830	406,830	224,347
10 Year Planning Period		2,603,000		5,776,509	3,173,509	420,820	155,899	219,753	-	10,491	6,583,472	3,980,472	2,195,034	

- a. Actual Census data for years 2010 thru 2020; others based on year 2024 population estimates from U.S. Department of the Census, increasing at a rate of 0.47% per year. (2020 Census data obtained from the Berks County Planning Commission).
- b. Years 2014 through 2023 values are from PADEP Waste Destination Reports for Berks County.
- c. Municipal waste after 2024 through 2033 is calculated using a generation rate of 3.91 pounds/person/day (Table 3-2)
- d. C&D Waste Generation after 2024 through 2033 is calculated using a generation rate of 0.52 pounds/person/day (Table 3-2).
- e. RMW Generation after 2024 through 2033 is calculated using a generation rate of 0.19 pounds/person/day (based on Table 3-2).
- f. Sewage Sludge Generation after 2024 through 2033 is calculated using a generation rate of approximately 0.27 pounds/person/day (Table 3-2).
- g. Ash Waste Generation after 2024 through 2033 is calculated using a generation rate of approximately 0.00 pounds/person/day (Table 3-2).
- h. Asbestos Waste Generation after 2024 through 2033 is calculated using a generation rate of 0.01 pounds/person/day (Table 3-2).
- i. Residual Waste Generation after 2024 through 2033 is calculated using a generation rate of 2.71 pounds/person/day (Table 3-2)
- j. Total Solid Waste includes municipal, C&D, RMW, sewage sludge, ash, asbestos and residual waste components.
- k. The recycling rate includes all recyclables reported through RE-Trac from residential, commercial, and institutional sources.

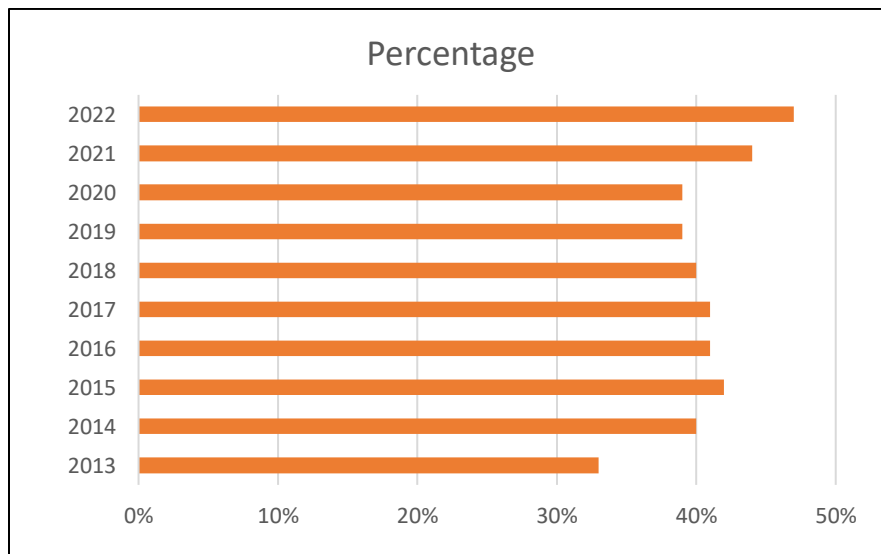
CHAPTER 4- DESCRIPTION OF RECYCLABLE MATERIALS

4.1 INTRODUCTION

This chapter describes the recycling activities currently taking place in Berks County and the impact recycling will have on the amount of municipal solid waste requiring disposal/processing capacity, over this planning period. Recycling in Berks County has continued to expand and reporting procedures and communication has continued to improve, which allowed Berks County to exceed the PADEP's recycling goal of 35%.

The recycling rates in Berks County have increased and decreased from year to year since 2013, as seen in Figure 4-1 below.

FIGURE 4-1
Berks County Recycling Rates, 2013 through 2022
Percentage of Waste Stream each year



Since the 2005 Plan revision, the County has continued to improve reporting channels for recycling data collection, thereby improving the accuracy of the County's overall reported recycling rate and improving the accuracy of the recycling reports.

4.2 Recyclables for Possible Consideration

4.2.1 Standard Materials

The 1990 Plan, 2005 and 2014 Plan revisions focused on basic material types for recycling programs, including:

Paper (newspaper, corrugated cardboard, mixed paper, and high-quality office paper)

Metal (aluminum cans, bi-metal cans, steel cans, scrap metals, and appliances)

Glass (clear, amber, green, mixed colors)

Others (food wastes, leaf and yard wastes, HDPE plastics, PET bottles, used motor oil, electronics, tires and household hazardous waste)

Due to the efforts put forth by the municipalities within the County, recycling in Berks County has moved beyond the traditional Act 101 materials and now includes such items as tires, textiles, consumer electronics, mixed plastic, auto parts, lead-acid batteries, universal waste, hazardous waste and more. The Authority also conducts collection programs for the following types of materials: hazardous waste, electronics, pharmaceutical, tire recycling and paper shredding. These collections have been extremely successful in removing hazardous and toxic wastes from the waste stream, while greatly improving our recycling programs.

This section will briefly describe the materials that are most commonly targeted in municipal recycling programs.

4.2.2 Leaf Waste

Mandated municipalities are required to separate leaf waste from other municipal solid waste. Organic materials can be ground into mulch, or processed to create compost, and has been proven to be beneficial in many municipal, residential and agricultural applications, while also removing a substantial quantity of waste, which would otherwise require disposal capacity. Each year, Pennsylvania generates more than two million tons of yard waste, which accounts for approximately 20% of the municipal solid waste stream. This fraction increases significantly in autumn due to the seasonal collection of leaves by municipalities. The definition of the materials that are the subject of this focus includes leaves, garden residues, shrubbery, tree trimmings, brush and similar materials, but does not include grass clippings.

Recovery of this organic portion of the waste stream, as an alternative to landfilling or incineration, has been the focus of a number of recent PADEP programs. In fact, Act 101 prohibits landfills from accepting truckloads of leaf waste for disposal and also mandates that larger municipalities collect this waste for composting. Grant applications under Act 101, Section 902 have historically been a popular way for municipalities to request monies to assist in the development of recycling and composting programs.

The recycling rates of leaf waste in Berks County have increased and decreased from year to year since 2013, as shown in the chart below.



The Authority assisted Hopewell Nursery in Amity Township in obtaining their yard waste permit to accept Colebrookdale Townships yard waste. Hopewell Nursery is a permitted yard waste site and provides grinding services for a number of municipalities and businesses, both in and outside of Berks County. Lower Heidelberg Township entered into an Inter-Municipal Agreement with South Heidelberg Township, to use their yard waste site and received grant money to make necessary improvements. Wernersville Borough also has an Inter-Municipal Agreement with South Heidelberg Township to use their yard waste site. In addition, Laureldale Borough has an Inter-Municipal Agreement with Muhlenberg Township and St. Lawrence Borough with Exeter Township, all for the shared use of yard waste drop-off sites. Twenty-five municipalities in Berks County provide drop-off access, at twenty-one permitted yard waste sites. Seven municipalities in Berks County provide year-round curbside collection of leaf waste, for their residents. Nine (9) farms in Berks County are currently permitted by PADEP for the land application of leaves, collected by Berks County municipalities. In addition, the Rodale Institute Farm located in Maxatawny Township, Berks County is permitted as a Demonstration Facility to accept food and yard waste, which is used for research, farmer training and education. Giorgio Foods, Inc. located in Muhlenberg Township accepts leaf waste from a number of Berks County municipalities and uses that material for mushroom production. Below is a listing of municipalities with both drop-off and curbside leaf/yard waste collection programs:

Amity Township	Robesonia Borough
Bern Township	Shillington Borough
Bernville Borough	Sinking Spring Borough
Birdsboro Borough	South Heidelberg Township
Colebrookdale Borough	Spring Township
Cumru Township	St. Lawrence Borough
Exeter Township	Wernersville Borough
Heidelberg Township	West Reading Borough
Kutztown Borough	Womelsdorf Borough
Laureldale Borough	City of Reading
Leesport Borough	Hamburg Borough
Lower Heidelberg Township	Kenhorst Borough
Maidencreek Township	Lower Alsace Township
Maxatawny Township	Mount Penn Borough
Mohnton Borough	Topton Borough
Muhlenberg Township	Wyomissing Borough

4.2.3 Food Waste Composting

The Authority worked closely with PADEP, the Conrad Weiser School District, the Rodale Institute and Cogle's Recycling in the development of a post-consumer food waste composting project, which was implemented throughout the School District in 2009. In October of 2008, the Rodale Institute located in Maxatawny Township, Berks County received their Permit from PADEP to operate a Demonstration Facility, to be used for this project. In 2010, PADEP awarded \$ 74,000 towards the development of a food waste collection program, EPA awarded a total of \$11,000 towards the 2011 and 2012 collection costs and the Authority dedicated \$10,000 towards the success of this program in both 2011 and 2012. The Authority awarded the collection contract to Cogle's Recycling in November of 2010 and moved forward with the purchase of our collection equipment, with the program kicking off in April of 2011.

In November of 2012, at the Authority's request, Gannet Fleming performed a technical review of our program, on behalf of PADEP. The recommendation of that review was for the Authority to terminate our involvement in the food waste program, as originally designed and to have the program operated directly by the private sector, if there is adequate interest. A copy of the technical review can be found on the Authority website at:

<http://www.co.berks.pa.us/Dept/SWA/Documents/Special%20Wastes/Berks%20Co%20%20RTA%20527%20-%20Draft%20Rpt%2011-7-2012rev1.pdf>

Food waste composting is still being offered in Berks County to a number of large grocery stores and department stores, such as Walmart, Giant and Weis markets and reported through RE-Trac.

4.3 Potential Benefits of Recycling

The 1990 Plan and 2005 and 2014 Plan revisions discussed three main benefits of recycling, which still exist in the County. The first and most direct potential benefit of recycling programs is economic. The economic benefits come both from the potential revenues from sale of materials and the avoided disposal costs. In many municipal programs, it has been, and will continue to be, cheaper to collect and recycle materials for which markets can be found than to dispose of them in a landfill or resource recovery plant. The County as a whole also realizes some income from the sale of these materials. At a 35 percent recycling rate, the PADEP recycling goal, 175,000 tons of recyclable materials would be diverted in 2023 from disposal. However, currently and based on recycling data, Berks County is reporting recovery of recyclables on the order of approximately 252,652 tons (approximately 44%). With the creation of new recycling programs, considering available markets, and the expansion of existing programs and increased/better reporting requirements, Berks County will continue to exceed the PADEP goal of 35 percent recycling, during this planning period.

The decrease in the tonnage of municipal solid waste requiring disposal in 2023 as a result of diversion for recycling (at the 44% recycling rate) would result in an estimated annual savings of \$18.9 million dollars in disposal fees (tipping fees only) (assuming a gate rate of \$75 /ton). By the end of this planning period (2034), as much as 2.95 million tons of recyclables can be expected to be diverted from waste generated in Berks County, with an estimated savings of \$221million

dollars.

The second economic benefit of recycling is saving resources. This item applies primarily to materials that have commercial value, such as aluminum. However, items such as paper and glass that have relatively weaker markets are not as valuable when recycled. Paper is made from a renewable resource, and glass is inexpensive and easy to produce due to its commonly found ingredients. Analysis of economic benefit is not valid for yard waste, which is completely renewable and is not typically considered a raw material.

State recycling grants under Act 101 have provided support of, and benefits to, County and municipal recycling programs in the form of planning grants under Section 901, Development and Implementation Grants under Section 902, County Recycling Coordinator Grants under Section 903, and Recycling Performance Grants under Section 904. Some of these grants reimburse counties and municipalities for money spent implementing or enhancing recycling programs, while others reward counties and municipalities that have succeeded in recovering significant volumes of materials. Monies from these grants can be significant. Since the last Plan revision in 2014, Berks County and our municipalities have received over \$ 15.6 million in 902 grants, over \$6.2 million in 904 grants and \$620,000 in 903 grants.

The County and individual municipalities will continue to work with the PADEP to enhance their recycling programs and, through the Authority's Executive Director, improve reporting channels for recycling data collection, as well as, determine which of the programs are eligible for appropriate grant funds. The Authority and/or the County will also work with municipalities to prioritize applications for municipalities that are in the most need of grant funding to start recycling programs or to improve the efficiency of existing ones.

The recycling and waste information for Berks County, for the year 2022, was entered into the EPA Waste Reduction Model (WARM) program to estimate greenhouse gas emission reductions and economic impacts from several different waste management practices. WARM calculates greenhouse gas emissions, energy and economic impact for baseline and alternative waste management practices, including source reduction, recycling, combustion, composting, and landfilling. A copy of the Berks County WARM is attached in Appendix H. In addition to the potential benefits of recycling, the benefits of waste reduction are extremely valuable. The WARM report, for Berks County, calculated a savings of 218,000 metric tons of carbon dioxide, and savings of \$ 54.29 million dollars in wages and \$14.78 million dollars in taxes being directly associated with waste management practices in Berks County.

Recycling information, for the year 2022, was also entered into Re-TRAC to evaluate the three Environmental Benefits, which include the following: Domestic Equivalencies, Fuel Equivalencies and Natural Resources Equivalencies. These reports, for Berks County, calculated a savings of 305,860.94 metric tons of carbon dioxide, which was not released due to recycling efforts in Berks County. Copies of these three reports are included in Appendix H, where additional information related to the positive impact of recycling on forest preservation, fuel conservation, and reduction of energy usage can be found.

4.4 Existing Recycling Activities

As per § 272.411 of the PA Code, all municipalities with populations exceeding 5,000 people with population densities exceeding 300 people per square mile are required to recycle, as well as any municipality exceeding 10,000 residents. These are referred to as “mandated municipalities”. Table 4-1 (page 59-64) summarizes the recycling programs, both curbside and drop-off, that are presently in place in the municipalities in Berks County and also indicates if that municipality is mandated to recycle. The following sections summarize the existing recycling activities in the County, which is available through state and county reports.

4.4.1 Mandated Municipalities

Twenty-two (22) municipalities in the County are currently required to mandate by ordinance, that their residents and businesses participate in recycling services. Fifteen (15) are required under Act 101 and seven (7) under Act 140. Those required under Act 101 are: the City of Reading; Amity, Bern, Colebrookdale, Cumru, Exeter, Lower Heidelberg, Maiden creek, Muhlenberg, South Heidelberg and Spring Townships; and the Boroughs of Birdsboro, Kutztown, Shillington, and Wyomissing. All fifteen of these Act 101 mandated municipalities in the County utilize curbside collection of recyclables for their residents, as shown in Table 4-1 (Page 59-64). Furthermore, each of these municipalities has implemented a curbside recycling program that collects more than the minimum required types of materials. The following municipalities are mandated under Act 140 and are in compliance with those requirements: Caernarvon, Heidelberg, Marion, Ontelaunee and Richmond Townships and Hamburg and West Reading Boroughs.

The Authority’s Executive Director and/or the County will continue to provide the municipalities with assistance in developing an appropriate program and coordinating details of these programs. The Authority’s Executive Director and/or the County will continue to assist municipalities to improve reporting channels for recycling data collection, thereby improving the accuracy of the County’s overall reported recycling rate and improving the accuracy of the recycling reports.

None of the mandated municipalities in Berks County have delegated this responsibility to the County.

TABLE 4-1

CURBSIDE AND DROP-OFF RECYCLING PROGRAMS IMPLEMENTED IN BERKS COUNTY

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Adamstown Borough	No	No	No	None	None
Albany Township	No	No	No	None	None
Alsace Township	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Amity Township	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Bally Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Bechtelsville Borough	No	No	No	None	None
Bern Township	Yes	Yes	Yes - Municipal and County	Aluminum and tin cans, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, #1-#6 Plastic bottles and containers, mixed paper and OCC
Berville Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Bethel Township	No	No	No	None	None
Birdsboro Borough	Yes	Yes	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Boyertown Borough	No	Yes - Private subscription	No	None	None
Brecknock Township	No	Yes - Private subscription	No	None	None
Caernarvon Township	No	Yes - Private Subscription by Ordinance	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Centerport Borough	No	No	No	None	None
Centre Township	No	No	No	None	None
City of Reading	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Colebrookdale Borough	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Cumru Township	Yes	Yes	Yes - Landfill	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
District Township	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Douglass Township	No	No	No	None	None
Earl Township	No	No	Yes - Landfill	None	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper and OCC
Exeter Township	Yes	Yes	Yes - Municipal and Landfill	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper and OCC
Fleetwood Borough	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Greenwich Township	No	No	No	None	None
Hamburg Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Heidelberg Township	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Hereford Township	No	Yes - Private subscription	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Mixed paper
Jefferson Township	No	No	No	None	None
Kenhorst Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Kutztown Borough	Yes	Yes	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Laureldale Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Leesport Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Lenhartsville Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Longswamp Township	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Lower Alsace Township	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	
Lower Heidelberg Township	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Lyons Borough	No	No	No	None	None
Maidencreek Township	Yes	Yes	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Marion Township	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Maxatawny Township	No	Yes - Private Subscription by Ordinance	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Mohnton Borough	No	Yes	No	Aluminum and tin cans , clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Mount Penn Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Muhlenberg Township	Yes	Yes	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
New Morgan Borough	No	No	Yes - Landfill	None	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
North Heidelberg Township	No	No	No	None	None
Oley Township	No	Yes - Private subscription	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Mixed paper
Ontelaunee Township	No	Yes - Private subscription	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Penn Township	No	No	No	None	None

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Perry Township	No	No	No	None	None
Pike Township	No	No	No	None	None
Richmond Township	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles, and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Robeson Township	No	Yes - Private Subscription by Ordinance	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Robesonia Borough	No	Yes	No	Aluminum and tin cans, #1-#6 Plastic bottles and containers and mixed paper	None
Rockland Township	No	No	No	None	None
Ruscombamanor Township	No	No	No	None	None
Shillington Borough	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Shoemakersville Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Sinking Spring Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
South Heidelberg Township	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Spring Township	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
St. Lawrence Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Tilden Township	No	No	No		

Municipality	Mandated	Curbside	Drop-off	Materials - Curbside	Materials - Drop-off
Topton Borough	No	Yes - Private subscription by Ordinance	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Tulpehocken Township	No	No	No	None	None
Union Township	No	Yes - Private subscription	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Upper Bern Township	No	No	No	None	None
Upper Tulpehocken Township	No	No	Yes	None	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Washington Township	No	Yes - Private subscription	Yes	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper
Wernersville Borough	No	Yes	No	Aluminum and tin cans, #1-#6 Plastic bottles and containers and mixed paper	None
West Reading Borough	No	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None
Windsor Township	No	No	No	None	None
Womelsdorf Borough	No	Yes	No	Aluminum and tin cans, #1-#6 Plastic bottles and containers and mixed paper	None
Wyomissing Borough	Yes	Yes	No	Aluminum and tin cans, clear and colored glass bottles and jars, #1-#6 Plastic bottles and containers and mixed paper	None

4.4.2 Non-mandated Municipalities

Fifty-one (51) municipalities in Berks County are not yet mandated to implement recycling programs. Of these fifty-one (51) non-mandated municipalities, twenty-four (24) have voluntary programs in place.

Seven (7) non-mandated municipalities have voluntary recycling drop-off programs in place (Brecknock, Earl, Hereford, Robeson, Upper Tulpehocken and Washington Townships and New Morgan Borough) and seventeen (17) non-mandated municipalities have curbside collection programs in place (Lower Alsace and Maxatawny Townships, Bally, Bernville, Kenhorst, Laureldale, Leesport, Lenhartsville, Mohnton, Mount Penn, Robeson, St. Lawrence, Shoemakersville, Sinking Spring, Topton, Wernersville and Womelsdorf Boroughs).

4.4.3 Curbside Collection

Standard Materials

Presently, the majority of successful County programs involve curbside collection of recyclables, often by the same vendor that provides the municipal solid waste collection services. The recycling vendor is typically contracted directly by the municipality or resident to provide the service. There is an extensive network of private haulers that provide recycling collection services in Berks County.

Robeson, Wernersville, and Womelsdorf operate under a Council of Government (COG) through which trash and recycling collection for all three municipalities are contracted together. This type of inter-municipal cooperation and agreement benefits the participants by achieving lower rates for joint collection services than for individual collection services. An example of the inter-municipal agreement is included in Appendix F.

Yard Waste

The collection of fall leaves is often handled by municipal staff through the Public Works Department. The following thirty-three (33) municipalities currently provide curbside collection of leaves for their residents: Amity, Bern, Colebrookdale, Cumru, Exeter, Heidelberg, Lower Alsace, Lower Heidelberg, Maiden creek, Maxatawny, Muhlenberg, South Heidelberg and Spring Townships, and the Boroughs of Bernville, Birdsboro, Fleetwood, Hamburg, Kenhorst, Kutztown, Laureldale, Leesport, Mohnton, Mount Penn, Robeson, St. Lawrence, Shillington, Sinking Spring, Topton, Wernersville, West Reading, Womelsdorf, and Wyomissing and the City of Reading.

In addition, Act 101 requires those municipalities mandated under Act 101 to collect leaf waste, including leaves, garden residues, shrubbery and tree trimmings, and similar materials, but not including grass clippings, through curbside collection twice per year, supplemented with a drop-off location. These materials are to be collected so they are diverted from disposal in landfills. Often these materials are collected for either mulching or composting operations. Yard waste composting facilities must be approved by PADEP. Currently the PADEP approved composting facilities relevant to the Berks County area include the following:

Zwicky Processing and Recycling
Ridgewood Soil
Martin's Mulch
Rodale Institute
Hopewell Nursery

Other seasonal drop-off facilities for leaves are available to residents around the County. Drop-off centers for yard wastes are discussed in more detail in the following section. Throughout Berks County the leaves are currently taken to farms for direct land application or to other private composting facilities. Some examples of curbside leaf and yard waste collection practices are discussed herein.

The City of Reading provides a city-wide loose leaf collection program for its residents throughout the fall of each year, as well as a year-long yard waste collection programs. The yard waste must be placed in brown paper bags for pickup, on their scheduled day. Overall, the leaf and leaf waste collection programs yielded approximately 4,200 cubic yards of recycled yard wastes in 2022. The materials are taken to a permitted yard waste site for processing/composting.

Additional examples include Amity, Bern and South Heidelberg Townships and Kutztown, Robesonia, Wernersville and Womelsdorf Boroughs, all operating loose-leaf collection programs, where the leaves are used as mulch by local farmers. All of these farms have applied for and have received Permit by Rules from PADEP to accept this material, for beneficial reuse. Muhlenberg Township also conducts a loose-leaf collection program in the fall of each year. An estimated 2,400 cubic yards of leaf waste was collected in 2022 and taken to Giorgio Foods, Inc., for use in making compost solely for its own private facility operations and governed under agricultural guidelines. In addition, the Township collected over 6,700 cubic yards of yard waste for composting at their drop-off location in 2022. Exeter, South Heidelberg and Spring Townships also operate their own yard waste composting facility and utilize a third-party vendor to provide on-site grinding. All leaf waste that is stored at these sites is shipped off site for processing.

The Rodale Institute accepts leaves from numerous municipalities located both in and outside of Berks County. Leaves are land applied and used as a natural fertilizer at the farm.

4.4.4 Municipal Drop-Off Centers

Standard Materials

Numerous municipalities provide drop-off facilities, as previously discussed in Section 4.4 and shown on Table 4-1 (Page 59-64). In addition, the County operates the Berks County Recycling Center in Bern Township. This facility is open 7 days a week for the convenience of County residents, and accepts aluminum and bi-metallic cans; plastics; newsprint; paperboard; phonebooks; magazines; junk mail; catalogs; office paper; and cardboard.

In 2010 and 2019, the Authority installed two balers at the recycling center on Hilltop Rd., in Leesport, Pa., which drastically decreased the operating expenses of that site. These balers were both financed through 902 Recycling Grants from PADEP.

As previously indicated, municipalities not mandated to recycle, have multiple options available for their residents, those being: voluntary drop-off centers operated by the host municipality, the County's recycling drop-off program, drop off centers operated at one of the four landfills located in the County or at one of the two private processing/recycling facilities located in the County.

Yard Wastes

Twenty-five municipalities, up from sixteen in 2014 and nine in 2005 have drop-off centers where residents can bring their brush, branches, and other yard materials, throughout the year for composting. Those municipalities being Bernville, Birdsboro, Kutztown, Laureldale, Leesport, Mohnton, Robesonia, St. Lawrence, Shillington, Sinking Spring, West Reading, Wernersville and Womelsdorf Boroughs and Amity, Bern, Colebrookdale, Cumru, Exeter, Heidelberg, Lower Heidelberg, Maiden creek, Maxatawny, Muhlenberg, South Heidelberg and Spring Townships. These facilities allow for a substantial amount of yard waste to be easily diverted from area landfills for beneficial reuse.

4.4.5 Recycling Facilities Provided by Landfills or Other Private Entities

Recyclables from both the commercial, municipal, institutional and residential populations are processed at no fewer than four (4) material recovery facilities (MRF) serving Berks County. One of those, Cogle's Recycling provides a county-wide report each year. In 2023, Cogle's reported processing over 27,000 tons of recyclables from Berks County. TotalRecycle did not provide a County-wide report but did report processing processed 4,862 tons of recyclables in 2023, which were collected by JP Mascaro. The other two MRFs that we are aware of process a very small percentage of recyclables collected in Berks County. They are Penn Waste, located at 85 Brick Yard Road, Manchester, York County, and Greenstar, located at 799 Smith Lane in Northampton County. These two facilities did not provide County-wide recycling reports, but did report their tonnages to the individual business or municipality where that material came from. The BDSI recycling facility in Elverson stopped processing recyclables during 2022 and now transfers that material to Penn Waste for processing and marketing. We currently receive county-wide recycling reports each year from nine (9) haulers and transfer stations, which is very helpful in streamlining this process. In addition, the Professional Recyclers of Pennsylvania (PROP) currently coordinates

the collection and dissemination of forty (40) Statewide Corporate Recycling Reports from the larger businesses throughout the Commonwealth, but we are unaware of exactly where that material is being processed. In addition, numerous waste-disposal and processing facilities in the County provide drop-off centers for recyclable materials. These are listed on the Authority website with specific information related to location, availability, and items collected at each. Information on major commercial facilities, such as landfills and large recycling processing operations, is summarized in the following sections.

Conestoga Landfill Recycling Center (Morgantown, Pa.)

A formal recycling center is provided at the Conestoga Landfill in New Morgan Borough, just north of Caernarvon Township in Berks County. Items can be dropped off weekdays and limited hours on Saturday. The Conestoga Landfill Recycling Center is currently accepting newspapers, magazines, telephone books, cardboard, junk mail, aluminum and bi-metal cans, and clear glass bottles and jars. This facility is open to the general public.

Western Berks Landfill (Birdsboro, Pa.)

Western Berks Landfill offers a drop-off facility for newsprint, glass, aluminum, and steel cans. The drop-off facility is open to the general public during normal landfill operating hours. In addition, The Western Berks Landfill undertakes captive recycling of bulk metal/white goods that are received as part of the landfill's waste stream. This facility is scheduled to close in June of 2024 along with the Landfill.

Rolling Hills Landfill (Boyertown, Pa.)

Rolling Hills Landfill undertakes captive recycling of bulk metal/white goods that are received as part of the landfill's waste stream. In addition, they accept aluminum and tin cans, glass bottles and jars, PET/HDPE plastics and cardboard for recycling from the general public during normal landfill operating hours.

Pioneer Crossing Landfill (Exeter, Pa.)

The Pioneer Crossing Landfill currently accepts aluminum and tins cans, plastic bottles and containers and glass bottles and jars at their recycling center located at the landfill scale house, from the general public during normal landfill operating hours. In addition, they accept electronic recyclables and freon containing items during certain operating hours.

Alliance Sanitary Landfill (Taylor, Pa.)

The Alliance Landfill operates a public drop-off recycling center for the following materials: Aluminum and tin cans, plastic bottles and containers and glass bottles and jars. Newspapers are also accepted separately, as well as corrugated cardboard. The drop-off is for residents only. Commercial businesses are not permitted to use this site.

Bethlehem Landfill (Bethlehem, Pa.)

The Bethlehem Landfill accepts single stream recycling at their center. A frontload container is on-site to accept the following materials: cardboard, mixed paper, aluminum and tin cans, plastic bottles and containers and glass bottles and jars.

Commonwealth Environmental Systems, LP (Hegins, Pa.)

The Commonwealth Environmental Systems, LP (CES) Landfill accepts metal, aluminum and plastic for recycling, at their drop-off location.

Cumberland County Landfill (Shippensburg, Pa.)

The Cumberland County Landfill operates a public residential drop-off recycling center for the following materials: Aluminum and tin cans, plastic bottles and containers and glass bottles and jars.

Fairless Landfill (Morrisville, Pa)

The Fairless Landfill operates a public drop-off recycling center for the following materials: aluminum and tin cans, plastic bottles and containers, glass bottles and jars and mixed paper. These materials are accepted at the facility as single stream materials.

Grand Central Sanitary Landfill (Pen Argyl, Pa)

The Grand Central Landfill operates a public drop-off recycling center, just inside the entrance gates, at their facility. The following materials are accepted: Aluminum and tin cans, plastic bottles and containers and glass bottles and jars. Newspapers are also accepted separately, as well as corrugated cardboard. The drop-off is for residents only and no commercial businesses are permitted to use this site.

Lancaster Landfill (Elizabethtown, Pa)

The Lancaster Landfill is a Construction & Demolition Debris landfill and is therefore not required to provide a recycling drop-off center at their disposal facility.

LCSWMA Resource Recovery Facility (Bainbridge, Pa.)

The LCSWMA Resource Recovery Facility currently accepts “The Big 4” Corrugated Cardboard, Plastic Bottles and Jugs, Metal Food and Beverage Cans and Glass Jars and Bottles. Tires and white goods are also accepted at this site. In addition, the facility recovers ferrous and non-ferrous metals for recycling from waste combustion.

McKean County Landfill (Kane, Pa)

The McKean County Landfill currently accepts, metal, cardboard and heavy paper products, paper plastic and electronics for recycling. There is a \$1.00 per pound fee for recycling electronics.

Susquehanna Resource Management Complex (SRMC) (Harrisburg, Pa.)

The Susquehanna Resource Management Complex currently accepts tires, white goods, ferrous and non-ferrous metals for recycling. Both ferrous and non-ferrous metals are also captured from waste combustion.

York County Resource Recovery Center (York, Pa.)

The York County Solid Waste Authority's Recycling Drop-Off Center is open for use by York County residents and commercial entities. There is no fee to deliver recyclables to this facility. The following items are accepted at their facility located at 2685 Blackthorne Court, York, Pa. 17406: Clothing, shoes, corrugated cardboard, aluminum, steel and bi-metal cans. The center is open Monday -Friday (8:00 AM – 4:00 PM) and Saturday from (8:00 AM until Noon)

Cogle's Recycling (Hamburg, Pa.)

Cogle's Recycling is located in Hamburg in the northern section of the County. Cogle's Recycling is open weekdays with limited hours on Saturdays. Cogle's accepts the following materials: glass bottles and jars, plastics #1 to #7, aluminum and bi-metallic cans, brass, copper, lead, magnesium, stainless steel, tin and ferrous metals, newsprint, cardboard, office paper, paperboard, phone books, catalogs, magazines, and any type of uncontaminated paper.

TotalRecycle (Exeter, Pa.)

TotalRecycle is located in Birdsboro in the southeastern section of the County. TotalRecycle currently accepts the following materials for recycling: glass bottles and jars, mixed paper, corrugated cardboard, cartons, high-grade paper, aluminum and tin cans, aluminum foil, Plastic #1 through #7, ferrous metal, scrap metal, aluminum, copper and brass. Current operating hours are Thursday and Friday from 12 pm – 5 pm and Saturday from 7 am – noon.

Penn Waste (York, Pa.)

Penn Waste is located in York, Pa. and currently accepts the following materials for recycling at their material recovery facility: Newspaper, cardboard, plastics, cartons, aluminum and tin cans and glass bottles and jars.

Greenstar (Northampton, Pa.)

Greenstar Recycling is located in Northampton, Pa. and currently accepts the following materials for recycling at their material recovery facility: Paper, cardboard, tin and aluminum, glass and plastic. Current operating hours are Monday through Friday from 7:00 am until 5:00 pm.

Others

Numerous other private recyclers operate in Berks County, including Alleghany Towing and Salvage, Laurel Street Recycling, Berks Container Recovery, Royal Green and Nester's Sanitation, to name a few (refer to the Authority website for a complete list of current recycling centers).

These entities operate under market conditions and will continue to provide these services at market determined rates. Disadvantages of utilizing some private recycling centers include limitations on types of materials accepted, and/or restrictions on co-mingling of materials (i.e., glass must be separated by color, plastics must be separated by type, etc.).

4.4.6 Private Composting Facilities

There are several private composting facilities that currently service the Berks County area. These facilities include Rodale Institute, Zwicky Processing and Recycling, Giorgio Foods, Martins Mulch, Ridgewood Soils and Hopewell Nursery.

Rodale Institute Composting Education and Research Center

The Rodale Institute, located just outside the Borough of Kutztown, researches and promotes composting to help people improve soils, grow healthier crops, conserve resources, and protect the environment. Public and private partners include the U.S. Department of Agriculture, Pennsylvania State University, Composting Council, Pennsylvania Composting Association, and the Department of Environmental Protection.

Rodale's main production area features all-weather access and appropriate environmental protection, and is available to the Berks County Conservation District, Natural Resource Conservation Service, PADEP, and others to use as a model site for agricultural compost production. This facility is primarily an experimental farm for manure composting, therefore is governed under agricultural guidelines rather than under waste processing/composting/recycling guidelines. Leaf waste collected from the Borough of Topton is processed by Rodale Institute for beneficial reuse.

Zwicky Processing & Recycling, Inc.

Zwicky Processing & Recycling runs wood recycling and composting operations at two facilities in Berks County. Zwicky processes and composts a variety of yard wastes, scrap wood, land clearing debris, grass clippings and leaves. Zwicky accepts materials from local land clearing operations and landscape contractors. Currently Zwicky runs two wood processing and composting operations, both in Berks County (Robesonia Borough, and Maiden creek Townships). Through its recycling processes, Zwicky produces several varieties of wood mulch, manufactured topsoil and finish compost that are available to landscape contractors and nurseries. In addition, Zwicky processes construction and demolition waste and provides fuel for cement mills and other businesses, processing wood waste into a biofuel for beneficial reuse.

Giorgio Foods, Inc.

Giorgio Foods, Inc., is one of the largest growers, processors and distributors of mushrooms in the Country. Giorgio operates several mushroom production facilities at sites located in Berks County. Giorgio Foods uses leaves as substrate for making high-quality compost, which Giorgio then uses as a feedstock for mushroom production in its many local growing facilities. With the use of this compost for mushroom production, the operation is governed under agricultural guidelines rather

than under waste processing/composting/ recycling guidelines.

Martin's Mulch

Martin's Mulch is a private company located in Ephrata, Pa, offering materials for landscaping, including mulch derived from yard waste composting. According to PA DEP, the major sources of composting materials received at Martin's Mulch currently come from out of state. Martin's Mulch currently processes yard waste collected from many Berks County Municipalities under the Berks County Cooperative Purchasing Council (BCCPC) contract.

Berks Transfer Station

Berks Transfer station currently provides roll-off containers and transportation services to many local municipalities at their yard waste drop-off centers, under the BCCPC contract. Yard waste collected through this program is taken to Martin's Mulch for processing and beneficial reuse. In 2022, 1,030 tons of yard waste was collected and processed through this contract.

Ridgewood Soil

Ridgewood Soil is a private company offering materials for landscaping, including mulch derived from yard waste composting. In addition, they provide collection and drop-off services for yard waste materials. They currently process all of the yard waste that is collected through the Cumru and Exeter Townships yard waste drop-off sites. They also accept leaf waste in the fall of each year from a number of Berks County municipalities, including Shillington Borough, Cumru and Exeter Townships, to name a few.

Hopewell Nursery

Hopewell Nursery is a private company offering materials for landscaping, including mulch derived from yard waste composting. In addition, they provide collection and drop-off services for yard waste materials, as well as on-site grinding. They are currently under contract with Colebrookdale Township to accept yard waste from their residents. They also process the yard waste collected at the Amity Township yard waste site, under separate contract. They currently process all of the yard waste that is collected from municipal yard waste drop-off sites that requires on-site grinding. This service is provided through the BCCPC contract and currently services Exeter, Muhlenberg, South Heidelberg and Spring Townships yard waste sites.

4.4.7 Special Waste Collections

The Authority operates a full-time center for electronics and tire recycling and spring and fall collection events for household hazardous waste and paper shredding. These programs are extremely important in recovering this material from our waste stream and are well received by our residents.

Electronic Recycling Center

On July 1, 2010 the Authority opened a full-time electronic recycling site at 1316 Hilltop Rd., in Bern Township. This center is open Tuesday, Thursday and Saturday from 8:00 AM – Noon. Since opening in July of 2010, nearly 210,000 residents have participated in our collections and brought in approximately 16 million pounds of electronics for recycling. Effective January 1, 2012 residential materials were accepted free of charge as required by the Covered Device Act.

Tire Recycling Center

The Authority held its first tire collection event in November of 2007 and opened a full-time tire collection center in April of 2012 at the site of our electronic recycling center on Hilltop Road in Leesport. The center operates on the same hours as the electronic center, thereby not incurring additional labor costs. Since the start of our program over 5,000 residents have recycled over one million pounds of tires. Residents are charged a reasonable per tire disposal fee, which covers most of the program costs.

Household Hazardous Waste Collection Event

The Authority operates a spring and fall collection program for household hazardous waste from Berks County residents. Since 2007, over 51,000 residents have disposed of approximately 2.84 million pounds of hazardous waste at our collection events. In 2023, approximately 2,200 residents disposed of approximately 156,000 pounds of hazardous waste. Participation and the quantity of wastes collected during these four-hour events continues to remain steady, as residents become educated about the programs and have begun to rely on the semi-annual events, as the proper disposal method.

The following is a table outlining the costs and revenue sources associated with the operation of the Authority’s Household Hazardous waste collection since 2017:

	2017	2018	2019	2020	2021	2022	2023
Collection Costs	(\$150,226)	(\$ 170,449)	(\$ 173,875)	(\$99,281)	(\$124,961)	(\$132,039)	(\$158,994)
PADEP	\$ 75,113	\$ 86,953	\$ 86,938	\$ 48,095	\$ 64,612	\$ 68,297	\$ 79,497
Sponsorships	12,800	\$ 9,140	\$ 15,575	\$ 14,975	\$ 15,400	\$ 16,556	\$ 20,386
Solid Waste Authority *	62,313	\$ 74,356	\$ 71,362	\$ 36,211	\$ 44,949	\$ 47,186	\$ 59,111

Paper Shredding Event

The Authority operates a spring and fall paper shredding event for Berks County residents. The Authority held its first paper shredding event in October of 2009. From the fall of 2009 through the fall of 2023, more than 29,000 residents disposed of 1.26 million pounds of confidential documents for shredding. The Authority expects this program to continue to grow as residents become educated about the importance of protecting yourself from identify theft and properly shredding your confidential documents.

Pharmaceutical Collection Event

The Authority held pharmaceutical collection events in 2009 through 2014. During that time 4,800 residents properly disposed of 13,520 pounds of medications, through our events. In April of 2013, the Berks County District Attorney implemented a full-time drop-off program for pharmaceuticals in twenty-nine police stations throughout Berks County. The containers are serviced on a weekly basis by the District Attorney who ensures that the material is property destroyed. Please visit their website for additional up-to-date information on that program.

<http://www.co.berks.pa.us/dept/da/Pages/medicationdropbox.aspx>

4.4.8 Commercial and Institutional Establishments Recycling

Commercial and institutional establishments have been contracting privately with haulers to provide recycling services, for years. This practice has been effective and will continue. Some businesses in the County have gone above and beyond typical recycling practices. For instance, Boscov's, RM Palmer, DEKA Battery, Boyer's Market and many of the big box stores are just a few local businesses that have done a great job in commercial recycling in Berks County. This includes training related to how to use a cardboard baler, information on paper recycling, buying recycled goods, and properly sorting, recycling, and disposing of their waste.

4.4.9 Summary of Existing Recycling Activities

In summary, 21% of County municipalities were mandated to recycle under Act 101, prior to the 2010 Census. One additional municipality was added based on the 2010 Census and no additional municipality based on the 2020 Census, bringing the total mandated under Act 101 to fifteen municipalities. Currently, twelve (12) of these mandated municipalities rely on curbside programs alone and three (3) utilize a combination of curbside and drop-off centers. There are also seven (7) municipalities in Berk that are currently mandated under Act 140, all of which are in compliance with that Act. In Berks County, 63% of all municipalities, mandated or not, have some form of recycling program in place.

As non-mandated municipalities become mandated or request assistance from the County to develop programs, the Authority Executive Director and/or the County will assist them in developing appropriate programs. The Authority Executive Director and/or the County will encourage municipalities to continue to take advantage of the PADEP and Technical Assistance grants described previously in this section, and will assist municipalities with developing reporting channels for recycling data collection.

4.5 Integration of Recycling with Waste Management Systems

At the present time, recycling programs in mandated municipalities, throughout the County, are well served by existing waste management systems and/or private haulers. Recycling has been implemented in the County, and in areas where residential recycling collection practices are routinely performed, recycling is fully integrated with existing waste management programs. The following haulers among others currently service Berks County municipalities with waste and recycling services:

Waste Connections, Waste Management, Republic Waste Services, JP Mascaro, Casella, White Tail, Hollanbaugh, County Waste, Charles Blosenski and Diamond Disposal among others.

4.6 Increased Recycling

Increased recycling rates can be achieved by a number of different methods, or a combination of methods. Existing programs can be expanded by adding materials, increasing volume, or by the development of new collection programs.

The objective of the Plan revision that was approved in October of 2014 was to meet the State goal of 35% recycling by 2015. At the time the Plan was approved the County recycling rate was 21% up from 17% in 2004. Of our seventy-three municipalities only twenty-two are mandated under Act 101 or Act 140 to implement curbside recycling programs for their residents. No new municipalities became mandated under Act 101 due to the 2020 census. As of December 31, 2022, thirty-four of the County's municipalities provide curbside recycling collection; thirty-four require curbside recycling by ordinance, fourteen provide drop-off programs for their residents which includes the drop-offs operated at landfills in Berks County, with twenty-seven municipalities in Berks providing no recycling services to their residents.

In 2023, the Authority continued to work with non-mandated municipalities to gather recycling data from their haulers who were providing recycling services to their residents and businesses, through private subscriptions. The County recycling rate rose from 21% in 2005 to 32% in 2013 to 40% in 2022 simply by evaluating the County's non-mandated municipalities and including all of their recyclable materials in the County's year end reports.

In January of 2008, the Authority assumed all recycling operations for the County, which included the operation of the full-time recycling center on Hilltop Road in Bern Township. During the past sixteen years the Authority has invested much needed funds into the appearance and operation of the recycling centers, and has installed equipment which greatly reduced our operating costs. In 2010, the Authority hired a full-time employee to oversee the operation of the drop-off location and full-time electronic and tire recycling center on Hilltop Road in Leesport. This was required due to the increase in participation at the Center, which required additional manpower. This facility is currently operated by one full-time and two part-time employees.

With the completion of these projects, it has both improved the appearance of the Center as well as the economics of the Center, by increasing the value of cardboard and mixed paper with the installation of the balers. Ninety percent of the costs for these improvements have been reimbursed

to the Authority through our 902 Recycling Grants from PADEP. Approximately 500 tons of recyclables (cardboard, newspaper and commingled bottles and cans) have been recycled at the Center, each year, from 2014 through 2023. The cost of processing that material in 2010 was \$21,300. That same material was processed using the baler at an average profit of \$15,000 each year from 2011 through 2023.

By improving the economics of operating the recycling centers for the County, the Authority is able to reallocate those funds and provide new recycling programs for County residents.

The Authority encourages municipalities to investigate and evaluate recycling options, including inter-municipal cooperation, and encourages the County and municipalities to work together to research and evaluate options for establishing a wide range program of recycling opportunities.

The following sections provide options for increasing recycling of municipal and yard wastes.

4.6.1 Options for Standard Materials

Inadequate reporting ultimately results in lower reported recycling rates. The Authority Executive Director and/or the County will be available to assist municipalities with improving reporting channels for recycling data collection, thereby improving the accuracy of the County's overall reported recycling rate and improving the accuracy of the recycling reports, as has been done over the past eighteen (18) years.

Curbside Collection

As mentioned previously, the majority of successful recycling programs involve curbside collection of recyclables, often by the same vendor that provides the municipal solid waste collection services. The recycling vendor is typically contracted directly by the municipality to provide the service.

Municipalities will continue to contract for these services. Municipalities desiring to increase curbside collection of recyclables can add materials to their current program. Municipalities desiring to add curbside collection of recyclables can investigate opportunities for joint/inter-municipal agreements for such services; refer to Section 4.8 for additional information. The Authority Executive Director and/or the County will strive to assist municipalities to reach their full recycling potential by providing information on markets as well as information on financial assistance and program costs.

Commercial and Institutional Establishments Recycling

Commercial and institutional establishments have been contracting privately with haulers to provide recycling services. This practice has been effective and will continue over the life of this Plan revision. The Executive Director and/or the County will work with our municipalities to assist their commercial and institutional establishments in reaching their full recycling potential. Among other programs, the County will encourage establishments to provide containers for recyclables in lunchrooms and hold cleaning services accountable for keeping wastes separate from materials

collected for recycling, when properly sorted.

Drop-Off Locations

The low-density, agricultural nature of much of the County encourages the use of multiple recycling drop-off areas that are sited at locations accessible to County residents. The drop-off locations provide easy accessibility for residents to recycle their materials, as seen in the dramatic increase in materials being brought to these locations.

Although many municipalities not mandated to recycle have either curbside collection programs, participate in a drop-off program, have haulers providing private subscription curbside service or utilize one of the landfill drop-off or private recycling centers, there are still some non-mandated municipalities that do not provide any option for residential or commercial recycling within their municipality. Again, municipalities can investigate opportunities to cooperate with each other in establishing drop-off centers, through the use of inter-municipal agreements. A continued goal of the Authority Executive Director is to encourage our municipalities to develop and open drop-off centers, which will ensure that the County continues to exceed the recycling rate of 35%. The Executive Director and/or the County will educate municipalities on the importance of convenient recycling drop-off centers and the availability of grant funds to assist in start-up costs.

Facilities Provided by Landfills or Other Private Entities

Numerous waste-disposal and processing facilities in the County provide drop-off centers for recyclable materials (described in Section 4.4.5). Municipalities in need of increasing their recycling rates should consider the services available through these facilities.

4.6.2 Options for Leaf Wastes

Since the 2014 Plan revision, the Authority has assisted seven property owners with the permitting of farms for the land applicant of leaf waste, saving those municipalities using those sites, tens of thousands of dollars each year in processing costs. (Kutztown, Robesonia, Wernersville and Womelsdorf Boroughs and Amity, Bern and South Heidelberg Townships)

In addition to the following options for increasing recycling of leaf wastes, municipalities should first consider reviewing, and if necessary, updating the method(s) of reporting. Inadequate reporting ultimately results in lower reported recycling rates. The Authority Executive Director and/or the County will assist municipalities with improving reporting channels for recycling data collection, thereby improving the accuracy of the County's overall reported recycling rate and improving the accuracy of the recycling reports.

The following yard waste sites are permitted by PADEP for the collection of yard waste from residents of those municipalities. In addition, the County has three private commercial yard waste sites that process materials, within the County.

PADEP PERMITTED - MUNICIPAL YARD WASTE SITES IN BERKS COUNTY

Facility Name/Municipality	Exact Facility Address	Berks County PIN#	Permit #	Phone	Contact
Amity Township	2004 Weavertown Road, Douglassville, Pa. 19518	PIN 536505079848	Letter - Permit by rule (6-18-2018)	610-689-6000	Kathie Benson
Bern Township	1316 Hilltop Road, Leesport, Pa.	PIN 438801274003	Letter - Permit by rule (4-7-2009)	610-926-2267	Brian Potts
Bernville Borough	101 Umbenhauer Drive, Bernville, Pa. 19506	PIN 445015732936	APS-555860 (6-23-2005)	484-769-8594	Brenda Strunk
Birdsboro Borough	Armorcast Road, Birdsboro, Pa.	PIN 534410463567	Letter - Permit by rule (2-24-2020)	610-582-6030	Kelly Yanos
City of Reading	Hill Road, Reading	PIN 531719606599	Letter - Permit by rule (9-10-1996)	610-655-6017	Steven Harity
Colebrookdale Borough	Hopewell Nursery (172 Fancy Hill Road, Boyertown	PIN 537603025223	Letter - Permit by rule (1-22-2013)	610-369-1362	Brittany Billera-Smith
Cumru Township	301 Poplar Neck Road, Birdsboro, Pa.	PIN 531500289610	Letter - Permit by rule (8-10-2009)	610-777-1343	Jeanne Johnston
Exeter Township	950 W. Neversink Road, Reading, Pa. 19606	PIN 532509152371	APS-497482 (9-23-2003)	610-779-5950	Clarence Hamm
Heidelberg Township	11 Tulpehocken Forge Road, Robesonia, Pa. 19551	PIN 434711677040	Letter - Permit by rule (11-14-2019)	610-693-3197	Nicole Werner
Kutztown Borough	45 Railroad St., Kutztown, Pa.	PIN 544308886624	Letter - Permit by rule (3-1-2019)	610-683-3202	Brian Bailey
Leesport Borough	Berks Soil - 1 Belleman Church Road, Reading Pa.	PIN 449119606386	WMGR 103SC001 - 11-12-2009	610-926-2115	Sandy Weiss
Lower Alsace Borough	Hill Road, Reading	PIN 532701084160	Letter - Permit by rule (2-13-2019)	610-779-6400	Don Pottinger
Maidencreek Township	Quarry Road, Fleetwood, Pa.	PIN 541204815820	APS-915777 (7-11-2016)	610-926-4920	Katelyn Gruber
Maidencreek Township	61 Lake Shore Drive, Blandon, Pa. 19510	PIN 541118318853	Letter - Permit by rule (9-21-2021)	610-926-4920	Katelyn Gruber
Maxatawny Township	127 Quarry Road, Kutztown, Pa. 19530	PIN 546400020821	Letter - Permit by rule (9-26-2012)	610-683-6518	Jeri Wehr
Mohnton Borough	W. Madison Street, Mohnton, Pa. 19540	PIN 439517125343	Letter - Permit by rule (3-21-2022)	610-775-0660	Loretta Imbody
Muhlenberg Township	Reading Crest Blvd., Muhlenberg, Pa.	PIN 530918409906	Letter - Permit by rule (5-7-2009)	610-929-1503	Jim Bobeck
Robesonia Borough	210 S. Elm Street, Robesonia, Pa.	PIN 434716949172	Letter - Permit by rule (11-14-2019)	610-693-3474	Lisa Stoltz
Shillington Borough	Philadelphia Ave., Shillington, Pa. 19607	PIN 439512953467	APS - 631106 (12-18-2007)	610-777-1338	Scott Brossman
Sinking Spring Borough	152 R. Woodrow Ave., Reading, Pa. 19608	PIN 437616948965	APS-1043397 (8-12-2021)	610-678-4903	Mike Hart
South Heidelberg Township	Point Road, South Heidelberg, Pa.	PIN 435602777365	APS-633871 (1-8-2008)	610-678-9652	Sean McKee
Township of Spring	Yerger Blvd, Reading, Pa. 19609	PIN 438715535221	APS - 74283 - Site 745577 (3/9/11)	610-678-6393	John Groller
Township of Spring	122 Goose Lane, Reading, Pa. 19609	PIN 438517016170	Letter - Permit by rule (3-2-2022)	610-678-6393	John Groller
Tulpehocken Nursery	1148 Van Reed Road, Reading, Pa. 19605	PIN 4398031258979	Letter - Permit by rule (6-5-2023)	610-223-1669	Charles / Patricia Minehart
West Reading Borough	123 S. First Ave., West Reading, Pa.	PIN 530606484878	Letter - Permit by rule (6-22-2018)	610-374-8605	Kerry Grassley
Womelsdorf Borough	Rt. 422 - Womelsdorf, Pa.	PIN 433819607222	Letter - Permit by rule (3-25-2019)	610-589-4725	Bruce Edwards

Curbside Collection

The collection of leaf wastes is often handled by municipal staff or addressed in municipal solid waste collection contracts. Municipalities will continue to provide, or contract for, these services. Municipalities desiring to add or increase curbside collection of yard wastes can investigate opportunities for joint/inter-municipal agreements for such services. Refer to Section 4.2.2 for additional information concerning leaf waste collection.

Municipal Composting Facility

A goal of the Authority is to encourage municipalities to develop and open yard waste drop-off centers to provide convenient options for area residents. The Authority and/or County will continue to provide assistance with permitting and grant funding opportunities.

Private Composting Facilities

There are several private composting facilities that currently serve the Berks County area (described in Section 4.4.6). Municipalities looking to offer this service to their residents should consider the services available through these facilities. This information is shared with our municipalities and also posted on the Authority website.

Backyard Composting

The most common method of yard waste recycling in the County is backyard composting. Unfortunately, the quantities of yard wastes recycled via this method are not reported. With respect to backyard composting, the Authority Executive Director and/or the County will continue to educate and encourage municipalities to assess the degree to which this practice is occurring in their area.

4.7 Options for Processing, Storage and Sale of Recyclables

Processing and disposal facilities in Berks County presently utilize the broker method to sell recyclable materials and move them into the market for reuse. This method takes advantage of market prices and is used by private entities.

Temporary storage of recyclable materials occurs at each drop-off center.

Storage of finished compost and mulch is always handled at the composting facility, whether it is a public or private operation.

4.8 Options for Inter-municipal Cooperation

The Berks County Planning Commission has prepared the Berks County Comprehensive Plan Revision, known as Berks Vision 2020 – 2030 Update. Berks Vision 2020 – 2030 Update is a guide to growth and development within the County through year 2030. It focuses on many topics, including Inter-governmental Cooperation/Participation. The goal of this topic is “to develop and expand cooperation and communication among municipal officials and citizens to provide for

increased participation in the planning process, and to create a more efficient mechanism to meet government responsibilities.”

Three municipalities (Robesonia, Wernersville and Womelsdorf), already operate under a Council of Government (COG) through which trash collection and recycling for all three municipalities are contracted together. Similarly, South Heidelberg, Lower Heidelberg and Wernersville Borough also have inter-governmental cooperative agreements that enables them to provide a joint drop-off leaf collection site for their residents. These types of inter-municipal cooperation and agreements benefit the participants by achieving lower rates for joint services than for individual services. In addition, six municipalities in Berks participate in the Joint Purchasing for their yard waste processing contracts. Those municipalities currently include the following: Spring, Bern and South Heidelberg Townships and the Boroughs of Mohnton, Shillington and Wyomissing Borough.

The Executive Director and/or the County will work to provide municipalities with the information necessary to achieve the goals set in Berks Vision 2020 – 2030 Update, with respect to partnerships, coordination and inter-municipal incentives for collection, storage, and sale of recyclable materials. Options for consideration should include, at a minimum, joint collection contracts and cooperative drop-off locations.

4.9 Schedule for Implementation of Recycling Programs

As discussed in Section 4.4.1, only fifteen of our seventy-three municipalities in the County are now mandated to recycle under Act 101 and an additional seven under Act 140 and have appropriate programs in place, which includes ordinances, collection programs and education. Copies of those municipal ordinance are attached in Appendix G.

4.10 Estimated Costs of a Recycling Program

The three main benefits of implementing a recycling program are avoided disposal costs; the resources saved by reusing materials; and the removal of recyclable materials from the waste stream to improve the combustibility and/or decomposition characteristics of the waste stream.

Municipal solid waste collection contracts should be unaffected or may benefit from including recycling with the waste collection services because of avoided disposal costs. The cost of implementing these contracts is offset by the decrease in overall disposal costs for disposing of solid waste, because the volume/weight of waste to be disposed of will be less. The sale of recyclable materials is volatile, with a market that suffers from peak highs and lows.

The 2023 Budget for the Berks County Solid Waste Authority was approximately \$700,000, which includes the operation of the Berks County Recycling Center, Electronic and Tire Center, Spring and Fall Household Hazardous Waste Collections and Paper Shredding Events and the operation of that office.

The actual cost of any recycling and waste diversion system will depend on the extent to which the County and municipalities opt to utilize the services of the private sector versus the

development and operation of municipal drop-off sites, transportation systems, and processing facilities. The County and municipalities will continue to research and analyze the available options and select and implement through competitive bidding the approach that best meets the overall needs of the overall community.

4.11 Consideration of Existing Recycling Businesses

Act 101 requires that the County Plan describe what consideration has been accorded to persons engaged in the business of recycling (as of September 26, 1988) and explain how recycling under the Plan will be coordinated with, and will not interfere with, recycling by mandated municipalities. The previous parts of this section pointed out how the County's current recycling strategy is based primarily upon continuation of the present municipal and other recycling programs in the County. These existing operations will co-exist with municipal recycling programs and with non-profit and for-profit recycling drop-off operations. The private sector plays an integral part of the recycling successes in Berks County.

4.12 Recycling Education Efforts

Both the County and municipalities share the responsibility for public education. The County will continue to assist municipalities to tailor their educational materials to their specific needs. Community-specific promotional materials have the advantage of harnessing community pride to generate interest and boost participation. Even for program-specific public education efforts, the County has, and will, provide assistance, such as model brochures and cost information.

Costs of developing a recycling program, whether curbside or drop-off, or a mandatory or non-mandatory program, are specific to each municipality or group developing the program. The County, through the Executive Director of the Berks County Solid Waste Authority or otherwise, can provide recycling program cost analysis, bidding assistance and guidance to any municipality or group that seeks assistance in developing a program. Municipal newsletters and websites and the County website all are used to educate residents of proper disposal methods.

4.13 Waste Reduction Strategies

Waste reduction, including reuse of products, may be achieved through both education of consumers and regulation of the amount and types of packaging. Educational efforts are to be carried out by the County working in conjunction with the waste system authorities and municipalities. Regulations designed to reduce the amount of packaging may be encouraged at both the state and federal level. Although Berks County can have little impact on the design of products ranging from food packaging to electronics, the County can educate residents to make wise decisions when they purchase these products.

Berks County has elected to focus on waste reduction in order to complement its recycling programs. Although the environmental benefits of recycling are well known, it is much more difficult to quantify the effect that successful waste reduction, minimization, and reuse programs have on decreasing the waste stream.

Berks County is not alone in examining possible programs and actions to decrease the volume of the waste stream at its source. Numerous federal programs and other states have begun to shift the focus from recycling and pollution cleanup to pollution avoidance and decreasing waste stream volume or pollution potential.

Source reduction techniques that will be encouraged by the County include:

- backyard composting of yard waste;
- buying products in bulk or larger containers rather than single use containers;
- making a concerted effort to purchase goods that feature reduced packaging;
- using reusable bags for packing purchases at grocery stores instead of disposable paper or plastic ones;
- buying foods and detergents in concentrated form;
- buying fresh produce with minimal packaging;
- avoiding purchase of products that are double packaged;
- avoiding single-use products such as disposable razors, diapers, lighters, and some food products;
- repairing broken items rather than disposing of them; donating unwanted items to charity;
- decreasing the volume of unwanted “junk mail” by removing name from national mailing lists.

The County will encourage all municipalities to include this information on their website and in their newsletters.

In addition, the County will encourage residents and businesses to complete the recycling loop by purchasing goods made from recycled materials. The County will educate residents about the logos that can be found on products that identify them as packaged in containers made from recycled materials. This includes foods such as dry food packages, canned foods and beverages, detergent and other cleaning product containers, glass bottles, health and beauty product containers, and paper products such as tissues, paper towels and bathroom tissue. County educational materials will also inform residents that recycled materials can be found in other consumer products as well, such as writing paper, cards, and other stationery supplies, carpeting, tools, cardboard boxes, plastic “lumber”, retread tires, and even some articles of clothing.

CHAPTER 5 - SELECTION AND JUSTIFICATION OF MUNICIPAL SOLID WASTE MANAGEMENT PLAN

5.1 Introduction

This section describes how the County evaluated and selected its waste processing and disposal options.

5.2 Financing of Selected Programs

Berks County does not own and does not intend to own, develop or construct a publicly owned waste processing or disposal facility, as part of this Plan revision, and will, therefore, incur no financing costs associated with its obligation to ensure disposal capacity for municipal solid waste. Berks County is currently home to four (4) municipal solid waste landfills and three (3) transfer stations and has secured adequate disposal capacity for municipal solid waste for this planning period.

5.3 Recycling and Waste Reduction Programs

Under this Plan revision, municipalities have the obligation to look at their recycling rates and to select a recycling program that best matches the needs of their municipality. Waste Reduction Programs, as outlined in this Plan revision, are encouraged at all levels of government and in the private sector. The result of improvements recommended in this Plan revision will be an improved recycling rate for the County, one that exceeds the State goal of 35%.

5.4 Processing and Disposal Plan

This Plan revision continues to allow waste generated within Berks County to be disposed of at any permitted disposal facility. Berks County does not flow control waste. An advertisement for capacity assurance was placed in the PA Bulletin on July 22, 2023 and was also advertised in the August 2023 edition of the Waste Advantage Magazine.

To ensure available disposal capacity for waste generated in Berks County during the ten-year term of the Plan, Berks County has non-exclusive Disposal Capacity Agreements with the disposal facilities identified in Section 3.4. While the Disposal Capacity Agreements provide for potential extension upon the mutual written agreement among the parties, these agreements will not be extended into the term of a subsequent municipal waste management plan, without the County engaging in a fair, open, and competitive process for consideration of establishing disposal capacity. The County and the Authority have negotiated host fees for out-of-County waste with certain in-County disposal facilities with which the County and the Authority have entered into disposal capacity agreements. There is no obligation on the part of the County to provide any of these facilities with specific amounts of waste. Based on the non-exclusive Disposal Capacity Agreements identified in Section 3.4 and attached in Appendix A, Berks County has sufficient disposal capacity for municipal solid waste generated in Berks County during the term of this Plan revision.

CHAPTER 6 - LOCATION OF FACILITIES AND PROGRAMS

This Plan revision identifies the location of all facilities that currently accept waste generated in Berks County, as well as recycling programs that exist or are planned in the County. This includes all landfills and waste-to-energy facilities, yard waste composting or processing facilities, recycling centers, and recycling drop-off or curbside programs.

6.1 Municipal Solid Waste

As shown on Table 2-3 and 3-5, fourteen disposal facilities located both within and outside of Berks County have provided capacity assurances to Berks County for this Plan revision. These fourteen facilities have provided more than 5.7 million tons of capacity, an excess of 1.7 million tons. Below please find additional information on each of those facilities providing capacity assurance for this planning period.

Delaware County Solid Waste Authority – Rolling Hills Landfill

On November 20, 2023, Delaware County Solid Waste Authority signed a Disposal Capacity Agreement with Berks County for the Rolling Hills Landfill located at 83 Longview Road, Boyertown, Pa. 19512, to provide 120,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Conestoga Landfill

On November 15, 2023, New Morgan Landfill Company signed a Disposal Capacity Agreement with Berks County for the Conestoga Landfill located at 420 Quarry Road, Morgantown, Pa. 19543, to provide 100,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Western Berks Landfill

On September 12, 2023, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Western Berks Landfill located at 455 Poplar Neck Road, Birdsboro, Pa. 19508, to provide 30,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Commonwealth Environmental Systems

On September 8, 2023, Keystone Landfill, Inc. and L&D Management, Inc. signed a Disposal Capacity Agreement with Berks County for the Commonwealth Environmental Systems Landfill located at 99 Commonwealth Road, Higin, Pa. 17938, to provide 55,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

LCSWMA Resource Facility

On October 10, 2023, the Lancaster County Solid Waste Management Authority. signed a Disposal Capacity Agreement with Berks County for the LCSWMA Resource Recovery Facility located at 1911 River Road, Bainbridge, Pa. 17502, to provide 500 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

Susquehanna Resource Management Complex

On October 10, 2023, the Lancaster County Solid Waste Management Authority. signed a Disposal Capacity Agreement with Berks County for the Susquehanna Resource Management Complex (SRMC) located at 1670 S. 19th Street, Harrisburg, Pa. 17104, to provide 500 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

Alliance Landfill

On September 12, 2023, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Alliance Sanitary Landfill located at 398 S. Keyser Ave, Taylor, Pa. 18517, to provide 30,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Cumberland Landfill

On January 4, 2024, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Cumberland County Landfill located at 135 Vaughn Road, Shippensburg, Pa. 17257, to provide 60,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Fairless Landfill

On September 12, 2023, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Fairless Landfill located at 1000 New Ford Mill Road, Morrisville, Pa. 19067, to provide 30,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Grand Central Landfill

On September 12, 2023, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Grand Central Sanitary Landfill located at 1963 Pen Argyl Road, Pen Argyl, Pa. 18072, to provide 30,000 tons of capacity per year commencing on October

7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

Lancaster Landfill

On September 12, 2023, Waste Management of Pennsylvania signed a Disposal Capacity Agreement with Berks County for the Lancaster Landfill located at 2487 Cloverleaf Road, Elizabethtown, Pa. 17022, to provide 30,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan.

York Resource Recovery

On December 12, 2023, the York County Solid Waste Authority signed a Disposal Capacity Agreement with Berks County for the York County Resource Recovery Center located at 2700 Blackbridge Road, York, Pa. 17406, to provide 5,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

IESI Pa Bethlehem Landfill

On December 11, 2023, Waste Connections, Inc. signed a Disposal Capacity Agreement with Berks County for the IESI Pa Bethlehem Landfill located at 2335 Applebutter Road, Bethlehem, Pa. 18015, to provide 48,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

McKean County Landfill

On December 14, 2023, Casella Waste Systems, Inc. signed a Disposal Capacity Agreement with Berks County for the McKean County Landfill located at 19 Ness Lane, Kane, Pa. 16735, to provide 80,000 tons of capacity per year commencing on October 7, 2024 and continuing for the term of the forthcoming Berks County Municipal Solid Waste Management Plan

6.2 Authority operated Recycling Program

The recycling programs (for mandated and non-mandated municipalities) that are presently in place in the County were discussed in Chapter 4, as were recycling drop-off centers and yard waste composting facilities.

Recommended criteria for municipalities that wish to voluntarily implement a recycling and/or yard waste drop-off site are as follows:

The site should be near the population center of the municipality so as to be as convenient as possible for the majority of residents. This will result in as much material being collected as possible.

The property should ideally be owned by the municipality, which can sponsor the site and also submit grants to PADEP for site improvements. If this is not possible, perhaps a local civic or environmental group or even a private owner would be willing to donate land for such use.

The location should be secure to prevent illicit dumping of non-recyclable materials or garbage, and to prevent persons from removing recyclable materials from the site illegally.

The site should be easily accessible by standard vehicles, with adequate signage to direct the resident where he or she may and may not drive.

Signs should clearly indicate what materials are accepted and where they should be deposited.

Municipalities that will develop curbside collection programs should keep in mind the following factors when designing a program that best meets their needs:

The municipality should work with the Authority Executive Director and/or the County as well as neighboring municipalities, to design a program that will optimize recycling while keeping expenses down.

The existing municipal solid waste management collection contract method utilized by the municipality, whether municipal, residential, or subscription.

The number of haulers servicing their municipality or nearby municipalities that are equipped to collect recycled materials.

The amount that the municipality is initially willing to pay for the recycling contract and startup costs.

The availability of staff to promote the program, monitor participation, and follow through with PADEP equipment and performance grant applications to secure monies based on a program's success.

The centers of population in the municipality and the likely participation rate that would be provided by the area. This would entail review of existing participation rates of residents at nearby drop-off facilities.

Hilltop Road – Recycling Center

The following improvements to Recycling Center on Hilltop Road have allowed for the County to greatly improve the economics by preparing paper materials for market and to expand programs for electronic and tire recycling, on a full-time basis. In addition, these improvements also greatly discourage illegal dumping due to the site appearance and security system.

The Authority invested over \$800,000 during 2010 through 2022 installing the following equipment and completing much needed repairs to the center:

Paved the parking lot at the recycling center on Hilltop Road
Installed restroom facilities including the installation of a well and septic
Completed structural repairs to the floor in the electronic recycling center
Repaired the roof at the recycling center
Installed a baler and tipper baling mixed paper and corrugated cardboard
Painted and/or replaced all roll-off containers at Hilltop Road

Renovated the entire first floor of the existing barn for the expansion of the electronic recycling storage area.

Purchased six new roll-off containers for storage of recyclables, tires and freon waste.

Poured a new concrete pad for siting roll-off containers.

Painted, installed new gutters and repointed stone area of recycling center

Received approval of our full land development plan including the demolition and construction of a new 2,400 sf storage building

Renovations and installation of a second baler

Fenced and secured property

Installation of a canopy roof over outside baling area

The Authority works with private material recovery facilities (MRFs) in the area to process our commingled materials for market. Berks County is home to two (2) MRFs, Cogle's Recycling in Hamburg and TotalRecycle in Exeter Township.

Full-time Electronic Recycling Center

On July 1, 2010 the Authority opened a full-time electronic recycling site at 1316 Hilltop Road, in Bern Township. Since opening in July of 2010, 200,000 residents participated in our collections and brought over 16 million pounds of electronic for recycling. Effective January 1, 2012 residential materials were accepted free of charge in compliance with the Covered Device Act, which prohibits charging residents for certain types of electronics. Businesses are charged a recycling fee for their materials.

Tire Recycling

The Authority opened a fulltime tire collection center in April of 2012 at the site of our electronic recycling center on Hilltop Rd. The center operates on the same hours as the electronic center, thereby not incurring additional labor costs. Residents are charged a per tire disposal fee, which covers most of the program costs.

Household Hazardous Waste

The Authority utilizes a program through the Pennsylvania Department of Agriculture whereby the Authority "piggy-backed" on a contract the Commonwealth of PA has with MXI Environmental. This program provides for two, one-day HHW drop-off events per year in Berks County. Based on available funding, the Authority and/or the County intend to continue holding two such events for County resident's each year. PADEP reimburses the Authority for 50% of the costs of operating such program, up to \$100,000 per year. The Department of Agriculture also

allocates a certain amount of funding each year to cover the cost of pesticides, collected through the events.

Future HHW drop-off programs beyond 2024 will continue to be considered after a thorough analysis of available program options and available funding from the County.

Paper Shredding

The Authority held its first paper shredding event in October of 2009. The Authority expects this program to continue to grow as residents become educated about the importance of protecting yourself from identity theft and properly shredding your confidential documents. This event is currently being held free of charge with Vital Records Destruction Company, providing their services at a discounted rate.

Pharmaceutical Collection

The Authority held its first pharmaceutical collection events in 2009 and transferred the program to the District Attorney in 2013. That program was held free of charge with the following sponsors assisting with the operation and funding of this program: Pa American Water, Western Berks Water Authority, Reading Area Water Authority, Berks County District Attorney, Exeter Police Department, City of Reading Police Department, York County Solid Waste Authority and MXI Environmental.

Since 2013, the Berks County District Attorney's office has been offering a full-time collection program for pharmaceuticals in twenty-nine police stations throughout Berks County. The Authority expects this program to continue to grow as residents become educated about the importance of proper medication disposal. Please visit their website for additional information on that program:

<https://www.co.berks.pa.us/Dept/DA/Pages/Prescription-Drop-Box.aspx>

CHAPTER 7 - IMPLEMENTING ENTITY IDENTIFICATION

This plan will be implemented by Berks County (County) and the Berks County Solid Waste Authority (Authority).

7.1 Berks County

The County's implementation responsibilities under the Plan revision involve execution of disposal capacity agreements, as identified in Section 3 of this Plan revision, to secure 10 years of disposal capacity. Section 303(a) of Act 101 gives the County the power and duty to ensure adequate disposal capacity for waste generated within the County during the planning period.

7.2 Berks County Solid Waste Authority

The Berks County Solid Waste Authority (Authority) was organized by the Berks County Commissioners pursuant to Ordinance 5-92 in July 1992. The Ordinance, the Articles of Incorporation of the Authority, and a 1992 Cooperation Agreement between the County and the Authority are attached as Appendix K. The County delegated to the Authority pursuant to a 1992 Cooperation Agreement "all rights, duties and obligations of the County under Act 101 for Municipal Waste planning and for implementation of the Plan." In the event that the 1992 Cooperation Agreement terminates as currently scheduled in 2032, 40 years following its commencement, the County will assume all rights, duties and obligations previously delegated to the Authority by that Agreement. Though portions of the Cooperation Agreement are no longer valid or applicable (including but not limited to those related to flow control, administrative fees and hauler licensing), given the County's selected disposal plan, the Authority's primary activities include preparation of the Plan, oversight of its implementation, and operation of all recycling activities for the County.

The Authority also has implemented programs for the collection of household hazardous waste, electronics, tires, pharmaceuticals, and paper shredding, from County residents.

The Authority has proposed to coordinate municipal recycling activities in the County and to achieve or surpass the State recycling goal of 35%. Authority and/or County personnel will be available to offer technical assistance to municipalities that need assistance in evaluating their programs and in learning which PADEP grants can be utilized to fund new collection programs or to improve operating costs.

7.3 Berks County Planning Commission

The Berks County Planning Commission receives an official copy of all solid waste permit applications filed with the PADEP for solid waste facilities located in Berks County. The Planning Commission will notify the County Commissioners and the Authority of each and every application received from landfills and solid waste facilities located within the County limits.

CHAPTER 8 - PUBLIC FUNCTION

As this Plan revision does not propose a municipal solid waste processing or disposal facility to be operated by the County, no discussion comparing the benefits of public and private facilities is required to be included in this document.

The fourteen (14) disposal facilities providing capacity assurance to Berks County in addition to the two (2) MRFs located in Berks County is adequate to meet our disposal needs over this planning period. Of the 14 facilities providing guaranteed disposal capacity for waste generated in Berks County during this planning period, four are publicly owned and ten are privately owned. Based on this we do not believe it is in best interest of the County for municipal solid waste processing or disposal to be a public function, at this time.

CHAPTER 9 – IMPLEMENTING DOCUMENTS

The County implementation documents associated with this Plan revision will consist of documents as described below.

The County has secured disposal capacity agreements with the facilities listed in Section 3 of this Plan revision. Copies of the executed agreements are included in Appendix A, along with the County’s Resolution authorizing the execution of the agreements.

Chapter 10 - ORDERLY EXTENSION

As new development takes place, the Executive Director will support the extension of recycling programs into those new areas by the public or private trash and recycling haulers involved, taking into consideration planning, zoning, population estimates, engineering, and economics. This Plan revision proposes to use only facilities that have already been approved with respect to State, regional, or local plans affecting the development, use, and protection of air, water, or land.

Chapter 11 – METHODS OF DISPOSAL OTHER THAN BY CONTRACTS

Berks County does not require by contract or otherwise that waste generated within its boundaries be disposed only at designated facilities. As stated in Section 5 above, this Plan revision continues to allow waste generated within Berks County to be disposed of at any permitted disposal facility.

Chapter 12 – NON-INTERFERENCE

The County will not flow control waste during this planning period and therefore will not interfere with the design, construction, operation, financing or construction of any existing municipal solid waste processing or disposal facilities.

CHAPTER 13 - PUBLIC PARTICIPATION

Berks County established its Solid Waste Advisory Committee (SWAC) as required by Section 503(a) of Act 101 in August 1988. The SWAC participated in the development of the 1990 Municipal Solid Waste Management Plan and in 2005, 2007, 2013 and 2014 Plan revisions; the individual members of the SWAC at the time of each revision are identified in those plans. On November 4, 2021, Berks County appointed new members to the SWAC for the purpose of developing this Plan revision. The following is a list of the members of the Solid Waste Advisory Committee (SWAC) who participated in this Plan revision, and affiliations or constituencies that they represent:

SOLID WASTE ADVISORY COMMITTEE

Member - 2022 Plan Revision	Position - Required by Act 101	Representative/Municipality
Charlie Jones	City Representative (City of Reading)	City of Reading
Jim Bobeck	1st Class Township	Asst. Manager (Muhlenberg)
Brian Potts	2nd Class Township	Manager (Bern)
Brian Cole	Municipal Representative	Manager (Lower Heidelberg)
Brian Clements	Citizen	Citizen
Charles Mowbray	Citizen	Citizen
Mike Gombar	Citizen	Citizen
Josh Clements	Private Solid Waste Industry	AJ Blosenski, Inc.
Diane Solomon	Private scrap/recycling	Alleghany Towing & Salvage
Don Moll	Industry	B & G Glass
Jane Meeks	Recycling Coordinator	Recycling Coordinator

The SWAC's involvement and ability to make suggestions is demonstrated in the minutes from the meetings. The members of this Committee represent diverse interests, including municipalities, private industry, waste haulers, disposal facilities, recycling centers, and Citizens of Berks County.

The Berks County SWAC met four times in connection with this Plan revision. Each meeting was advertised and open to the public. The initial meeting was on January 25, 2022 and focused on the history of Solid Waste Plans and the scope of this Plan revision. The second meeting was held on November 15, 2022 and focused on reviewing Act 101 and planning requirements, statewide recycling goals, existing waste generation estimates, existing disposal facilities, future waste generation projections and the existing waste disposal capacity agreements. The third meeting was held on May 16, 2023 and focused on disposal capacity agreements. The final meeting was held on March 19, 2024 and focused exclusively on reviewing the final draft Plan revision, which had previously been distributed to the Committee Members for their review and comment. The final draft Plan revision was approved and the SWAC authorized sending it to the Municipalities, as drafted, for their review and comment. The SWAC also approved sending the Disposal Capacity Agreements to the Berks County Solid Waste Authority and the Berks County Commissioners for final execution. Minutes of these meetings are provided in Appendix I.

Act 101 requires counties to provide written notice to municipalities when the Plan revision Process has begun. Berks County provided this notice to its municipalities in December of 2021, the same time at which it informed PA DEP.

Municipalities had the opportunity to provide input to the Plan revision during the public review and comment period that was part of the revision process.

CHAPTER 14 – OTHER INFORMATION

No other information is being provided under this Chapter.