

Building Partnerships for Environmentally Sound Municipal Waste Management

The 2013 Municipal Waste Plan Update
for Blair County, Pennsylvania

Prepared for the
Blair County Board of Commissioners
Hollidaysburg, Pennsylvania

Public Review and Comment Draft



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In cooperation with the
Intermunicipal Relations Committee Council of Governments
Altoona, Pennsylvania

MUNICIPAL WASTE MANAGEMENT PLAN
2013 UPDATE

DRAFT

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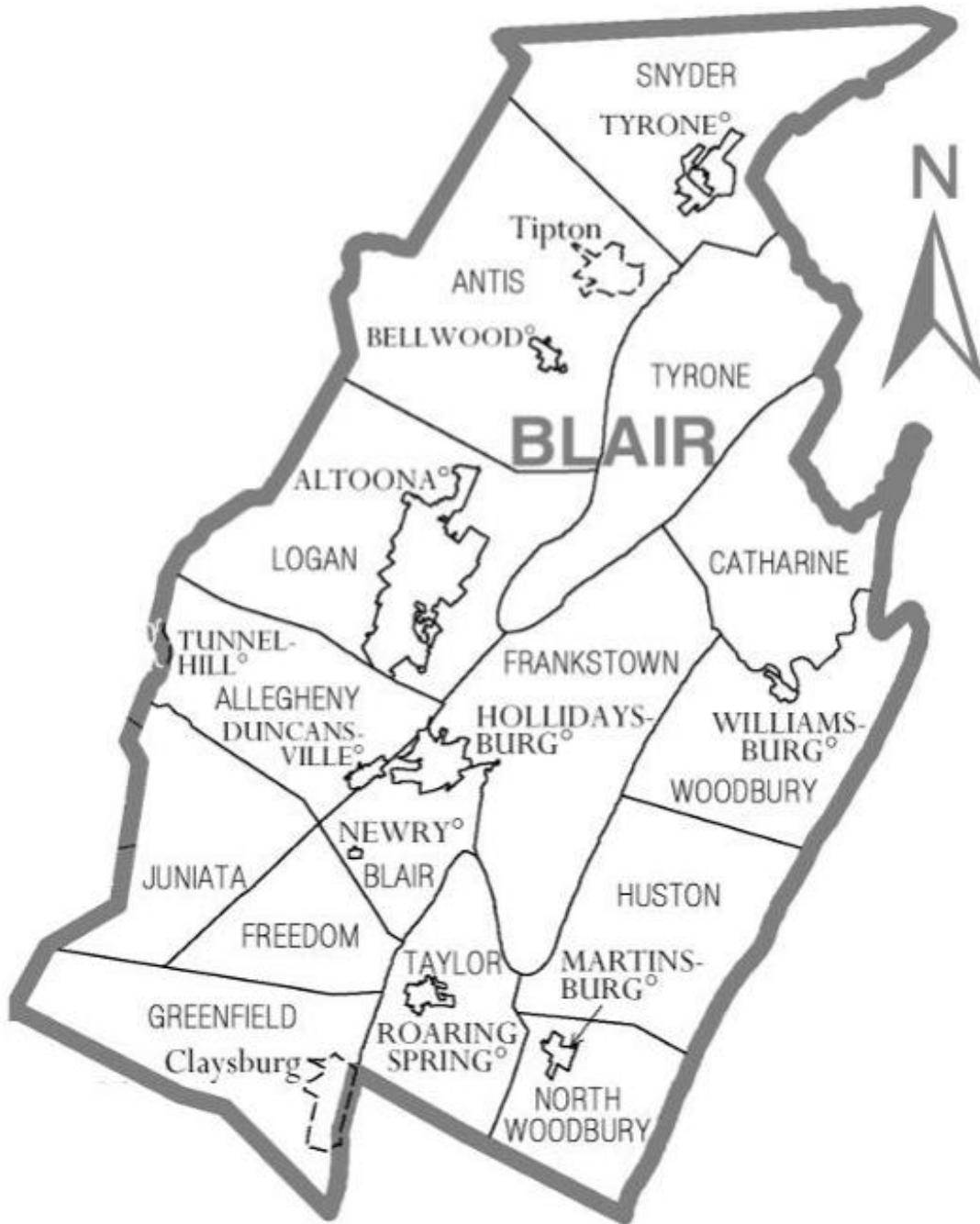
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Table of Contents

CHAPTER 1 - DESCRIPTION OF WASTE.....	1-1
1.1 RESIDENTIAL, COMMERCIAL, AND INSTITUTIONAL FRACTION OF THE MUNICIPAL WASTE STREAM	1-1
* <i>SOME DATA FROM 2011 MAY BE INCOMPLETE.</i>	1-1
1.2 CONSTRUCTION AND DEMOLITION WASTE.....	1-2
1.3 BIOSOLIDS AND SEPTAGE.....	1-2
1.4 IRC YARD WASTE AND RECYCLING.....	1-3
1.5 INFECTIOUS AND CHEMOTHERAPEUTIC WASTE	1-4
1.6 HOUSEHOLD HAZARDOUS WASTE.....	1-5
1.7 COVERED DEVICES (ELECTRONICS) RECYCLING	1-6
CHAPTER 2 - DESCRIPTION OF FACILITIES	2-7
2.1 EXISTING WASTE DISPOSAL FACILITIES	2-7
2.2 EXISTING WASTE TRANSFER STATIONS	2-8
2.3 BLAIR COUNTY YARD WASTE COMPOSTING AND RECYCLING FACILITIES.....	2-8
2.3.1 <i>Organics Management Facilities in Blair County</i>	2-8
2.3.2 <i>Status of Organics Management Permits and Approvals</i>	2-9
2.3.3 <i>Recyclables Dropoff Sites</i>	2-9
2.4 PERMITTED SITES FOR AGRICULTURAL UTILIZATION OF BIOSOLIDS ..	2-9
2.5 OTHER PRIVATE REGIONAL FACILITIES	2-10
CHAPTER 3 - ESTIMATED FUTURE CAPACITY	3-1
3.1 FUTURE COUNTY POPULATION PROJECTIONS	3-2
3.2 WASTE AND RECYCLABLES PROJECTIONS	3-2
3.3 PER CAPITA WASTE GENERATION RATES	3-3
3.4 PER CAPITA RECYCLABLES GENERATION RATE	3-6
3.5 FUTURE COUNTY MUNICIPAL WASTE GENERATION PROJECTIONS	3-8
3.6 POSSIBLE VARIATIONS IN FUTURE WASTE GENERATION PROJECTIONS	3-9
3.7 CAPACITY OF BLAIR COUNTY YARD WASTE FACILITY TO HANDLE PROJECTED WASTE STREAM.....	3-10
3.8 TOTAL CONTRACTED DISPOSAL CAPACITY NEEDS AND SOLICITATION.....	3-11
CHAPTER 4 - DESCRIPTION OF RECYCLING PROGRAM	4-1
4.1 THE MATERIALS ADDRESSED BY ACT 101	4-1
4.2 CHANGES IN ACT 101 AND IMPACT OF THESE CHANGES ON THE COUNTY	4-3
4.3 AMOUNT OF MATERIALS RECYCLED	4-4
4.4 EXISTING MATERIAL RECOVERY OPERATIONS	4-6
4.5 SUMMARY OF MUNICIPAL RECYCLING PROGRAMS	4-8
4.6 SUMMARY OF MUNICIPAL EDUCATIONAL PROGRAM.....	4-11
4.7 ENVIRONMENTAL BENEFITS OF RECYCLING	4-12
4.8 BLAIR COUNTY RECYCLING IN RELATION TO PA RECYCLING GOALS.....	4-13
4.9 NEW PROGRAM RECYCLING GOALS AND OPPORTUNITIES	4-16
4.10 COMPLIANCE.....	4-19
CHAPTER 5 – SELECTION AND JUSTIFICATION	5-1

5.1 BACKGROUND	5-1
5.1.2 <i>Illegal Dumping</i>	5-3
5.1.3 <i>Open Burning</i>	5-7
5.1.4 <i>Securing Waste Disposal Capacity for Blair County</i>	5-7
5.2 OVERVIEW OF CURRENT MUNICIPAL WASTE MANAGEMENT SYSTEM	5-8
5.3 WASTE AND RECYCLABLES MANAGEMENT – ALTERNATIVES	5-8
5.3.1 <i>Waste and Recyclables Collection</i>	5-9
5.3.2 <i>Waste Transportation and Disposal</i>	5-14
5.3.3 <i>Yard Waste and Food Waste/ Organics Composting</i>	5-18
5.4 WASTE AND RECYCLING SYSTEM RECOMMENDATIONS.....	5-20
5.4.1 <i>Waste and Recyclables Collection Recommendations</i>	5-21
5.4.2 <i>Waste and Recyclables Transportation</i>	5-22
5.4.3 <i>Waste Disposal</i>	5-23
5.4.4 <i>Management and Sustainability of Programs</i>	5-23
5.4.5 <i>Recyclables Dropoffs</i>	5-23
5.4.6 <i>Open Burning</i>	5-24
5.4.7 <i>Illegal Dumping</i>	5-24
5.4.8 <i>Yard and Food Waste/ Organics Composting</i>	5-25
5.4.9 <i>Increasing Recycling</i>	5-25
CHAPTER 6 - LOCATION OF DISPOSAL FACILITIES	6-1
CHAPTER 7 - IMPLEMENTING ENTITY IDENTIFICATION.....	7-1
CHAPTER 8 - PUBLIC FUNCTION.....	8-1
CHAPTER 9 - IMPLEMENTING DOCUMENTS: ORDINANCES AND RESOLUTIONS	9-1
CHAPTER 10 - ORDERLY EXTENSION.....	10-1
CHAPTER 11 - METHOD OF DISPOSAL.....	11-1
CHAPTER 12 - COUNTY OWNERSHIP	12-1
CHAPTER 13 - OTHER INFORMATION	13-1
13.1 SPECIAL MATERIAL COLLECTION PROGRAMS.....	13-1
13.1.1 <i>Household Hazardous Wastes</i>	13-1
13.1.2 <i>Special and Non-curb-side Materials Recycling</i>	13-1
13.1.3 <i>Electronics Recycling</i>	13-1
13.1.4 <i>Appliance Recycling</i>	13-1
13.1.5 <i>Food Waste Recovery</i>	13-2
13.2 FUNDING FOR THE IRC.....	13-2
13.3 FUTURE CHALLENGES OF THE IRC.....	13-3
CHAPTER 14 - NON-INTERFERENCE WITH EXISTING FACILITIES	14-1
CHAPTER 15 - PUBLIC PARTICIPATION	15-1



INTRODUCTION

INTRODUCTION/ HISTORY AND OUTLINE SUMMARY OF PLAN TO BE ADDED HERE
LATER

CHAPTER 1 - DESCRIPTION OF WASTE

The purpose of this chapter is to establish a basis for determining the quantity of municipal solid waste (MSW) generated in Blair County that will be managed by the system defined in this Plan. To estimate the quantity of present and projected solid waste quantities generated in Blair County, the following sources were used:

- Municipal Waste Management Plan for Blair County (2002)
- PADEP Origin/Destination Landfill Summary Reports for the period January 2001 through December 2011.
- Blair County Re-TRAC Reports
- Blair County Population Projections from the Blair County Comprehensive Plan, 2005.

A summary of this data is provided below.

1.1 RESIDENTIAL, COMMERCIAL, AND INSTITUTIONAL FRACTION OF THE MUNICIPAL WASTE STREAM

The residential, commercial, and institutional fraction of the County's solid waste stream consists of waste generated by residential (homes, apartments), commercial (offices, retail stores, restaurants, industrial lunchrooms and offices, etc.), and institutional sources (municipal buildings, libraries, schools, etc.), and community events. Recyclables generated/diverted from these sources are also included in the tonnages reported below. Table 1-1 reports the total quantities of residential, commercial, and institutional waste processed or disposed of from Blair County sources for the years 2007 through 2011.

TABLE 1.1 – BLAIR COUNTY RESIDENTIAL, COMMERCIAL, AND INSTITUTIONAL WASTE AND RECYCLABLES TONNAGES FOR 2007 – 2011

Type of Material	Year				
	2007	2008	2009	2010	2011*
Residential, Commercial, and Institutional Waste	106,797	104,797	103,253	111,895	105,373
Recyclables (diverted)	41,808	52,400	55,447	47,696	32,354
Total:	148,605	157,197	158,700	159,591	137,727

* *Some data from 2011 may be incomplete.*

1.2 CONSTRUCTION AND DEMOLITION WASTE

The amount of Construction and Demolition (C&D) waste collected for disposal on an annual basis from Blair County sources has been consistent over the past five years. The per capita rate for C&D waste is expected to remain steady over the next ten (10) years. Table 3.3 reports the total quantities of C&D waste processed or disposed of from Blair County sources for 2007 through 2011. Typical C&D waste materials include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development. Refer to Chapter 3, Table 3.3 for C&D waste projections.

1.3 BIOSOLIDS AND SEPTAGE

Throughout Blair County there exist sixteen (14) Municipal Wastewater Treatment Plants (WWTPs). These include

- Allegheny Township
- Altoona Easterly
- Altoona Westerly
- Blair Township
- Canoe Creek
- Central Blair
- Duncansville
- Freedom Township
- Greenfield
- Hollidaysburg
- Martinsburg
- Roaring Spring
- Tyrone
- Williamsburg.

Of these, four (4) accept septage. This service is provided either through 1) an agreement between individual septage haulers and the Municipal Authority owning and operating the plant, or 2) acceptance by some facilities of septage from any properly licensed septage hauler. Surveys were sent out to local wastewater treatment plants that accept biosolids and septage from Blair County (see Appendix F for WWTP survey results).

The capacity of the Wastewater Treatment Plants serving Blair County varies from a daily average of approximately 375 gallons per day (GPD) to 6 million gallons per day (MGD). The annual sludge produced (biosolids) ranged from 650 gallons (liquid) to 5,200 tons (“wet” dewatered cake). The amount of dewatered sludge cake disposed of on an annual basis in landfills serving Blair County ranged from approximately 60 to 6,100 tons. Dewatered sludge cake is sewage sludge that has been removed of water by one of many processes, which produces a cake like substance that can be land applied. The WWTPs listed Laurel Highlands and

Mostoller as the two landfills that accept sludge. Four (4) WWTPs listed land application on farm fields as the final method of disposal for sludge. Four (4) WWTPs reported that they currently accept septic and holding tank waste. Altoona's WWTP reported that they are willing to accept additional septic and holding tank wastes in the future. Hollidaysburg Borough reported that they are willing to consider accepting additional sludge in the future from non-dewatering wastewater treatment plants.

Williamsburg WWTP reported that they will be constructing a new WWTP in 2013. This new WWTP will contain a sludge dewatering press. Other than Williamsburg, the WWTPs reported that no changes are planned in the next 5 to 10 years. If land application of biosolids were to be prohibited in the future, Altoona's WWTPs reported interest in the Cove Regional Digester project. The Cove Regional Digester project started when the Martinsburg Region recognized a high nitrogen level in their municipal water system. In response to the high nitrogen levels, among other issues, the Region investigated other ways to dispose of manure (produced by dairy farms primarily). The Region applied for grants, conducted feasibility studies and engaged in discussions with farmers regarding nutrient management initiative controls. For various reasons, the project became dormant, as farmers continued to make initiatives towards better management practices. The farmer's initiatives reduced the nutrient levels and the Cove Regional Digester project currently remains dormant. The research previously conducted for this project is and will remain available if interest in the project grows in the future.

1.4 IRC YARD WASTE AND RECYCLING

These materials are organics which readily decompose in either an agricultural land application process or a composting system. The Blair County Department of Solid Waste and Recycling previously (until September 30, 2012) operated the Blair County Yard Waste Compost Recycling Facility. Due to recent financial difficulties precipitated by court rulings making county fees illegal, the Blair County Yard Waste Compost Recycling Facilities are now owned, operated and managed by the IRC (Intermunicipal Relations Committee) Council of Governments. The IRC began operation of the two compost facilities, previously operated by the County, on October 1, 2012. Further information regarding the IRC's operational responsibilities in Blair County is included in Chapter 7.

When operated by the County, the compost facilities were open to all Blair County residents to drop off leaves, grass clippings, and brush to be recycled into compost and mulch. In addition, the four (4) mandated municipalities of Blair County, through an intergovernmental agreement, collected leaves and other yard waste from their residents' properties at curbside and deliver them to the Blair County compost site. In return, residents could pick up mulch and compost at the facility. According to updated ReTrac information on Blair County for 2011, the County managed a total of 3,428 tons of residential leaf and yard waste, and 265 tons of commercial leaf and yard waste, and 4,071 tons of commercial wood waste.

The Buckhorn compost facility also serves as a recyclables drop-off site for County residents, a drop-off operation that is being continued by the IRC. Starting in 2013, the R&D Compost site provides drop-off opportunities one day per week. The Buckhorn site recycled over 1,700 tons of used motor oil from residents and over 3,900 tons of magazines, catalogs, newspapers and junk mail from residents and businesses for recycling in 2011. Further information on recyclables accepted at drop-off sites in the County, sponsored by the IRC or by other public and private entities, is presented in Chapter 4.

The IRC conducts a backyard composting education program. Periodically, the IRC hosts training workshops to teach residents about the benefits of backyard composting. Though state funding for free composting bins has been eliminated, the IRC has continued to promote backyard composting when possible and hopes to sponsor bin sales as well. The program gives residents the know-how and tools to effectively compost yard waste and vegetative kitchen scraps in their own backyard, thus reducing the amount of waste residents place at the curb for disposal. Additional information on home composting and grasscycling can be found at www.ircenvironment.org.

The following Table shows the tons of wood, leaf, yard and food waste recycled from 2007 through 2011 at the Blair County Yard Waste Compost Recycling Facilities:

TABLE 1.2 – BLAIR COUNTY WOOD, LEAF, YARD AND FOOD WASTE RECYCLABLES TONNAGES FOR 2007 – 2011

Type of Material	Year				
	2007	2008	2009	2010	2011
Wood Waste	4,682	3,834	3,352	3,651	4,071
Leaf & Yard Waste	2,574	2,897	3,901	2,765	3,693
Food Waste?	4,935	1,429	574	1,470	1,496
Total:	12,191	8,160	7,827	7,886	9,260

1.5 INFECTIOUS AND CHEMOTHERAPEUTIC WASTE

Under the Pennsylvania Department of Environmental Protection (PADEP) regulations, infectious and chemotherapeutic waste (ICW) generated by hospitals, nursing homes, clinics, dental and medical offices is included as part of the municipal waste stream. Therefore, it is Blair County's responsibility to ensure proper management of this portion of the municipal waste stream.

Most ICW is processed by the generators on-site, through autoclaving, with sterilized materials being disposed of in the Veolia Chestnut Valley Landfill. In 2011, 866 tons of ICW was accepted for disposal at the Veolia Chestnut Valley Landfill.

For generators with no on-site processing system, these materials are collected by one of a number of private companies that offer medical waste collection services. To ensure the proper handling of this material by private haulers, PADEP requires that all vehicles used for the commercial collection of ICW generated in the County be permitted by PADEP.

Surveys were sent out to the major haulers of ICW in Blair County, as well as the major generators of ICW in Blair County. The ICW generators in Blair County that reported the highest average annual ICW waste generation were the Altoona Regional Medical Center (600,000 lbs); Blair Medical Associates (10,400 lbs), HealthSouth Rehabilitation – Hospital of Altoona (16,800 lbs), James E. Van Zandt VA Medical Center (18,000 lbs), and Nason Hospital (18,000 lbs). All ICW waste generators reported using an outside contractor to manage their ICW waste. The ICW waste generators that responded to the survey reported Stericycle and Veolia ES Solid Waste of PA, Inc as the contractors used to transport the ICW waste. Veolia ES Solid Waste of PA, Inc. reported transporting 2,400,000 lbs of ICW waste annually. A few generators reported a potential decrease in tonnage of ICW over the next few years. ICW haulers that did not respond to the survey or responded that they do not handle waste from Blair County include Alpha Bio/Med Services, Bio-Haz Solutions, Inc., Environmental Waste Minimization, Inc., and Premier Medical Waste Transport Ltd.

Today, medical facilities continue to manage ICW effectively either through on-site processing or through arrangements with commercial contractors to safely transport, process and dispose of this material. Though home-generated sharps, pharmaceuticals and infectious wastes are not technically regulated ICW, concerns over their safe and best disposal options remain and should be addressed in some way in this plan. Sharps waste is a form of medical waste comprised of items that are used to puncture or lacerate the skin. Common types of sharps include, but are not limited to, syringes and injection devices, blades, contaminated glass and some plastics.

1.6 HOUSEHOLD HAZARDOUS WASTE

Blair County, now in coordination with the IRC, has historically conducted one HHW collection event per year. The event is usually held between 8 AM and 1 PM, with a cost of \$10 per car trunk-load. Items that have been accepted at these collection events include:

- Aerosols
- Antifreeze
- Automotive batteries
- Corrosive acids & bases
- Flammable liquids, solids & adhesives

- Fluorescent light bulbs
- Garden chemicals
- Herbicides, fungicides, pesticides
- Indeterminate chemicals
- Oil-based paint (No latex paints)
- Oil filters
- Organic peroxides
- Oxidizing liquids & solids
- Poisonous liquids & solids
- Pool chemicals
- PCB ballasts & capacitors
- Reactive & non-reactive chemicals
- Used motor oil

The HHW collection events have not accepted latex paint, medications or alkaline batteries. They officially had been open to Blair County residents only, and residents had to show a valid ID upon arriving. The IRC has, however, not turned away residents from adjacent counties and has tried to build reciprocity arrangements with those adjacent counties so as to give additional options to residents that have problematic materials. Commercial/institutional/municipal establishments have also been able to take advantage of the HHW collection event by making an appointment.

The County, and now the IRC, has also accepted some of these materials at their Buckhorn Composting and Recycling Facility. These include:

- Automotive batteries
- Fluorescent light bulbs
- Oil filters
- Used motor oil

With the closure of the Blair County Department of Solid Waste and Recycling in September 2012, the IRC has taken over the duties of coordinating HHW recycling events. The IRC intends to continue offering annual HHW collection events in the future.

1.7 COVERED DEVICES (ELECTRONICS) RECYCLING

A large variety of electronic devices are accepted at the Buckhorn recyclables drop-off (and yard waste composting) site that was previously run by Blair County and is now owned and operated by the IRC. In addition to the electronic devices that are included under the 2010 PA Covered Device Recycling Act, other small appliances and electronics with power cords are also accepted. Further details on the IRC's electronics recycling program, are discussed in Chapter 4. Details of the Covered Devices Recycling Act are presented in Appendix J.

CHAPTER 2 - DESCRIPTION OF FACILITIES

This chapter describes the facilities currently being utilized to manage the municipal solid waste (MSW) generated in Blair County.

2.1 EXISTING WASTE DISPOSAL FACILITIES

The Altoona FAM composting facility ceased operation in October 1982. The Delta Disposal Landfill in Antis and Logan Townships ceased operation in February 1985. Since that time, all non-recyclable materials and other municipal wastes generated in Blair County have been transported outside of Blair County for disposal.

Over the years, a variety of landfills located outside of the County have been utilized by the 30 or more private haulers operating throughout the County. The following waste transfer or disposal facilities have accepted municipal solid waste from the Blair County Region over the past five (5) years:

- Altoona Transfer Station (WM)
- Blair County Resource Recovery Facility (Burgmeier Transfer Station)
- Southern Alleghenies Landfill (Waste Management, or WM)
- Sanitary Landfill
- Cumberland County Landfill (Interstate Waste Services, or IWS)
- Veolia Greentree Landfill
- Shade Township Landfill (WM)
- Laurel Highlands Landfill (WM)
- Sandy Run Landfill (IWS)
- Mostoller Landfill (IWS)
- York County Resource Recovery Facility (York County Solid Waste and Refuse Authority)
- Evergreen Landfill

As the result of a Solicitation of Interest performed in the fall of 2012 as part of the 2013 Plan Update, the following disposal facilities are tentatively listed as designated disposal facilities to take Blair County MSW starting in 2013 and continuing through 2023, subject to execution of disposal capacity agreements with Blair County. A sample of that disposal capacity agreement appears in Appendix A. The selected MSW disposal facilities that are part of this plan tentatively include:

- Mostoller Landfill (IWS)
- Sandy Run Landfill (IWS)
- Laurel Highlands Landfill (WM)
- Greentree Landfill (Veolia)

2.2 EXISTING WASTE TRANSFER STATIONS

Since November 1986, a municipal waste transfer station operated by Waste Management has been in operation at the central Blair County site of the former Altoona FAM composting plant (that closed in 1982). The facility has been known as the Altoona Transfer Station. In May 1998, a second municipal waste transfer station, the Burgmeier Transfer Station, also known as the Blair County Resource Recovery Facility, was permitted and placed into operation in central Blair County. In March 2012, Breezewood Transfer, LLC in Bedford County was granted a Form 37 approval from PADEP to begin construction and waste transfer operations at their Transfer Station. These three (3) transfer stations are the only municipal waste processing facilities known to be presently serving Blair County.

As the result of the Solicitation of Interest performed in the fall of 2012 as part of the 2013 Plan Update, these three waste transfer facilities have been tentatively designated to accept and transfer Blair County waste from the period of 2013 through 2023, as part of the County's integrated waste management system, subject to execution of municipal waste transfer agreements with Blair County. A sample of the transfer station agreement is included in Appendix A. The three selected transfer stations are:

- Altoona Transfer Station (Waste Management)
- Blair County Resource Recovery Facility (Burgmeier Transfer Station)
- Breezewood Transfer Station (Weavers Sanitation)

2.3 BLAIR COUNTY YARD WASTE COMPOSTING AND RECYCLING FACILITIES

2.3.1 Organics Management Facilities in Blair County

The Blair County Yard Waste Compost and Recycling Facility is located at 1860 Black Snake Road in Dysart (Buckhorn). Through September 30, 2012, this facility was operated by the Blair County Department of Solid Waste and Recycling. Beginning October 1, 2012, the IRC has taken over ownership, operation and management of this site. The regular hours of operation are Monday, Tuesday, Thursday and Friday from 10 AM to 5 PM and Saturday from 9 AM to 3 PM. Unscreened mulch can be bought for \$10.00/ cubic yard, screened mulch can be bought for \$15.00/cubic yard and screened compost can be bought for \$20.00/cubic yard. Residents with yard waste deliveries may drop off material at no charge. Current fees are charged for truckload quantities based on the following rates:

- | | |
|-----------------------|-------|
| • Automobile | Free |
| • Small Pickup/Van | \$5 |
| • Standard Pickup/Van | \$6 |
| • Dump Truck | \$10 |
| • Tandem/Triaxle | \$20 |
| • Season Pass | \$200 |

Season passes are intended for large volume users and commercial landscapers.

Additionally, there is a research and development compost facility located on Old Route 220 S. between Duncansville and Newry. Staff limitations mean that the R&D facility is currently only open on Tuesdays between 12 PM and 6 PM. Despite the limited hours, the IRC hopes to sell finished material from the facility in 2013, facilitating quicker turnover of the material and ultimately expanding capacity. Costs for finished material and tip fees for woody waste are the same as they are at the Buckhorn facility.

In 2012, the Blair County Department of Solid Waste & Recycling announced a ban on certain materials being accepted at the two Compost Facilities in Blair County. Residents were advised that it is unlawful to include in yard waste any materials that have been treated with, or may have been affected by, the herbicide Imprelis. The ban includes grass clippings, vegetable or flower plants, brush, billets, logs, etc., that are known to have been, or are suspected of having been subject to Imprelis contact. This ban continues under the operations by the IRC. Imprelis is a persistent herbicide that has long residual effects and, in turn, is bad for composting. The composting facilities also do not accept treated lumber.

2.3.2 Status of Organics Management Permits and Approvals

The Blair County Yard Waste Compost Recycling Facility is operated in accordance with applicable regulations, codes, standards, guidelines, policies and laws. The Yard Waste Compost Recycling Facility is operated as a Permit-by-Rule (PBR) facility under PADEP guidelines. The Research and Development Facility is operated under General Permit WMGR097R004. The IRC is taking appropriate actions to comply with currently mandated regulatory requirements which will become applicable in the future.

2.3.3 Recyclables Dropoff Sites

A list of the nine (9) former (under the auspices of the Blair County Department of Solid Waste and Recycling) and the current (present plus potential) recyclables dropoff sites that have survived, or are being opened in the County, subsequent to the closure of the County Department, are discussed in Chapter 4 – Description of Recycling Program.

2.4 PERMITTED SITES FOR AGRICULTURAL UTILIZATION OF BIOSOLIDS

Chapter 1, Section 1.3, summarized the current biosolids management system. Land application of biosolids is common practice in Blair County, and the following is a list of PADEP-permitted land application sites that are located in Blair County. Although the following list of land application sites are permitted through the PADEP, not all sites currently accept material from Blair County.

- Replogle Farm
- Robert Himes Farm
- Robert Smith Farm
- Fred England Farm
- Lloyd Acker Farm
- Sollenberger Farm
- EF Smith Farm
- Phillip Keith Farm
- Jeff Allison Farm
- Gary Stiffler Farm
- Kenneth Wertz Farm
- Daniel Hegarty Farm
- Bernard Smith Farm

2.5 OTHER PRIVATE REGIONAL FACILITIES

There are a number of operations in or near the County accepting and processing C&D waste materials. The items recycled by these operations include:

- Fluorescent Bulbs – IRC Buckhorn Facility, Scott Electric and R.E. Michel Company
- Mercury Thermostats – Scott Electric, Shipley Energy and R.E. Michel Company
- Ceiling Tiles – Ceiling Systems Distributors, Duncansville
- Drywall – USA Gypsum, Reinholds and Burgmeier’s, Altoona
- Asphalt Shingles – Centre County Recycling and Refuse Authority
- Vinyl Siding and Fencing - IRC Buckhorn Facility
- Asphalt and Concrete – Ventre Excavating

Beyond these C & D recycling options, all corrugated cardboard should be recycled as part of all construction projects in the mandated municipalities and the IRC reminds generators of those responsibilities.

CHAPTER 3 - ESTIMATED FUTURE CAPACITY

Blair County includes one (1) city, eight (8) boroughs and fifteen (15) townships with a population of 127,089 persons (2010 United States Census). Over a recent six-year period (2007 – 2012), Blair County municipal wastes were transported to nine (9) disposal sites (most waste to eight (8) landfills, plus a small amount to a waste-to-energy facility). A listing of these disposal sites, along with the tonnages of Blair County MSW accepted each year between 2007 and 2012, are presented in Table 3.1. The two landfills that accepted most of the County’s MSW for disposal during this recent time period are shaded in Table 3.1.

TABLE 3.1 – Blair County Municipal Waste Accepted at Processing and Disposal Facilities (2007 – 2012)

Site Name	County	Year/Tonnage ¹						
		2007	2008	2009	2010	2011	2012	5 year total
Southern Alleghenies Landfill	Somerset	323	2	3	32	2,753	267	3,380
Evergreen Landfill	Indiana					5		5
Veolia Greentree Landfill	Elk	3,220	7,846	2,088	37,889	1,470	590	53,103
Shade Landfill	Somerset	2,062	247			1		2,310
Laurel Highlands Landfill	Cambria	22,285	18,817	21,374	25,261	27,198	24,580	139,515
Sandy Run Landfill	Bedford	6,375	6,707	5,640	3,595	3,602	5,192	31,111
Mostoller Landfill	Somerset	72,018	71,170	74,146	45,117	70,344	70,548	403,343
Sanitary Landfill		510						510
York County WTE Facility	York	4	8	2	1			15
Total		106,797	104,797	103,253	111,895	105,373	101,177	

Source: PADEP Waste Origin/ Destination Landfill Summary Reports

¹ Tonnages do not include residual, sewage sludge, ICW, C&D, Ash or Asbestos waste. Also do not include recyclable materials and organics that have been diverted from disposal through recycling and composting.

3.1 FUTURE COUNTY POPULATION PROJECTIONS

Municipal waste generation is a function of a number of socio-economic factors, including population. Table 3.2 shows historic County populations from 1980 to 2010, and population estimates and forecasts for Blair County from 2011 through 2030. These population forecasts were extracted from the 2005 Blair County Comprehensive Plan.

TABLE 3.2 – HISTORIC AND PROJECTED POPULATIONS FOR BLAIR COUNTY

YEAR	POPULATION
1980	136,621 Actual (Census)
1990	130,801 Actual (Census)
2000	129,144 Actual (Census)
2010	127,089 Actual (Census)
2011	127,089
2012	127,077
2013	127,071
2014	127,065
2015	127,059
2016	127,053
2017	127,047
2018	127,041
2019	127,035
2020	127,033
2021	127,027
2022	127,021
2023	127,015
2025	127,003
2030	126,977

Sources: U.S. Census of Population, 2000 and 2010.

Forecasts: 2005 Blair County Comprehensive Plan, Population

As Table 3.2 illustrates, the County is forecast to have a nearly constant population over the ten (10) year planning period. Blair County's projected population from 2013 to 2023 is projected to drop by only 55 persons, or approximately 0.044 percent less (i.e. less than a one-tenth of one percent drop) over ten (10) years or essentially a steady County population.

3.2 WASTE AND RECYCLABLES PROJECTIONS

The three primary sources of data used in making projections of the amount of municipal wastes generated in the twenty-four (24) municipalities of Blair County are: the population projections from the 2005 Blair County Comprehensive Plan (Table 3.2); Re-TRAC data on recyclables and

organics diverted from disposal through recycling/ composting (Table 3.3), and; Blair County-generated tons of MSW disposed, taken from PADEP's Waste Origin/Destination Landfill Summary Reports from 2007 through the year 2011 (Tables 3.1 and 3.3).

The estimates and projections of municipal waste generated in Blair County, presented in Table 3.4, were computed by taking into consideration historic per capita waste and recycling generation rates and applying these rates to the projected County population for years 2013 through 2030 (with some special considerations, that will be discussed in this chapter). The per capita generation rates were calculated by taking the net waste disposal tonnage data contained in the PADEP Waste Origin/Destination Reports for years 2007 through 2011 (2012 data on recyclables tonnages was not available at the time that per capita projections were calculated), taking the reported tonnages of recyclables/organics diverted from disposal from Re-TRAC reports, and dividing the five-year averages of these tonnages (from Table 3.3) by the estimated population of Blair County during that time period, assumed for the purposes of these calculations to be the year 2010 U.S. Census population for Blair County (since the County's population is quite stable at the present time). These calculated per capita waste generation rates for each waste and recyclables category were then multiplied by yearly population projections for years 2013 through 2030, to estimate waste and recyclables tonnages generated by Blair County over the planning period (with some special considerations/ adjustments for recycling tonnage projections). These waste and recyclables/organics projections, through year 2030, are presented in Table 3.4.

3.3 PER CAPITA WASTE GENERATION RATES

The annual projected MSW waste generation and recyclables diversion projections for Blair County are based on per capita generation rates, as observed over the period of 2007 through 2011, in conjunction with the County population projections. During the 5-year period of 2007 through 2011, Blair County generated an average total of approximately 172,200 tons per year (TPY) of municipal solid wastes (all categories) plus diverted recyclables/ organics, of which approximately 126,200 tons were landfilled each year.

Typical Municipal Solid Waste generated by Blair County, which includes residential, commercial and institutional waste, but not including recyclables/ organics diverted from disposal, averaged approximately 106,400 TPY from 2007 through 2011. Using a stable 2010 U.S. Census population of 127,089 for Blair County, the **net MSW per capita** rate for municipal waste generation from 2007 through 2011 averaged approximately **0.8372 tons per capita per year**. With diverted recyclables/ organics included, the total typical MSW gross generation rate for Blair County averaged 152,400 tons annually and the **gross MSW per capita (including recyclables/ organics)** generation rate (including recycling) averaged approximately **1.1992 tons per capita per year**.

Sewage Sludge (the fraction that is dewatered and landfilled, but excluding land-applied liquid sludge) averaged 10,750 tons annually from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for dewatered and landfilled sewage sludge was **0.0846 tons per capita per year**.

Infectious and Chemotherapeutic Waste (ICW) generated by Blair County and disposed in landfills averaged 885 tons annually from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material was **0.0070 tons per capita per year**.

Construction and Demolition Waste (C&D) generated by Blair County and disposed in landfills averaged 7,400 tons annually from 2007 through 2011, or **0.0582 tons per capita per year**. Based on the goal and initiative of the IRC to increase C&D waste diversion through recycling over the ten (10) year planning period, the Plan projects that C&D waste disposal **will slowly decrease between 2013 and 2023 at a rate of approximately 200 tons per year**.

The Ash Residue component of Special Municipal Wastes generated by Blair County and disposed in landfills averaged 470 tons annually from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material was **0.0037 tons per capita per year**.

TABLE 3.3 – TONNAGES OF BLAIR COUNTY WASTE (BY WASTE TYPE) AND RECYCLABLES/ ORGANICS GENERATED, 2007 – 2011 (In Tons)

Waste Type	Year					5-Year
	2007	2008	2009	2010	2011*	Average
Typical Residential, Commercial, Institutional MSW	106,797	104,797	103,253	111,895	105,373	106,423
Recyclables & Organics Diverted	41,807	52,400	55,446	47,696	32,354	45,941
SUBTOTAL - Typical MSW + Recyclables/ Organics	148,604	157,197	158,699	159,591	137,727	152,364
Recycling Diversion, as a % of Typical MSW + Recycling	28.13%	33.33%	34.94%	29.89%	23.49%	30.15%
Sewage Sludge	10,451	11,421	10,691	11,281	9,899	10,749
Infectious/ Chemo.	921	892	847	901	866	885
Construction/ Demo.	6,522	7,934	7,462	7,702	7,333	7,391
Ash Residue	17	182	0	1,103	1,048	470
Asbestos	296	209	353	708	106	334
TOTAL – All Categories of Municipal Waste + Recycling	166,811	177,835	178,052	181,286	156,979	172,193
Residual Waste	36,653	24,589	19,945	20,327	21,906	24,684
TOTAL – Municipal Waste, All Types + Recycling/ Organics + Residual Waste	203,464	202,424	197,997	201,613	178,885	196,877

Sources: PADEP Waste Origin/Destination Reports; Re-TRAC Reports.

* The 2011 recycling and composting figures seem likely to be incomplete. Data collection had not been completed because of the closure of the county office that did that work.

Over the past five years, the total tonnage of asbestos material generated in Blair County has remained consistent between 200 and 300 tons, except for 2010 (over 700 tons). The Asbestos component of Special Municipal Wastes generated by Blair County and disposed in landfills

averaged about 335 tons annually from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material was **0.0026 tons per capita per year**.

Non-hazardous industrial waste (residual wastes) tonnages are not a component of municipal wastes, and this plan deals with municipal wastes as defined by Act 101 of 1988. However, it is noted that residual waste generated within Blair County and disposed averaged nearly 25,000 tons per year from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material was approximately **0.1967 tons per capita per year**. The future generation of residual wastes in Blair County is included in the waste projection tables for convenience.

3.4 PER CAPITA RECYCLABLES GENERATION RATE

The amount of material recycled or otherwise diverted from disposal in Blair County rose steadily between 2007 and 2009, from approximately 42,000 TPY to over 55,000 tons per year. The recorded recyclables tonnages in 2010 dropped slightly (to approximately 48,000 tons), and in 2011 dropped significantly to approximately 32,000 TPY. This drop in tonnage is most likely attributed to a difficulty obtaining accurate recycling tonnage totals from generators.

As presented in Table 3.3, the estimated recycling rate for Blair County in 2011 was 23.5%. The average recycling rate over the past five years was 30.159%. The recyclables and organics component of typical MSW that is generated by Blair County and diverted from landfill disposal averaged 45,940 tons annually from 2007 through 2011. Based on the year 2010 U.S. Census population, the average per capita generation rate for recyclables and organics that have been diverted from disposal in Blair County was approximately **0.3615 tons per capita per year**. In year 2011, a year with a decrease in recycling tonnage, possibly due to incomplete data on recycling, tonnages of recyclables/ organics diverted significantly dropped from 2009 levels, from over 55,000 TPY to approximately 32,000 TPY, or to a 2011 recycling rate of **0.2546 tons per capita per year**. 2012 Re-Trac recycling data is not yet available for Blair County.

The recycling programs in Blair County are in transition, and will change over the ten (10) year planning period, due to the closure of the Blair County Department of Solid Waste and Recycling, for financial reasons, on September 30, 2012. With the recent elimination of that Department, some of the County's recycling programs/ facilities have had to be reduced or eliminated, including the majority of the County's nine (9) recyclables dropoff sites. The IRC, that now serves as the County's Recycling Coordinator and that is now responsible for managing various recycling programs in Blair County, is striving to maintain at least some of the previous dropoff sites in the County, as well as maintaining operations of the previous County organics receiving/ composting facilities, and some other related services. The IRC, in coordination with the Blair County SWAC members, have compiled a list of initiatives, goals and programs that may be

developed in order to try to enhance and sustain the recycling programs, as well as identifying options for residents that have had recycling programs eliminated. The lists of these programs efforts and goals are included in Chapter 4 and in Appendix E.

The IRC is currently working with municipalities and waste haulers of Blair County to gauge interest in municipalities and/ or haulers in sponsoring the operation and maintenance of recyclables drop-off facilities. The IRC has had some success to date in finding new drop-off facility hosts.

Several municipalities in the County have ordinances that allow residents to request curbside recyclables collection from their private subscription waste hauler if they so desire. The IRC intends to work with municipalities and local waste haulers to offer residential curbside recyclables collection to residents in “non-mandated” communities (in essence, any municipalities outside of the IRC) who request this service.

This Plan Update is providing the tools (via ordinance templates) to expand this optional curbside recyclables collection program for private “subscription” customers to other municipalities in Blair County. If curbside recyclables collection in non-mandated communities increases across Blair County, the county recycling rate could actually increase over time (recycling rates generated by recyclables dropoff services in these communities would likely be notably lower than they would be with more widespread curbside recyclables collections). This strategy has proven successful in neighboring Centre County where suburban townships under 10,000 have curbside recycling service.

Also, this Plan Update is investigating, on a very preliminary basis, the concept of food waste composting and how this technology may be introduced to the IRC’s yard waste operations in Blair County. As this technology is not currently utilized by Blair County residents (any food waste recycling is now done by the commercial sector of Blair County), the introduction of food waste processing to the IRC’s yard waste composting activities, and the expansion of food waste diversion in the commercial (and possibly residential) sector may further increase Blair County’s recycling tonnage diversion over the ten (10) year planning period.

In summary, recycling programs and practices in Blair County are in a state of transition. Past practices, reflected by a 5-year average of approximately 30% recycling of conventional MSW, are believed to be an overly optimistic reflection of the current recycling scenario, due to the closure of the County’s recycling activities and the more limited recycling dropoff opportunities in early 2013. However, it is projected that new recycling programs may result in a slow but steady growth in tonnages recycled over the planning period, and a return to the recycling rates experienced in 2009. The next section of this report addresses future recycling projections.

3.5 FUTURE COUNTY MUNICIPAL WASTE GENERATION PROJECTIONS

Table 3.4 presents the annual MSW waste generation and recyclables diversion estimates/projections for the County, from 2013 through 2030. These projections are tied to the population projections from Table 3.2 and the per capita waste generation figures developed in Section 3.3 and Section 3.4 of this chapter. The total waste generated in Blair County, including recyclables, is assumed to remain relatively steady over the ten (10) year planning period, due to stable populations and the current state of the economy observed in Blair County over the past five (5) years.

The recycling projections calculated in Table 3.4 were computed based on a continuation of year 2011 diminished recycling activities, reflected by a reduced per capita recyclables/organics diversion rate of 0.2546 tons per capita per year; this assumption is believed to be valid considering the diminished recycling programs now in effect in Blair County (after September 30, 2012), at least for a transitional period until new, cost-effective recycling programs can be developed and implemented under IRC management/ coordination. It is anticipated that recycling will steadily increase from 23.5% in 2011 to 25% in 2013 and will then continue to increase by 1% per year over the course of the ten (10) year planning period, to 35% recycling by 2023.

Municipal wastes that are not diverted/ recycled must be processed/ disposed. Since the recent historic data on waste tonnages (presented in Table 3.3) did not show any corresponding increase in 2011 disposal tonnages (from 2010 values), as recycling decreased in 2011, it is believed that the 5-year average per capita waste generation rates for the multiple fractions of MSW generated (described in Section 3.3) were a valid basis for projecting future waste generation and disposal tonnages. Municipal waste disposal tonnages became available for year 2012 at the time of Plan Update finalization. This 2012 historic waste tonnage data has been included in Tables 3.1 and 3.4. Waste projections in Table 3.4 are based on a five-year average from 2007 through 2011, because this was the data available at the time of the waste projection calculations.

As presented in Table 3.4, net County-generated MSW, including residential/ commercial/ institutional waste requiring disposal (after waste diversion and recycling), is projected to decrease steadily over the ten (10) year planning period, due to a projected increase in recycling efforts.

Nationwide, there is a growing trend to recycling more of C&D waste; “deconstruction and recycling” is becoming more common than the old “demolition and disposal” practices. Currently, C&D waste that is diverted through recycling in Blair County is not included in the recyclables diversion tonnages or recycling rate reported for Blair County, nor is it reported on the annual Re-Trac Reports. The Plan Update projects that recycling of C&D waste will grow over time, and that the County’s C&D waste tonnage requiring disposal will decrease by

approximately 200 tons per year over the ten (10) year planning period. This growing C&D recycled tonnage has not been included in the recyclables diverted tonnage totals projected in Table 3.4, since it has not been included in previous years and will not appear on the annual Re-Trac Report.

Special Handling Waste categories of MSW (those that require special handling provisions), including sewage sludge, ICW, ash residue, and asbestos, are projected to have a relatively steady combined disposal capacity need over the ten (10) year planning period of approximately 12,400 TPY.

When considering the disposal capacity needs for Blair County's MSW, and when procuring this disposal capacity through a solicitation process, it is prudent to consider the need to accommodate approximately 125,000-130,000 TPY of MSW disposal capacity each year, plus some additional allowance for disposal of currently diverted recyclables and organics (all categories of municipal waste), to provide for contingencies over the ten (10) year planning period of this Plan Update from 2013 to 2023. Conservative disposal capacity requirements have been included in the Solicitation of Interest (SOI) for Disposal Capacity, further discussed in Section 3.8.

3.6 POSSIBLE VARIATIONS IN FUTURE WASTE GENERATION PROJECTIONS

The primary variables which could affect actual MSW waste generation/ disposal tonnages in Blair County in the future are:

- Population loss or gain
- Changes in recycling activities and opportunities in Blair County, as a result of the closure of the County Department of Solid Waste and Recycling and the initiation of IRC management and coordination of County recycling programs
- Changes in product packaging trends
- Increases in waste reduction programs, striving toward "zero waste disposal"
- Addition of non-mandated municipality recycling programs and drop-off facilities
- Increases in recyclable materials recovery rates
- Expansion of materials diverted/ recycled, including implementation of food waste recovery programs
- Economic factors; the Plan's waste generation estimates reflect a stable level, but not growth, in commercial/ business development
- Municipal burning bans, which may result in additional tons of waste requiring disposal

Product packaging, although criticized in recent years as being excessive, is still very sensitive to the demands of the marketplace in relation to consumer convenience, consumer manufacturing protection, and retail theft, which, in turn, are in response to the pressures and demands of current day society. Consumer convenience has been "revolutionized" by the microwave oven and single serve packaging which has mushroomed from the use of this modern appliance. Product tampering and the attendant lawsuits have resulted in increased packaging of some food and

medicinal products. Retail theft contributes to over packaging of smaller items, the blister pack being an outgrowth of this societal problem. These product packaging tendencies along with a forecast of increases in "disposable" health care items and other products will tend to offset waste reduction programs. An edition of EPA's Recycling Times indicated that the amount of waste Americans generate will continue to escalate if no source reduction measures are taken.

Thus, the opinion expressed herein, that source reduction measures instituted as a result of this plan would equally offset increased municipal waste generation rates (expressed as a per capita waste generation value), appears to be a reasonable approach to take for planning purposes.

One of the most effective ways to both increase recycling and reduce waste volume is to implement pay-as-you-throw volume-based waste collection programs. This is one of a number of recommendations made to municipalities in this plan but this seems unlikely to become a widespread strategy unless municipalities take a more hands-on approach concerning waste collection and recycling. Despite this historic lack of engagement on the issue, the plan still encourages implementation of volume-based systems.

The County has recently discontinued its County-sponsored recycling and integrated waste management and recycling programs. The IRC has now assumed this role, but is restricted by its obligations to its four (4) member communities as well as its own budgetary limitations. Many of the above-mentioned recycling efforts may take years to implement; the County's recycling activities and programs are in a state of transition at this time, as the IRC determines which programs it can sponsor and which programs and sites it can sustain through other sponsors. By steadily increasing recycling rates by 1% annually from a recycling rate of 25% in 2013, the Plan Update takes into account that the recycling programs offered in Blair County are in transition and will be expanding over the course of the ten (10) year planning period.

If future recycling efforts, initiated by the IRC, municipalities, haulers and the business community exceed the recycling rates that are projected over the next 10-15 years, slightly less capacity may be required for processing/disposal of the balance of Blair County's municipal waste stream than is noted in Table 3.4.

3.7 CAPACITY OF BLAIR COUNTY YARD WASTE FACILITY TO HANDLE PROJECTED WASTE STREAM

The County Composting Site (Buckhorn Facility) and the County Research and Development Site (Duncansville) are now operated by the IRC, and these two facilities are processing yard waste materials brought in by residents, municipalities and by limited commercial deliveries. The sites are keeping up with current feedstock deliveries, although additional processing capacity at the IRC sites would be a plus.

Plans are in the works to expand the capacity of the IRC's compost facilities so as to be able to handle greater volume and a wider variety of feedstocks. An Act 101, Section 902 Grant was awarded to the IRC in early 2013 that will allow the expansion of the current paved portion of the compost pad. Additionally, the IRC has also continued the research begun by the county to complete permitting work to accept food waste at least one of their composting facilities.

3.8 TOTAL CONTRACTED DISPOSAL CAPACITY NEEDS AND SOLICITATION

Realizing that the County must ensure long-term disposal capacity, a "Solicitation of Interest" (SOI) document was prepared, advertised and distributed to interested processing/ disposal facilities. Refer to Appendix C for a copy of the SOI. This document solicited proposals from interested parties to provide disposal services to Blair County, for a maximum period of ten (10) years, with a 5-year initial term and an optional renewal after five (5) years. The SOI stated that the County will require a combined municipal waste disposal capacity for up to 149,000 tons per year of municipal waste (including residential/commercial/institutional waste, C&D waste, infectious/chemotherapeutic (ICW) waste, asbestos, sewage sludge and other "special handling" waste) during the ten year planning period. Over the past six (6) years, the highest annual tonnage total for municipal waste was approximately 135,000 tons. For the purposes of the SOI, B&L used a conservative projection of 135,000 tons as the total municipal waste tonnage requiring disposal from Blair County in 2013, assuming a potential increase in waste tonnage due to recycling program elimination (at the time of SOI release in the Fall of 2012). In the SOI, B&L increased the waste tonnage requirement by approximately 1.0% each year throughout the ten (10) year planning period. Therefore, in year 2023, the approximate total tonnage of municipal waste requiring disposal by Blair County was projected in the SOI to be up to 148,000 tons per year.

Based on B&L's current waste projections (Table 3.4), Blair County is projected to generate for disposal, from the waste categories of residential/ commercial/ institutional MSW, C&D waste, sewage sludge, ICW, ash residue, a combined total need of approximately 124,200 tons per year; adding in residual waste disposal needs, this total need is approximately 149,200 tons in 2013. The equivalent projections for year 2023 are 108,300 and 133,300 tons per year of disposal needs, respectively. The 132,000 to 148,000 TPY of disposal capacity solicited in the SOI are adequate to serve all of the projected MSW disposal needs of Blair County, plus some allowance for either increased MSW disposal needs (if recycling efforts drop significantly, or if burn bans on waste result in tonnage increases), and if not needed for that use, could potentially be used to meet some of the residual waste disposal needs of Blair County (although this is neither a requirement of this Plan Update, nor was it a goal, of the SOI document).

Therefore, the SOI solicitation for disposal capacity is adequate to meet the MSW disposal needs of the County during the ten (10) year planning period. Chapter 6 contains a summary of the results of the SOI solicitation and the decisions made regarding selection of processing/ disposal sites.

Table 3.4 – In-County Municipal Waste Generation Projections

Waste Type	Year ²														
	2011	2012 ¹	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2025	2030
County Population	127,089	127,077	127,071	127,065	127,059	127,053	127,047	127,041	127,035	127,033	127,027	127,021	127,015	127,003	126,977
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Total MSW + Recyclables Based on Per Capita Rates		138,743	138,736	138,730	138,723	138,716	138,710	138,703	138,697	138,695	138,688	138,682	138,675	138,662	138,633
Typical Residential, Commercial, Institutional MSW	105,373	101,177	104,052	102,660	101,268	99,876	98,484	97,092	95,701	94,312	92,921	91,530	90,139	87,357	80,407
Subtotal Recyclables & Organics Diverted	32,354	34,686	34,684	36,070	37,455	38,841	40,226	41,611	42,996	44,382	45,767	47,152	48,536	51,305	58,226
Subtotal Typical MSW + Recyclables/Organics	137,727	135,863	138,736	138,730	138,723	138,716	138,710	138,703	138,697	138,695	138,688	138,682	138,675	138,662	138,633
Recyclables Diversion, as a % of Typical MSW + Recycling	23.5%	25%	25%	26%	27%	28%	29%	30%	31%	32%	33%	34%	35%	37%	42%
Total Sewage Sludge Generated	9,899	11,161	10,750	10,750	10,749	10,749	10,748	10,748	10,747	10,747	10,746	10,746	10,745	10,744	10,742
Total ICW Generated	866	152	889	889	889	889	889	889	889	889	889	889	889	889	889
Total C&D Waste Generated	7,333	7,927	7,727	7,527	7,327	7,127	6,927	6,727	6,527	6,327	6,127	5,927	5,727	5,327	4,327
Total Ash Generated	1,048	0	470	470	470	470	470	470	470	470	470	470	470	470	470
Total Asbestos Generated	106	64	330	330	330	330	330	330	330	330	330	330	330	330	330
Total - All Categories of Municipal Waste + Recycling	156,979	155,167	158,903	158,696	158,489	158,282	158,075	157,868	157,661	157,458	157,251	157,044	156,837	156,422	155,392
Total - All Categories of Municipal Waste (Net of Recycling)	124,625	120,481	124,219	122,627	121,034	119,441	117,849	116,257	114,665	113,076	111,484	109,892	108,301	105,118	97,165
Total Residual Waste Generated	21,906	19,399	24,995	24,994	24,993	24,991	24,990	24,989	24,988	24,987	24,986	24,985	24,984	24,981	24,976
Total - Municipal Waste, All Types + Recycling/Organics + Residual Waste	178,885	174,566	183,898	183,690	183,482	183,273	183,065	182,857	182,648	182,446	182,237	182,029	181,821	181,404	180,368

Waste data for 2012 was obtained from PADEP Waste Destination Reports. Recyclables tonnages for 2012 were not available through Re-TRAC for 2012 at the time of Plan Update writing.

Ten (10) year planning period projections are shaded.

CHAPTER 4 - DESCRIPTION OF RECYCLING PROGRAM

This chapter describes the recycling activities taking place in Blair County, the goals for recycling over the ten (10) year planning period and the impact of recycling on the amount of municipal waste requiring disposal/processing capacity.

4.1 THE MATERIALS ADDRESSED BY ACT 101

Newsprint – Newsprint or newspaper is primarily generated in the residential sector. Post-consumer waste newspaper is called “old newspaper” or “ONP”. ONP can be recycled back into newsprint. It can also be made into cellulose insulation, animal bedding, mulch, low-grade copy and computer paper, and paperboard. Paperboard is a trade term that includes all cardboard types, such as corrugated cardboard and tablet backings, as well as the paper lining on gypsum wallboard. ONP can also be shredded and used as a bulking agent in composting wet organic wastes, such as sludge, manure, or food waste.

Corrugated Paper – Corrugated paper, referred to in the recycling industry as “old corrugated containers” or “OCC”, composed primarily of corrugated cardboard boxes, also comprises a significant portion of the municipal waste stream. The majority of it is generated in the commercial sector, although growth in on-line shopping has resulted in increased OCC from growing use of shipping boxes for home deliveries. Recovery of OCC is conducted by the commercial waste generators and private haulers, and is now collected in many residential curbside collection programs to reduce disposal costs and potentially earn modest sales revenue. Recovered OCC is mixed with virgin pulp to make new corrugated. It can also be used in the manufacture of other types of paperboard.

High Grade Office Paper – High grade paper includes computer print-out, office papers, and ledgers. Most of it is found in the commercial sector, particularly in office buildings, where it can comprise the majority of the office’s waste stream. Computer printout and white ledger can be made back into high grade paper. However, to make bright white paper requires that the recycled fiber be supplemented with a large percentage of virgin pulp. A common use is in the manufacture of tissue products such as paper towels and toilet paper. High grade paper is also used to make paperboard.

Mixed Paper – Mixed paper refers to a mixture of the above three types of waste paper plus other waste papers such as junk mail, phone books, magazines, cereal and pizza boxes. Roofing material and boxboard manufacture are traditional uses of mixed paper, and for the production of low grade tissue and toweling products.

Glass – Although glass is found in a variety of forms and colors (e.g. clear, green and amber) in the municipal solid waste stream, container glass (i.e. bottles and jars) is the most commonly recyclable type of glass. The majority is generated in the residential sector. Waste container glass can be melted and mixed with virgin glass ingredients to make new container glass.

Steel and Bimetal Cans – There are two types of steel cans: tin-coated cans commonly known as “tin cans” and “bimetal” beverage cans. Bimetal cans have a coated steel body and aluminum ends. Bimetal beverage cans are easily mistaken for aluminum cans.

Aluminum Cans – Aluminum cans or used beverage cans (UBC) are among the most easily recoverable aluminum products. Aluminum cans are very readily reprocessed into new aluminum sheet. Other products containing aluminum, such as cookware, use a different type of aluminum and are not accepted at recycling centers since the different varieties are not readily substitutable. The cost savings from using scrap aluminum rather than virgin inputs has provided for a strong scrap aluminum market.

Plastics – Plastic is a generic term that defines a wide variety of materials that are made up of one or a combination of plastic resins. The two most common, recyclable types of plastic are PET (Polyethylene terephthalate - #1) and HDPE (high density polyethylene - #2). PET (#1) is most commonly used to produce soft drink bottles. HDPE (#2) is most commonly used to produce milk and water containers, colored and opaque detergent bottles, and motor oil containers.

Yard and Leaf Waste – Mandated municipalities are required to separate yard and leaf waste from other municipal waste. Also, since September 26, 1990, PADEP regulations do not allow any waste disposal facility to accept shipments comprised primarily of yard and leaf wastes unless a separate composting facility has been provided. 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 removing a substantial quantity of waste stream material from landfill disposal.

Other Recyclable Materials Not Specifically Addressed by Act 101 – Large appliances or “white goods” can be shredded and the steel separated for recycling. Some scrap dealers in the County accept white goods. In addition, many appliance stores will accept appliance trade-ins when selling a new appliance. There are municipal recycling events that include major appliances, computers and electronics, clothing and textiles, books and other items.

Electronic equipment contains metals that, if not properly managed or contained, can become hazardous wastes. The “Covered Device Recycling Act” (House Bill 708), PA Act 108 of 2010, establishes a recycling program for certain covered devices; imposes duties on manufacturers and retailers of certain covered devices; provides for the powers and duties of PADEP including

enforcement; establishes the Electronic Materials Recycling Account in the General Fund; and prescribes penalties for noncompliance. Information on the CDRA is presented in Appendix J.

Provided markets can be found, various other types of materials in the municipal waste stream can be recycled. Tires, used motor oil, and automotive batteries are examples of recyclable items that pose disposal problems. Used tires can be retreaded, shredded and processed into crumb rubber for use in rubber plastic products, or they can be used to produce a durable ingredient in the production of asphalt. Alternatively, tires can be shredded and burned as a source of fuel. The metal in automotive batteries and the polypropylene plastic case are recyclable. Used motor oil can be refined to produce heating fuel, industrial lubricants and even new motor oil. Used textiles can also be recycled. Textiles can be reused as rags, or reprocessed into filler products such as insulation or furniture padding. Non-treated wood can be recycled into playground mulch and used as a fuel source.

4.2 CHANGES IN ACT 101 AND IMPACT OF THESE CHANGES ON THE COUNTY

Act 101 (P.L.556), originally enacted on July 28, 1988, was amended via the implementation of *Act 140* (House Bill No. 1902, session of 2005, as amended on 9/27/06). This amendment created a series of changes, including extension of the sunset date for the recycling fee to January 1, 2012. (Act 101 was later reauthorized in May of 2010, and the sunset date for the DEP Act 101 landfill-related fees was extended until December 31, 2020.) Notable among the other changes, were specific changes to Section 2, with respect to Section 904 (a) and (b), regarding performance grants for municipal recycling programs. Among other requirements, the amendment expanded the level of documentation required to be included with the applicant's recycling and composting grant request submission, and this affected funding received by municipalities beginning in 2007.

Under Section 2(d)(4) of Act 140, the amendment noted that all mandated municipalities and any non-mandated municipality receiving more than \$10,000 in funding must demonstrate to PADEP's satisfaction that they "...have met the following performance requirements:

- requires, through ordinance, that all residents have waste and recycling service
- has an implemented residential recycling program and facilitates a commercial recycling program or participates in a similar county or multi-municipal program
- has a residential and business recycling education program
- has a program of enforcement that periodically monitors participation, receives complaints and issues warnings for required participants and provides fines, penalties, or both, in its recycling ordinance
- has provisions, participates in a county or multi-municipal program or facilitates a private sector program for the recycling of special materials

- sponsors a program, facilitates a program or supports an organization to address illegal dumping and/or littering problems
- has a person or entity designated as recycling coordinator who is responsible for recycling data collection and reporting recycling program performance in the municipality or municipalities."

Section 2(d)(5) goes on to say that "If the requirements of paragraph (4) are not satisfied by the municipality, then the grant funds awarded under this section shall be expended by the municipality only to satisfy the requirements of paragraph (4)." Section 2(e) of Act 140 states that "The Department may require budget documents or other expenditure records and may deny funding through this section if an applicant cannot demonstrate that funds have been expended on eligible activities."

There has been a notable decrease in the amount of recycling performance grant funding awarded through Section 904 to municipalities throughout the Commonwealth in the last several years. PADEP initiated an across-the-board 40% reduction in performance grant awards to all municipalities in ____ due to budgetary limitations. Reductions in recent PADEP grant funding awards may also be due, in part, to the lack of municipal personnel to provide the services and prepare the documentation necessary to support the grant application requirements of Act 101 and Act 140. Specifically, it may be difficult for municipalities to comply with Act 140 requirements due to the lack of commercial recycling programs; a lack of commercial recycling ordinances; a lack of an enforcement program, and; lacking periodic public education on recycling programs at a municipal level. With that in mind, the IRC is encouraged to use staff to work with municipalities in the County to apply, on a County-wide basis, for Performance Grant funding to maximize the grant potential

4.3 AMOUNT OF MATERIALS RECYCLED

Current recycling activities within Blair County have a significant impact on the amount of solid waste being transported out of the county for disposal. A total of approximately 27,000 tons of Blair County recyclable material was reportedly diverted from the waste stream and recycled in 2011. As discussed in Section 3.5 of Chapter 3, the County's recycling rate is projected to be 25% diversion of municipal waste tonnage in 2013, and is projected to slowly ramp up over the ten (10) year planning period due to the expansion of current programs and the incorporation of new recycling programs and initiatives in the County. The recycling rate is projected to grow by approximately 1% annually, from 25% in 2013 to 35% by 2023.

The County had to eliminate many of its recycling programs in the fall of 2012 due to a lack of funding to sustain the County recycling programs and even the County's Department of Solid Waste and Recycling. The County entered an agreement with the IRC for the IRC to manage and maintain some of the recycling programs that were previously managed by the County. The IRC has had some initial success with identifying new municipal and/ or hauler sponsors of

drop-off sites to serve areas of the County. It is expected that if the IRC is able to facilitate the growth of existing recycling programs (like the establishment of new drop-off sites), and can help implement other recycling initiatives (such as optional curbside recycling collections in non-mandated municipalities, addition of new materials to existing and new drop-off programs, and consideration of introducing food waste composting technology to an IRC yard waste composting site in Blair County), Blair County's recycling rate may indeed increase over the ten (10) year planning period from the current estimated 25% rate.

Act 101 requires each municipality to submit to the county in which it is located a report "...describing the weight or volume of materials that were recycled by that municipal recycling program in the preceding calendar year." The data for those reports generally comes from three sources:

- Residential Curbside Programs - from reports submitted to the municipality by the private sector hauling firms with whom the municipality or individual residents had contracted for recycling services.
- Residential Drop-Off Programs – from reports submitted to the municipality or county by the recycling facility that receives and processes the material.
- Commercial/Institutional programs - from each individual establishment which had initiated a recycling program or from the private sector firm providing the recycling service.

In 2011, approximately 20% of the municipal waste stream was recycled in Blair County; this figure represented a drop from a high of 35% in 2009, and this drop may be at least partially due to incomplete recycling data reporting in 2011. An examination of data from a recent R.W. Beck study (described in detail below) statewide waste composition study conducted in Pennsylvania, suggests that of the remaining municipal waste currently being disposed of in Pennsylvania, there is additional discarded waste that could potentially be recycled. However, there are many factors that determine which materials are actually removed from the waste stream. These factors include, but are not limited to: availability of markets for the materials; economics of a recovery system; competing options; the percentage of people that participate in recycling; how easily the materials can be segregated for recovery; and how efficient people are in diverting the materials for recycling. The table labeled Waste Composition Estimate located in Appendix E, presents an estimate of the current composition of the discarded municipal waste stream (after source separation) by material (from best available data), as well as an estimate of the potential remaining tons of recyclables that may still be available for recovery in the discarded waste stream.

According to the Municipal Solid Waste Characterization Study conducted for PADEP, there were over 2 million tons of recyclable materials landfilled statewide in 2001. This material included paper, plastic, glass, metal, organics, and inorganics. Copies of the complete study can be obtained from the DEP web site at the following website location:

http://www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/Waste_Comp/Study.html

This information shows that there is still considerable room for improvement in recycling. For counties and municipalities to increase their recycling, they first need to establish a sustainable funding source to support recycling programs; Blair County was not able to do this, which resulted in the recent closure of their Solid Waste and Recycling Department. If the IRC can establish funding sources to stabilize and expand recycling programs, they may want to investigate expanding the types of materials collected curbside or drop-off, expand the number of sites and the hours of operation of drop-off programs, improve the education of residents, and focus on expanding recycling in commercial, institutional, and multi-family facilities. They should also consider increasing the number of special collections, and investigating the expansion of organics composting opportunities. Although all of these ideas may not work in each municipality, there needs to be a greater emphasis on cooperation, with an analysis of what can realistically be achieved. County recycling programs, now under IRC management, have shown some initial buy-in by municipalities that may result in expanded recycling opportunities and success in the County. With decreased grant money to spend on programs, the IRC in conjunction with the County should decide what its targeted recycling programs are, and take incremental steps toward realizing the desired end result.

In the future, an expansion of current educational mediums (e.g. mailers, newspaper inserts, radio spots) could be used to promote recycling, and school curriculums could be developed and used by teachers in Blair County school districts to educate students about the importance of proper waste management practices. The most cost-effective use of Blair County and IRC resources should be evaluated in determining which programs to develop.

Additionally, PADEP intended to establish outreach efforts to events held throughout the County during the year such as the Keystone Country Festival in the fall, Rail Fest, held at the Altoona's Railroaders Museum, the many events held at the new Blair County Convention Center, those at the Jaffa Shrine in Altoona, as well as others as they are scheduled. Efforts should also be made to establish recycling programs of commercial establishments and through the Blair County Chamber of Commerce.

4.4 EXISTING MATERIAL RECOVERY OPERATIONS

In the past two decades, communities and businesses in Blair County have made notable strides in reducing the amount of municipal waste requiring disposal. Seven (7) of the County's 24 municipalities have implemented curbside recycling collection programs (either mandatory or resident-elected), and nine (9) municipalities had (until recently) dropoff recycling centers located in their municipalities (11 municipalities have no municipally managed recycling program). The IRC is trying so coordinate the opening of new recycling drop-offs to replace those that were closed by Blair County in September 2012. Businesses and institutions have also

developed programs to divert materials from the waste stream. The total amount of recyclables reportedly recovered in 2011 was approximately 27,000 tons (net of C&D recycling).

TABLE 4.1 – MATERIALS ACCEPTED BY MAJOR PRIVATE COLLECTION SITES IN THE AREA (as of 2012)

FACILITY	LOCATION	MATERIALS ACCEPTED
Burgmeier's Hauling	East 6 th Ave. Road, Altoona	Antifreeze, appliances (for a fee), automotive batteries, NiCad batteries, corrugated cardboard, glass, magazines & catalogs, scrap metal, steel/tin food cans, newspapers & phone books, used motor oil, office paper, plastic bottles & jugs, radiators, tires (for a fee) and water heaters
Cove Recycling	4643 Cove Mountain Road (Rt. 164 East), Roaring Spring	Corrugated cardboard, magazines & catalogs, aluminum cans and foil, scrap shavings, #1 and #2 copper, sheet copper, fin tubes, yellow & red brass, brass shavings, die cast, stainless, and lead, newspapers & phonebooks and radiators
J&J Recycling	1747 Margaret Ave., Altoona	Appliances (for a fee), corrugated cardboard, steel/tin food cans, newspapers & phonebooks, plastic bottles & jugs #1 & #2, and water heaters
Joe Krentzman & Son	311 Wall St., Hollidaysburg	Automotive batteries, scrap metal (brass, copper, aluminum, etc.), radiators and water heaters
Waste Management Altoona Transfer Station	East Sixth Avenue Road	Corrugated cardboard, glass, magazines & catalogs, scrap metal, steel/tin food cans, newspapers & phone books, used motor oil, office paper, plastic bottles & jugs

There are over twenty (20) additional collection facilities throughout Blair County that take hard-to-recycle items. A list of these facilities and the materials accepted can be found on the IRC website at www.ircenvironment.org.

The Blair County drop-off centers accept all plastic bottles & jugs, aluminum cans, steel/tin cans, newspapers and cardboard. Table 4.2 shows the drop off centers located in Blair County in 2012. As previously mentioned, many of these drop-off facilities will be eliminated in 2013. The list of recyclables drop-off facilities may serve as a goal for Blair County, in the future, to increase the recycling rate beyond 20%.

TABLE 4.2 – LOCAL RECYCLABLES DROPOFF COLLECTION SITES

FACILITY	LOCATION
IRC Compost Facility	1860 Black Snake Road, Dysart, PA 16636
Frankstown Township Municipal Building	2122 Frankstown Road, Hollidaysburg
Greenfield Township Municipal Building	Claysburg
Martinsburg Borough Public Works	317 S. North Nicodemus Street, Martinsburg (this is a subscription program)
Williamsburg Borough Building	305 E. Second Street, Williamsburg
Duncansville R&D Compost Facility	16906 Dunnings Highway, Duncansville
Woodbury Township Building	State Route 2011, Williamsburg

4.5 SUMMARY OF MUNICIPAL RECYCLING PROGRAMS

In accordance with Act 101, four (4) municipalities in Blair County mandate via ordinance the mandatory curbside collection of at least three (3) recyclable materials. In addition, the IRC collects leaves and yard waste from the four (4) municipalities and hauls them to the IRC's leaf composting site at Buckhorn. These four mandated municipalities, all members of the IRC, are the City of Altoona, Hollidaysburg Borough, Logan Township and Tyrone Borough.

The non-mandated communities of Antis Township, Blair Township and Snyder Township have adopted ordinances that provide for voluntary curbside recycling; that is, private waste haulers are required to provide, if requested by the homeowner, curbside recycling services (these services can be provided at an additional cost to the homeowner).

Commercial, institutional and retail establishments located in the City of Altoona, Logan Township, Hollidaysburg Borough and Tyrone Borough, as well as community events in those municipalities, are also required to participate in the Act 101-mandatory recycling program. This could include the recycling of glass bottles and jars, aluminum cans, aerosol and steel cans, plastic containers and bottles, corrugated cardboard, newspapers, magazines & catalogs and high grade office and copy paper, plus leaf waste. Recyclables must be collected from these establishments at least once every two weeks, and more often if needed. Recyclables must be separated from trash, including placement of receptacles in public areas. Commercial and retail establishments are encouraged to contact their municipal officials or the IRC office, or to visit the IRC website, to obtain information regarding haulers, recycling containers, labels and posters, and municipal ordinances and guidelines.

To date, all municipalities in Blair County, except the Borough of Tyrone, rely on private subscription for waste collection from residences. The Borough of Tyrone utilizes a municipal

contract with a single private hauling firm for all residential collections. Thus, all curbside recycling is performed by one or more private haulers in all seven (7) respective municipalities that either mandate recycling or that require haulers to provide curbside collection of recyclables upon homeowner request. Each hauler is then responsible to deliver recyclables to a processing site of their choosing. Subscription collection programs are often, by their very nature, inefficient due to multiple collection trucks (different hauling companies) going up and down the same streets. Because not all customers use the same hauler, the resulting inefficiency can also cost more than a system where one hauler collects from all customers on one street, neighborhood, or municipality. A recently completed study by Penn State Altoona Geography professor Dr. Tim Dolney confirms the high cost of these private subscription collection systems. Recommendations in this plan encourage a move toward more efficient collection practices. Appendix G contains sample bid documents that a municipality can use if it chooses to bid for waste, recycling, or combined (bundled) collection services.

Table 4.5, located at the end of this chapter, lists each of the County's municipalities, the type of residential recycling program used in each municipality in 2012, and the materials collected by the program.

Blair County's recycling program in 2012 included a system of dropoff facilities. With the County's closure of its Department of Solid Waste and Recycling in September 2012, due to funding shortfalls, the nine (9) County-run dropoff sites were closed, with the exception of the Buckhorn site that has continued through IRC operations; once-weekly dropoff service has also been added by the IRC at the previous County, and current IRC, R&D site in Duncansville. The IRC has been instrumental in facilitating the establishment of new recyclables dropoff sites, including both municipally-sponsored and hauler-sponsored drop-offs. Tables 4.1 and 4.2 present information on the materials accepted at the private collection sites and dropoff centers, and/ or the location of these facilities.

The future recycling program will include drop-off facilities. The number of drop-off facilities that will be maintained is not determined at this time, but the goal of the Plan Update is to continue to increase the number of drop-off facilities over the ten (10) year planning period, by continuing conversations with local municipalities and private haulers.

Blair County residents may take hard-to-recycle items to the IRC Buckhorn dropoff facility or to one of the private collection sites listed in Table 4.1. Table 4.2 contains information on the materials accepted at the Buckhorn dropoff site.

As discussed in Section 1.6, Blair County, now in conjunction with the IRC, offers an annual HHW collection event to County residents. Additionally, Blair County/ IRC and several partners (PA CleanWays of Blair County and the Blair County Conservation District) offer an annual used tire, electronics and hard-to-recycle plastics recycling collection event. The event does not

accept tractor trailer, industrial or commercial tires, dehumidifiers, air conditions, freezers and refrigerators. The following is a price list for the materials accepted at this event in 2012:

- Car, light truck, motorcycle tires \$2 each
On rim \$4 each
- Tires wider than 14 inches \$12 each
On rim \$14 each
- Farm Tractor tires – off rim only \$20 each

All electronics (which do not contain Freon) with a chord are accepted for free. The following plastic items are accepted at these collection events free of charge:

- All types of books
- All types of boxes
- Plastic bags & film

The Blair County Compost Facility in Logan Township has an expanded electronics collection program that accepts computers, monitors, peripherals, keyboards, mice, speakers, televisions and nearly anything with a chord (not containing Freon). The items not currently accepted through this program include dehumidifiers, air conditioners, refrigerators and freezers. JVS Environmental has been contracted through the IRC to collect items that are classified under the Covered Device Recycling Act (CDRA). Information regarding this Act can be found in Appendix J. CDRA-eligible materials are collected year round at the IRC facility, located at 1860 Black Snake Road, Dysart, PA 16636.

Materials collected by the various recycling programs in the County are generally delivered to one of three privately owned and operated transfer stations. Table 4.3 lists the name, address, and telephone number for each of the transfer stations that accept recyclable materials for processing, marketing and shipping. The IRC intends to collect or facilitate the collection of Freon containing appliances at the IRC facility in the near future.

TABLE 4.3 – LOCAL TRANSFER STATIONS

FACILITY	LOCATION	PHONE NUMBER	HOURS OF OPERATION
Blair County Resource Recovery Facility	1308 Old Sixth Avenue Rd. Altoona, PA 16601	814-943-8975 EXT. 320	Fri. 7AM – 3PM; Sat. 6 AM – 11:30 AM
Waste Management Altoona Transfer Station	East 6 th Avenue Rd. Altoona, PA 16601	814-942-5633	Mon-Fri. 7AM – 2:45 PM (TS ONLY) Mon.-Fri. 7AM – 5PM (Recycling Only)
Breezewood Transfer, LLC	820 S. Breezewood Road, Breezewood, PA 15533	814-735-3035	Mon-Fri. 8 AM – 4 PM

Blair County municipalities, with technical assistance from the IRC, have opportunities to collect and recycle yard waste materials such as leaves, grass clippings, and brush to the two (2) IRC sites. The four (4) mandated municipalities of Blair County, through an intergovernmental agreement (the four (4) signatory members of the IRC), collect leaves and other yard waste from their residents' at curbside and deliver them to either the Blair County Yard Waste Compost Recycling Facility (Buckhorn site) or the Blair County Research and Demonstration Compost Facility (R&D site). In return, residents may pick up mulch and compost at these facilities. Table 4.4 lists the names, address, and telephone number for each of the compost facilities. The sites processed over 4,000 tons of brush and 4,000 tons of grass clippings and leaves in the year 2011 and 5,000 of woody waste and 5,200 tons of leaves and grass in 2012, respectively. The facilities also accepted used motor oil, cooking oil, non-curbside plastics and magazines, catalogs and junk mail for recycling.

TABLE 4.4 – LOCAL COMPOST FACILITIES

FACILITY	LOCATION	PHONE NUMBER	HOURS OF OPERATION
Blair County Yard Waste Compost Recycling Facility	1860 Blacksnake Road Dysart, PA 16613	814-941-6675	M, T, Th, F 10AM – 5PM Sat. 9AM – 3PM
Blair County Research and Demonstration Compost Facility	Old Route 220 S. between Duncansville and Newry	814-942-7472	12PM – 5PM (Closed December – March www.ircenvironment.org)

4.6 SUMMARY OF MUNICIPAL EDUCATIONAL PROGRAM

Because education is paramount to a successful recycling program, the IRC and the County of Blair had worked cooperatively on a recycling education program that utilized various mediums to inform residents about proper recycling and waste management practices. By using numerous types of media, a greater number of residents could be reached. With the closure of the county recycling office, the IRC has tried to continue the efforts that the two agencies have been involved with. It is the intention of the IRC to continue these efforts with the anticipation that the steady increase in curbside and commercial recyclable materials will continue. These efforts have included:

- A semi-annual Recycle newsletter mailed to nearly 30,000 households in and around the IRC mandated recycling municipalities
- A series of fact sheets for all sorts of special wastes, compostables, drop-off recycling, multi-family buildings and commercial and institutional venues
- Radio advertisements to promote recycling in general and special events in particular
- An extensive website and Facebook page

- Public presentations and exhibits, including but not limited to
 - The annual county home show
 - Numerous school and youth presentations
 - Civic and business organizations
 - Community parades and sporting events

As part of their public outreach the IRC offers free educational recycling programs and materials to schools, classrooms, libraries, businesses, clubs and organizations in Blair County. Topics include, but are not limited to:

- Recycling in Blair County
- School & Business Recycling
- Landfills
- Reduce, Reuse & Recycle
- Waste Reduction
- Composting
- Vermicomposting (worm composting)
- Trash to Treasure (recycling crafts)
- Blair County Compost Facility field trip/tour

4.7 ENVIRONMENTAL BENEFITS OF RECYCLING

The benefits of recycling stem from four sources: the value of the recyclable material in its reuse; the reduction in the waste requiring collection, transportation, processing, and disposal; the reduction in raw materials required to manufacture new products; and the energy saved in processing the raw materials to the point of manufacturing use. The reuse value of the material is reflected in its market price, although, with an average recyclables, net market value (after transportation and processing) is often close to zero; the chief financial benefit of recycling for consumers is usually the avoided cost of disposal.

B&L performed an EPA WARM model computer evaluation, which estimates the impacts and benefits of recycling activities on our environment based on Blair County's 2011 Recycling Report Summary. The WARM model calculates various savings based on the tonnages of materials recycled. Appendix H contains the result tables of the EPA WARM model evaluation.

The County's 2011 total recycling efforts provided environmental benefits that were the equivalent of the following estimated resources consumption savings and pollution reductions:

- A net reduction in greenhouse gas emissions by 66,297 metric tons of carbon dioxide equivalent or MTCO₂E);

- A reduction in the net energy consumption by 404,972 million BTUs (British Thermal Units);
- A reduction in oil consumption by 69,703 barrels of oil;
- A reduction in gas consumption of 7,432,435 gallons;
- A reduction of 12,999 average passenger cars on the road per year (based on the equivalent amount of energy and fuel used by a passenger car each year and the average CO₂ emissions released by a passenger car per year);
- Conserving 361 railway cars of coal

4.8 BLAIR COUNTY RECYCLING IN RELATION TO PA RECYCLING GOALS

Upon reaching the 25 percent recycling goal specified in Act 101 in 1997, the Governor’s Office established a new goal of 35 percent recycling to be achieved by 2003. Blair County reached a recycling rate of 35 percent in 2009, but unfortunately, with the economic downturn and the reduction in packaging weight, the recycling percentage has decreased to 20 percent in 2011. As noted earlier, perhaps some of this reduction is due to incomplete reporting of organics recycled in 2011.

A trend in packaging is occurring, away from heavier glass and metal containers to lighter, thinner-walled plastics and aluminum. This is a positive trend in source (tonnage) reduction, but also results in a lighter tonnage (and therefore, lower weight-based “percent recycled” tonnage) being recycled. Thus, the actual “percent recycled” rate (i.e. 20%) is becoming of less importance than just taking steps to optimize recycling, where practical. Even maintaining a 20% recycling rate over time may require increased recycling of lighter materials.

In an effort to increase recycling, the IRC may want to focus on strategies designed to expand or supplement existing recycling programs and to improve current data collection efforts. The IRC should continue former County recycling programs such as the HHW collection program. Furthermore, the IRC may want to provide advice to municipalities developing or expanding programs such as additional yard waste collection (woody materials).

Currently, 11 of the County’s 24 municipalities do not have a recycling program in place. Another strategy to further boost diversion is to encourage municipalities without recycling services to implement dropoff or curbside recycling programs. The IRC will provide technical assistance to help these municipalities if they choose to initiate dropoff programs or, if there is sufficient interest, curbside collection programs.

Table 4.5 - Blair County Municipal Recycling Program Summary²

Municipality	Mandated	Program Type	Newsprint Mixed Paper	Glass	Aluminum Cans	Steel/Bi-Metal Cans	Plastic Bottles	Yard Waste	Leaves	White Goods	Tires	Christmas Trees	OCC
Allegheny Township		N/A											
Antis Township		Curbside	X	X	X	X	X	X	X				
Bellwood Borough		N/A											
Blair Township		Curbside	X	X	X	X	X	X	X				X
Catharine Township		N/A											
City of Altoona	X	Curbside	X	X	X	X	X	X	X				X
Duncansville Boro		N/A											
Frankstown Township		N/A											
Freedom Township		N/A											
Greenfield Township		Drop-Off	X		X	X	X						X
Hollidaysburg Boro	X	Curbside	X	X	X	X	X	X	X			X	
Huston Township		Drop-Off*	X	X	X	X	X	X	X				X
Juniata Township		N/A											
Logan Township	X	Curbside	X	X	X	X	X	X	X				
Martinsburg Borough		Drop-Off*	X		X	X	X					X	
Newry Borough		N/A											
North Woodbury Tp.		Drop-Off*	X	X	X	X	X	X	X				
Roaring Spring Boro		N/A											
Snyder Township		Curbside	X	X	X	X	X	X	X				X
Taylor Township		Drop-Off	X		X	X	X						X
Tyrone Borough	X	Curbside	X	X	X	X	X	X	X			X	X
Tyrone Township		Drop-Off	X		X	X	X						X
Williamsburg Boro		N/A											
Woodbury Township		Drop-Off	X		X	X	X						X

* Part of the Martinsburg Area Recycling Center

Previous estimates from the County show that most of the Act 101 materials are collected, even if in modest amounts, in fourteen (14) municipalities. Newspapers, magazines and catalogs, mixed paper, cardboard, glass bottles and jars, plastic bottles, and aluminum and steel cans, along with various types of yard waste, are collected in most of the curbside and drop-off programs. With the recent addition of cardboard and paperboard, the curbside communities now recycle all the commonly collected curbside collection materials.

Regarding reporting of recycling tonnages, some of the residential recycling programs (primarily those in the four (4) mandated communities) are directly controlled by municipal governments and/ or the IRC, thus assuring that the amount reported is fairly representative of the amount of material actually recycled (assuming accurate reporting by the private haulers). Other municipalities have relied primarily on County drop-off locations, with accurate report confirmation by the County, but County management and operations of these sites has discontinued. Information regarding the amount of material actually being recycled in commercial, industrial, institutional and apartment complex programs may be inaccurately reported, since a comprehensive record of recycling from those sectors requires that each individual establishment or the collector provide complete, accurate information. This is a problem that needs to be addressed by the municipalities, and is a requirement that is difficult to enforce. With municipal staff shortages, and with the staff reductions due to transitioning from County to IRC program oversight, it will be even more difficult to “chase” recycling data in the future with limited IRC staff.

Businesses and institutions can be encouraged to reassess their efforts and expand recycling programs where it is economically feasible. Such entities, that are located in municipalities both where recycling is or is not mandated, can still be encouraged to implement programs where it makes economic business sense. If IRC staff is expanded to assign additional time to recycling data collection, they may want to consider contacting major retailers directly that manage their own recyclables. Going to the source ensures that data is gathered for all locations in the County, including data from generators in municipalities where recycling is not mandated that may not be reporting recycling data to the County, and now to the IRC. However, it is unlikely that the IRC will have the resources to increase staff at any time in the near future.

The types and amounts of materials recycled by both the residential and commercial sector during the past five years (2007-2011) are presented in Table 4.6 below, with special reference to those recycled materials that have been targeted by the PADEP in Act 101, including: #1 - #5 plastics, yard and leaf waste, aluminum and bi-metal cans, glass (brown, green and clear), mixed grades or paper, office paper, OCC and chipboard, and newsprint. Other recyclable materials are summarized below in the “non-Act 101 materials” category.

TABLE 4.6 - BLAIR COUNTY MATERIALS RECYCLED (TONS)

2007-2011

Type	2007	2008	2009	2010	2011*
Act 101 Materials	18,402	21,480	22,521	23,479	23,737
Non-Act 101 Materials	23,406	30,920	32,926	24,068	8,617
Recycling Totals	41,808	52,400	55,447	47,547	32,354

** 2011 data seems likely to be incomplete because the loss of county staffing meant that data was not collected and compiled by the time of the drafting of the plan documents.*

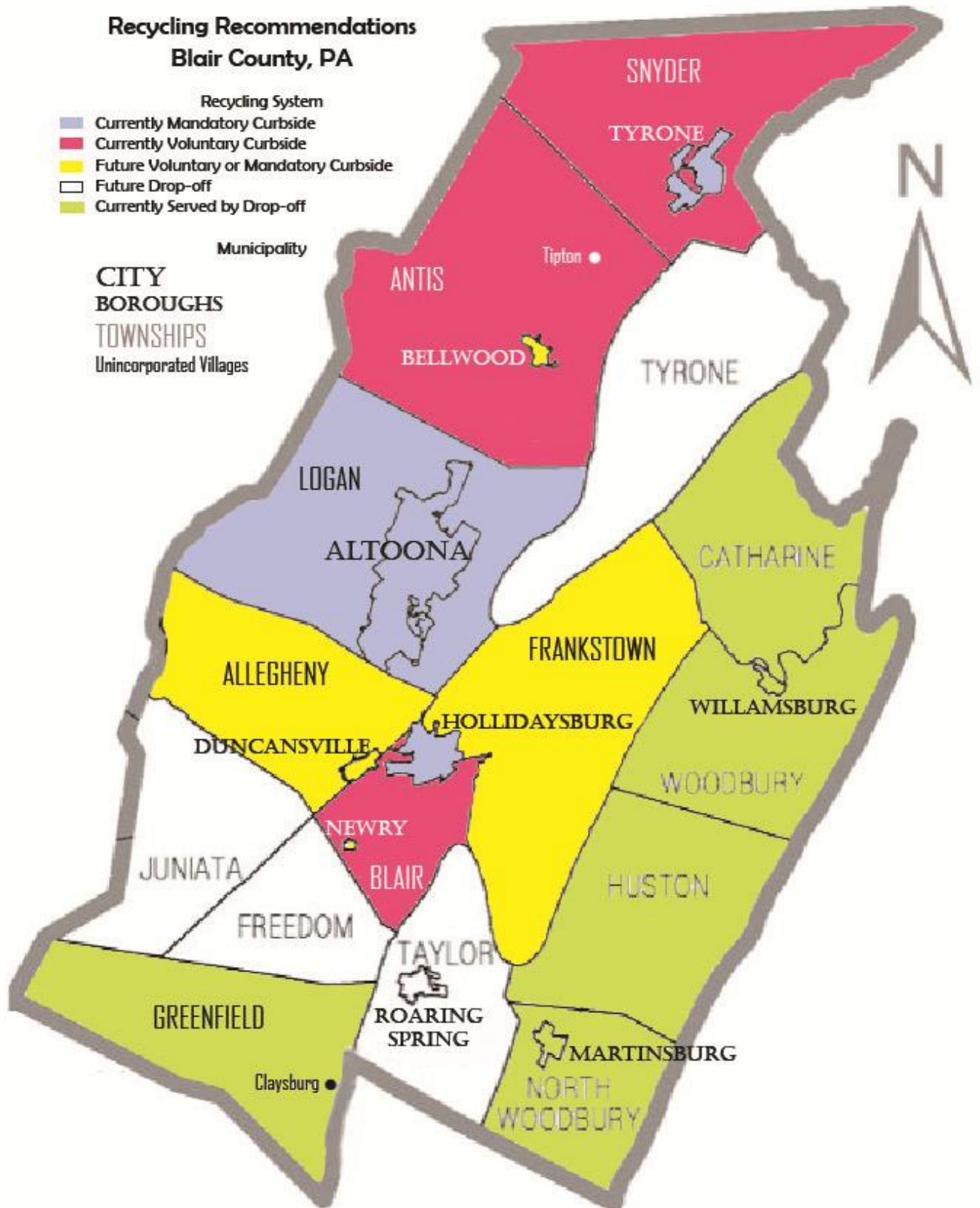
The table shows a fluctuation in materials recycled throughout the past five years, with 2009 having the highest reported recycling tonnages in this time frame, and 2011 having the lowest tonnages reported. Other years are fairly consistent, with small fluctuations. The table also shows that Blair County has consistently recycled materials beyond those listed in Act 101.

As discussed in Chapter 3, Section 3.5, it is anticipated that Blair County's recycling rate will increase from an assumed 25 % in 2013 to 35 % by 2023. Table 3.4 reflects these growing recycling tonnage projections.

4.9 NEW PROGRAM RECYCLING GOALS AND OPPORTUNITIES

It is always a challenge to increase recycling, especially in areas of low population density. In an effort to provide residential and commercial recycling opportunities in rural areas of Blair County and increase the amount of material recycled, the County initiated the Blair County Recycling Center Dropoff Program in 1998. The program was comprised of nine (9) dropoff centers located throughout the County for the recycling convenience of rural residents with and without curbside recycling. The dropoffs were serviced on an average of twice per week by the County, and the materials collected were delivered to several different local processing centers. These dropoff facilities accepted a wide variety of materials including; #1 and #2 plastic bottles and jugs, newspapers and magazines, aluminum and steel cans, yard waste (only at the Compost Facilities), corrugated cardboard, and telephone books. In addition, the Blair County Compost Facility, located at the edge of Logan Township, collected electronics year-round. With the closure of the Blair County Solid Waste and Recycling Department in September 2012, many of these dropoff sites were closed. The IRC maintains operations of the Buckhorn composting site, which accepts many recyclable items at its dropoff facility, and a one-day-per-week operation at the R&D site in Duncansville. Some new sponsors have stepped forward to operate dropoff sites, as detailed in Section 4.5.

A list of the items accepted at the Buckhorn IRC dropoff site can be found on the IRC's website. The IRC also provides education on recycling issues through fact sheet handouts, its website, and other educational resources, notifying Blair County residents where they can dispose of hard-to-recycle items throughout the year, such as motor oil, electronics, antifreeze, and other items.



As part of the preparation of this Plan Update, the SWAC reviewed a large number of initiatives and programs that could potentially enhance recycling in Blair County over the ten (10) year planning period. The SWAC, and this Plan Update, support the promotion of the following goals over the ten (10) year Plan Update period, given the proper resources and selected priority (to be determined during plan implementation) to implement these goals:

Municipal Recycling Recommendations:

- Require businesses to report recycling totals
- Require banning the burning of recyclables
- Intermunicipal cooperation and programs
- Recycling at all special events from municipality to municipality
- Recycling in municipalities over 5,000 pop. OR 300 people/ square mile density
- Require waste collection service for all households
- Require OCC recycling in all businesses with 10 or more employees
- Promote contract bidding for collection or municipal collection
- Implement volume-based pricing for trash (to encourage recycling)
- Provide recycling receptacles where empty beverage containers are generated
- Promote full curbside recycling programs (like in mandated communities)

Composting Recommendations:

- Promote Christmas tree composting/ recycling
- Maintain satellite composting facilities
- Encourage/ reward backyard composting
- Further research food scrap composting with yard waste in the County
- Promote food waste composting to accelerate the composting process
- Offer food waste composting services to large food waste generators
- Promote grasscycling, “let-it-lay” mowing practices
- Offer yard waste composting in “suburban” areas, not just mandated communities
- Look at transfer locations for yard and food waste to reduce transport costs

Special Recyclables Recommendations:

- For electronics
- For tires
- For non-curbside rigid plastics
- Provide drop-offs closer to population centers
- Provide programs for Freon-containing appliances

Educational Priorities:

- Publicize the benefits of recycling
- Publicize bin availability and use as an educational opportunity

- Continue educational campaigns that use print and electronic media
- Pursue PSAs and other free publicity
- Support enforcement for non-complying haulers
- Raise awareness of special recyclables (beyond the curbside bin)
- Support enforcement in commercial and institutional buildings
- Support youth education and competitions
- Support enforcement of residential curbside requirements
- Promote reuse and waste minimization
- Reward good recyclers

Other General Recycling Goals:

- Make recycling convenient
- Capture recycling data from recyclables processors and other recyclers
- Provide oversight of recyclables processors
- Explore/ encourage more efficient collection
- Encourage/ require pay-as-you-throw programs to increase recycling incentives
- Add additional recyclable materials to drop-off and curbside recycling programs
- Reward haulers for recycling, to encourage more recycling
- Have the IRC take a more active role in transporting and processing materials

4.10 COMPLIANCE

When the County operated a staff that included an enforcement officer, enforcement measures were undertaken to ensure that waste haulers met all recycling requirements. Historically, in instances where violations to the County code may have occurred, surveillance of the hauler was initiated. When a violation was witnessed during surveillance, or identified by other justifiable means, the municipality where the violation occurred would be contacted immediately.

With the loss of the County Department of Solid Waste and Recycling, and its enforcement staff, the municipality should now contact the IRC directly with evidence of the violation witnessed. The IRC will work on the concerns as time and employee availability becomes available. Subject to IRC staff availability, if a violation is found to have occurred, the hauler would be given the opportunity to explain their actions to the IRC via written letter or in person. If the hauler is found to have committed a recorded offense, then the IRC and/or County Commissioners could issue warnings and/or impose penalties from \$100.00 to \$1000.00 for each offense. Subject to IRC staff availability, in the event that a residence or commercial/institutional establishment has been found to be non-compliant, a written notification of their responsibility to recycle could be issued. Continued non-compliance could result in the commencement of enforcement proceedings including the imposition of penalties

CHAPTER 5 – SELECTION AND JUSTIFICATION

The purpose of this chapter is to describe the process used to select and recommend components to the overall waste management system for Blair County, and to provide justification for the selections and recommendations. The County must ensure that the recommended system(s) provides the required capacity needed to properly process/ dispose of all municipal waste generated within their boundaries over the next ten (10) years. This chapter examines available and realistic processing and disposal alternatives for municipal waste; determines the compatibility of these alternatives with the existing waste and recycling systems in the County; and makes recommendations for future adjustments to those systems.

Beyond the obvious need of understanding these issues for the general planning process, there are two particularly important reasons to fully address these matters in the plan.

Like many counties in Pennsylvania, Blair experiences considerable improper disposal, including:

- A failure to recycle things that are easily recovered (and frequently required to be recycled) in our region
- Littering along roadways and streets, pedestrian arteries and waterways significant number of households that do not have regular waste or recycling service because they do not make payment or a choose to improperly dispose of waste
- Illegal dumping in urban and rural areas, as well as in business waste containers Waste accumulation on private property that is a significant component of a serious blight issue in the County
- Open burning of waste and recyclables of all kinds

If a Zero Waste goal is on the distant horizon and a 50% recycling and composting diversion is a mid-range goal, a County-wide commitment to recycling and waste reduction is necessary and needs to be discussed in the County plan.

5.1 BACKGROUND

5.1.1 Marcellus Shale

5.1.2 Illegal Dumping

- Issues and Causes
- Statewide Dump Surveys
- KPB on the Causes
- Dump Study for Blair County

5.1.3 Open Burning

5.1.4 Securing Waste Disposal Capacity for Blair County

In 2012, it is estimated that Blair County generated a total of approximately 120,500 tons of MSW (all categories) for disposal, plus approximately 34,700 tons of materials that were

recycled or otherwise diverted from disposal. In 2012, approximately 94% of the landfilled total was disposed of at the Laurel Highlands Landfill and the Mostoller Landfill (see Table 3.1).

Currently, waste haulers that operate within the County can dispose of the waste they collect at a landfill or transfer station of their choice, as long as the ultimate waste disposal site is designated in the County's solid waste management plan (2003). Disposal sites that accepted at least 1,000 tons of Blair County MSW in multiple years between 2007 and 2012 include: Sandy Run Landfill, Laurel Highlands Landfill, Veolia (previously Superior) Greentree Landfill, and Mostoller Landfill. Table 3.1 lists the landfills which accepted waste from the County in 2007-2012, as well as the tonnage of waste each landfill accepted in 2011-2012.

As shown in Table 3.4, the Plan Update predicts that normal municipal waste **generation** (from residential, commercial, and institutional sources) will remain relatively level (due to a stable population) at approximately 137,000 tons per year (TPY) over the next ten (10) years, or approximately 527 tons per day, 5-day basis, or TPD5). Recycling efforts (not including C&D recycling) are predicted to slowly grow over time, from 34,700 TPY (133 TPD5) in 2013 to 48,500 TPY (186 TPD) by 2023, resulting in a net decrease in the remaining tons of conventional MSW that require landfilling (dropping from 400 TPD5 in 2013 to 347 TPD5 by 2023).

Generation of Special Handling Waste fraction of MSW, including dewatered sewage sludge, asbestos, infectious/chemotherapeutic waste, and ash, are expected to remain constant at 12,400 tons annually (approximately 50 TPD5).

C&D waste **generation**, which is not included in the above totals, is expected to remain constant at around 7,700 tons annually, but C&D recycling is expected to grow slightly (by an incremental 200 tons more in C&D recycling each year), thereby reducing the net quantity of C&D waste requiring disposal from 7,700 TPY (30 TPD5) in 2013, to approximately 5,700 TPY (22 TPD5) by 2023.

In total, the tons of conventional MSW, Special Handling waste, and C&D waste requiring disposal (i.e. after recycling) from Blair County is expected to drop from a combined 124,200 TPY (477 TPD5) in 2013 to 108,300 TPY (416 TPD5) by 2023. The Solicitation of Interest (SOI) for disposal capacity assurance accommodates all of these waste disposal needs, over the next ten (10) years, as further described in this Plan Update.

Residual wastes generated in Blair County, not technically a part of this Plan Update, add an average of an additional 25,000 TPY (nearly 100 TPD5) of waste to the area's landfills.

5.1.1 Marcellus Shale

A relatively new industry has exploded in the northern tier and western portion of Pennsylvania, which has the potential to impact waste disposal capacity in Blair County. The Marcellus Shale Play is a geologic formation that is a source of natural gas located in deep (1-2 miles deep) shale deposits. It is now being actively developed by scores of gas industries, thanks to recent drilling technology advances that make this gas development process technically feasible. These deep mine drilling operations generate drill cuttings and other residuals that currently require disposal in a proper landfill. The operations also require the handling of millions of gallons of chemically-treated fracturing, or “frac”, water at each drill site. The subsequent handling of drill residuals (and in some cases, wastewater from the operations) is typically classified as residual waste. These wastes may impact the available capacity of municipal waste landfills that service Blair County, should those residual wastes displace landfill capacity that is needed for municipal waste disposal.

As the Marcellus Shale drilling industry is still in its early years, it is expected to grow over the next five-ten years and will be in operation for decades. The potential impact of this industry’s residuals on available municipal waste disposal capacity for Blair County cannot be ignored in this plan. Contracts for long-term disposal capacity of municipal waste generated in Blair County need to confirm that municipal waste disposal capacity is “set aside” for the County’s use, and will not be negatively impacted by Marcellus Shale residuals disposal needs. This fact underscores the need for the County to secure long-term MSW disposal capacity as part of this planning process. MSW disposal capacity assurance contracts, developed through a Solicitation of Interest (SOI) process, will assure adequate capacity to meet Blair County’s needs over the ten (10) year planning period.

5.1.2 Illegal Dumping

5.1.2.1 Issues and Causes

Like most counties in Pennsylvania, illegal dumping is prevalent in rural areas of Blair County. While most would view illegal dumps as eyesores, they also create significant concerns for public health and safety, property values, and the general quality of life. When they are ignored, these sites often become chronic dumping areas and pollute the soil, surface water, and groundwater. Preventing illegal dumping will require stakeholders in the County to address factors that contribute to this problem. Cleaning up existing dumps will require cooperation from residents, businesses, haulers, and disposal facilities in the area.

Pennsylvania, and counties like Blair, may have a more severe problem because of the large number of municipalities that manage residential waste through individual subscription systems. All except one municipality in the County are currently served by subscription

programs. In subscription service municipalities, some residents choose to dump their waste illegally rather than pay a hauler for proper collection and disposal. However, there are other factors that contribute to the problem. Some haulers will not service rural or isolated parts of the County, thus forcing residents to self-haul their waste to the nearest landfill or transfer station for proper disposal. Also, some haulers will not collect what might be considered construction and demolition waste generated at the residential level, as a result of remodeling and similar activities. These materials include items such as drywall, roofing, shingles, siding, lumber, bricks, and concrete. Other difficult-to-dispose-of items such as tires, auto parts, appliances, and furniture often end up in illegal dumps. Proper disposal of these materials may require that the residents haul them to a disposal facility during operating hours (or rent a roll-off bin from the waste hauler), and pay to dispose of the waste, an inconvenience or expense that some wish to avoid.

Some homeowners in municipalities with individual subscription services may choose not to subscribe to a waste collection service, simply to save money, or to “share” a hauling service with neighbors or relatives at one house (a practice that is not technically allowed by most haulers). When it becomes a burden for homeowners to haul this material to a disposal facility, or when a contractor who has agreed to dispose of the material decides to avoid the cost of disposal, some of this waste may also be dumped illegally.

5.1.2.2 Statewide Dump Surveys

Keep Pennsylvania Beautiful (KPB) (formerly PA CleanWays) is a non-profit organization that works to eliminate illegal dumping and littering. The organization began surveying illegal dump sites in 2005. KPB's goal is to survey the entire state of Pennsylvania by 2014. Illegal dumpsites pose a direct threat to the health and safety of humans and animals. Illegal dumping attracts disease-spreading rodents and mosquitoes by giving them a place to live and breed. West Nile Virus, carried by mosquitoes, has been a primary concern of environmental officials. Illegal dumps also can be a source of physical injury for humans and animals due to broken glass, rusty metals, and toxic substances. Methamphetamine labs, used to produce the illegal drug “crystal meth,” are becoming more and more common. The materials used to make the illegal drug are tossed along the roadside in illegal dumps, and are extremely toxic.

Illegal dumping pollutes our soil, surface and groundwater supplies, as well as the air we breathe if a site catches on fire. The emissions released by the burning of plastics and household hazardous waste can be extremely toxic. It is also ugly, and ruins the beauty of natural areas, including many public places such as community and state parks, state forests, and game lands.

Economically, illegal dumps are expensive to clean up. The estimated cost to clean up a site can be anywhere from \$600 to over \$1,000 per ton for cleanup and removal. Illegal dumpsites also can impact property values, can be a liability for property owners, and can affect property purchases and transfers. Tourism revenues also can be affected by illegal dumps. Donation of free disposal capacity by area landfills can help offset the cost of disposing of some of these materials.

In KPB/ PA CleanWays surveys, areas that are considered to be an illegal dumpsite are:

- Areas of concentrated trash
- Areas of scattered trash that:
 - Are not considered roadside litter
 - Appear to have new trash thrown on them occasionally (more than twice per year)
 - Appear to have new trash thrown on them occasionally, but cleanup maintenance is prevalent to prevent accumulation.
- Areas containing only piles of yard waste (grass, leaves, branches, trees, etc.). These sites can often attract the dumping of other materials and can grow into major dumpsites, and,
- Areas containing isolated or solitary items, such as 1 or 2 appliances or tires that may or may not be dumped on in the future.

Two types of dumpsites that are not evaluated by KPB/ PA CleanWays are farm dumps and private dumps. A majority of today's farmers have inherited farm dumps on their properties, although some farmers continue to practice this illegal method to save money and time.

Private dumpsites are those dumps which are put on the property by current or previous owners. These dumpsites can include stockpiles of scrap, yard waste, household trash, and other things found in an illegal dumpsite. A dumpsite is usually determined to be private by its proximity to a residence, or marked private with "no trespassing" signs.

5.1.2.3 KPB/ PA CleanWays on the Causes

According to KPB/ PA CleanWays, the possible causes of an illegal dumpsite can include the following:

Municipal curbside trash collection is unavailable.

Because it is not mandated by the state, trash collection options are dependent on the city or municipal government. As many rural and small-town municipalities lack funding for mandatory trash collection, it is up to the resident to pay for trash collection. Communities that depend on private subscription for waste collection services have reported greater dumping problems. Inherent inefficiencies and associated higher costs exist in almost all private subscription systems because trucks must travel long distances between customers.

Recycling programs are unavailable or inconvenient.

Act 101 dictates that all communities with populations over 10,000, and densely populated municipalities between 5,000 and 10,000, have recycling programs. Communities that fall outside these parameters must opt for curbside or dropoff recycling programs on their own. Depending on the county, many or all of these communities don't have funding to support a curbside recycling program. Curbside recycling communities have reported a lower incidence of residential waste dumping.

Disposal of Construction and Demolition debris (C&D).

C&D debris is a serious solid waste management issue because of the amount that is generated each year, along with the lack of convenient and/or affordable disposal options available. C&D debris is often found in illegal dumps and creates a compounded problem because some of the materials may be hazardous, such as wood that has been chemically treated or painted with lead-based paint, insulation containing asbestos, or shingles.

Shortage of enforcement.

Unfortunately, many communities cannot devote people and resources to effectively deal with illegal dumping. As a result, dumpers do not fear prosecution and have no reason to stop their habits.

Education.

Illegal dumping has been a learned habit for many. Prior to anti-dumping laws, it was common practice to use open town dumps, burn or bury trash, or dump in a convenient out-of-the-way area. Today, we know the harmful effects from illegal dumping. Education is key to diminish the habits learned, and to teach the public proper and safe disposal practices.

5.1.2.4 Dump Survey Study for Blair County

KPB/ PA CleanWays conducted a survey of open dumping practices in Blair County in 2010. In this study, KPB/ PA CleanWays identified 116 dumpsites containing an estimated total of 167.5 tons of trash. The 116 dumpsites were located in sixteen (16) of the County's twenty-four (24) municipalities. These dumpsites ranged in size from 0.25 tons to 15 tons of waste. Seventy-eight percent (78%) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. Eleven (11) of these dump sites had "No Dumping" signs present; however, all of these sites were considered to be active dumpsites. Seventy percent (70%) of the dumpsites were visible or partly visible from the roadway. Thirty-three percent (33%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Twenty-five (25) of these dumpsites had waste materials directly in the waterway itself. The materials most commonly found in these illegal dumpsites were tires, bagged trash, household trash, and construction and demolition waste. Recyclables were also commonly found while surveying. The following municipalities had illegal dumpsites

surveyed by KPB/ PA CleanWays: Allegheny Township, City of Altoona, Antis Township, Blair Township, Catharine Township, Frankstown Township, Freedom Township, Greenfield Township, Huston Township, Juniata Township, Logan Township, North Woodbury Township, Snyder Township, Taylor Township, Tyrone Township, and Woodbury Township.

5.1.3 Open Burning

Open burning of wastes (like open dumping) is usually prevalent in the more rural parts of counties. There are health and safety impacts of this practice, including air pollution from inefficient combustion, fire risk, the needless burning of recyclables, and smoke and odor nuisance impacts on neighbors. Residents sometimes try to save money by burning their waste instead of paying a commercial hauler to collect and dispose of it. Burn bans are often implemented and most successful in more dense boroughs, where neighbors are closer to one another.

The “right” to burn one’s waste in the backyard often becomes an electrically charged debate. PADEP generally does not support the burning of recyclables, and in fact will not pay 902 recycling implementation grants or 904 recycling performance grants to municipalities that do not have an anti-burn ordinance for recyclables in place. To be eligible for 902 implementation grants funding regional recycling projects, PADEP may require all municipalities served by the project to have in place municipal bans on the burning of recyclables. The prevalence of open burning in the County, its impacts, and its politics, has been raised in discussions at SWAC meetings in Blair County, and this Plan Update takes a specific position banning the burning of recyclables in this Chapter.

5.1.4 Securing Waste Disposal Capacity for Blair County

As part of the Municipal Waste planning process, each county in Pennsylvania needs to secure ten (10) years of disposal capacity for municipal waste generated from within its borders. Historically, Blair County’s Municipal Waste Management Plan has provided that municipal waste from the County be delivered to disposal sites based on:

- 1) Their listing as designated sites in the County municipal waste plan, secured through contracts with the County, and
- 2) Prevailing market conditions. Haulers have been free to take municipal waste from a given county to any disposal site of their choosing, as long as the site is designated in the County’s plan.

Currently, under this modified “free market” waste system in place in the region, nearly 95% of municipal waste generated in Blair County is disposed of at two privately-owned and operated landfills, the Laurel Highlands Landfill and the Mostoller Landfill.

This contracting structure is being modified slightly in the new Plan Update, further opening up the options for municipal waste to be hauled to duly permitted disposal sites of the haulers' choosing. This is further discussed in this chapter.

5.2 OVERVIEW OF CURRENT MUNICIPAL WASTE MANAGEMENT SYSTEM

Up to this point, the current municipal waste system involved residents individually subscribing with waste haulers for waste (and in some cases recyclables) collection, except in Tyrone Borough where the municipality contracts with one hauler for curbside waste and recyclables collection. Processing and disposal of MSW is handled by private waste haulers. The private sector handles the consolidation and shipping of mixed recyclables at their Transfer Stations, as well as managing the processing and marketing of recyclables handled through their facilities. Processing and recycling/disposal of C&D waste is generally handled by the private sector. Biosolids (sewage sludge) and septage are managed by a combination of land application sites and private landfills, and infectious and chemotherapeutic waste is managed privately.

The County (formerly) and now the IRC, manages the processing of most yard waste from residences and businesses generated in the County. The IRC is currently working with municipalities to define the financial or in-kind commitments needed to allow municipalities that are not currently members of the IRC to continue to have access to the IRC's composting facilities.

The County formerly handled collection and marketing of recyclables from nine (9) dropoff locations throughout Blair County. Unfortunately, due to financial factors, Blair County decided in 2012 that it no longer could sponsor or fund the County's recyclables dropoff system. Beginning in October 2012, dropoff recycling collection is now handled through a limited number of IRC, municipal or privately sponsored dropoff sites in the County. The reestablishment of former, or the establishment of new, dropoff sites is an ongoing effort being coordinated through the IRC.

The Blair County SWAC has expressed a desire to expand the current recyclables collection program, to ensure that the maximum numbers of residents in the County are being offered recycling options through a combination of dropoff and curbside recycling programs. It is a strong desire of this Plan Update to satisfy the needs of the County's residents and businesses through the growth of these recycling opportunities in the County, although this must be done without County sponsorship or financial support.

5.3 WASTE AND RECYCLABLES MANAGEMENT – ALTERNATIVES

5.3.1 Waste and Recycling Collection

- MSW Collection
- Recyclables
- Hauler Licensing or Oversight

5.3.2 Waste Transportation and Disposal

- Transportation of MSW to Disposal Sites
- Transportation of Recyclables to Collection/ Processing Sites
- Waste Disposal Capacity Assurance in Blair County
- Hauling Cost Considerations of Contracted Waste Transfer/Disposal Sites

5.3.3 Yard Waste and Food Waste/ Organics Composting

The following section briefly highlights waste collection, transfer, processing and disposal system alternatives that currently are available to Blair County. This section focuses on alternatives that have specific compatibility or that show particular promise within Blair County's waste management system that was described earlier in this chapter. Waste management alternatives that are not realistic or feasible in Blair County have not been included in this analysis.

5.3.1 Waste and Recyclables Collection

5.3.1.1 MSW Collection

There are five (5) basic methods for the collection of MSW (residential/commercial/institutional refuse) that are practical in this region.

Municipal Collection - Municipalities can provide refuse collection services to their residents using municipal employees and equipment. .

Contracted Collection - Municipalities can contract via a public bidding procedure with a private waste hauler to provide refuse collection services to their residents (and institutions and small businesses, typically). .

Subscription Collection - Individual households and businesses can each contract directly with a private waste hauler for refuse collection services, with limited or no municipal involvement. .

Drop-off/Transfer Collection - A rural drop-off site/transfer station can be used in sparsely populated areas of a county, to provide some means of waste collection and proper disposal, and as an alternative to open dumping or open burning. Residents bring their waste to the site, and place it in a bin or compactor. The full bins are then hauled, either by the municipality or

under contract with a private hauler, to a disposal site for proper disposal. . This type of system requires special administrative approval by PADEP.

Self-Haul - Residents and businesses can self-haul wastes to a transfer station or disposal site.

Subscription collection is the most widely used method within Blair County, currently used in all but one municipality in the County. Although the current system appears to provide adequate services to its customers, efficiency is lower and costs are typically higher. The municipalities may want to consider municipal bidding for contracted collection of residential/institutional/small commercial customer refuse. In many situations, refuse collection fees decrease when local governments contract for refuse collection services (contracted collection) on behalf of their residents, as opposed to when residents directly contract for refuse collection through subscription collection. Tyrone Borough currently uses contracted collection, and appears to save significant costs for its residents through competitive bidding for collection and disposal services. The Tyrone single-collector contract calls for a \$14.99 per household monthly charge. The same collector charges \$24.00 per household in private subscription communities. Frequently, individual subscriptions do not include bulky wastes and other special wastes pickups; extra charges will be levied for these “value-added” services.

In addition to the potential financial benefits of contracted collection, there are additional advantages as well. Contracted collection with private haulers allows local governments to indicate the types of collection services to be provided under contract (unlimited collection, pickup with can limits, or straight pay-as-you-throw; bundled curbside recycling services with the waste collection; bulky item pickup allowances; may include direct customer billing; may or may not include disposal costs, at the municipality’s option; may include reporting requirements for wastes and recyclables collected; etc.). A municipal waste disposal contract can also (but does not have to) designate the disposal site or sites where the municipality wishes the contracted hauler to dispose of the municipality’s waste, and can also designate a site where the recyclables are to be taken (if part of the contract). Sometimes, haulers are hesitant to support contracted collection programs because they may be perceived as favoring larger haulers that have greater fleet and staff capabilities, or because the contract may contain contract requirements (insurances, guarantees, etc.) with which small haulers cannot easily comply. Contracted collection can reduce the number of waste vehicles within a municipality as compared to subscription collection, which results in more efficient collection with less truck traffic, road wear, air pollution and noise. Contracted collection may also help limit the occurrence of illegal dumping, as residents with this form of collection are provided with consistent and reliable refuse collection services and, therefore, are less likely to illegally dispose of waste and/or accumulate waste for long periods of time.

In some very rural areas, whether served under contract or by subscription, haulers may not want to provide service to an area due to the long distances between customers, poor roads, mountainous conditions, or distances between the area and their operation yard and a landfill. In these areas, a rural drop-off site for MSW may be the only practical solution.

In Blair County, municipalities with sparse population also may want to consider joining and contracting specific route collections within the County that are broader than just one municipality, to one or to multiple haulers. Where subscription service to a rural area may be uneconomical, a defined route with customers may make the economics work for some haulers. For example, within a county, five different private haulers may service their municipalities. This scenario may provide waste collection service for residents who were not previously obtaining it due to their location within the county. If municipalities would decide that contracted collection through a municipal contract is worth pursuing, the municipalities may be able to coordinate collection with private haulers in multiple municipalities, thus potentially further decreasing the cost of refuse collection for residents, and increasing the efficiency and safety of collection for the waste haulers.

Self-haul of waste is self-explanatory. Residents and businesses can haul waste directly to transfer stations and disposal sites, as long as self-haul customers are allowed to access the sites. Burgmeier Hauling offers this service by selling bags that may be purchased by residents and businesses, filled with waste, and self-hauled to the Blair County Resource Recovery Facility near Altoona.

5.3.1.2 Recyclables

The collection methods for recycled materials are similar to the collection methods for residential waste. Recycled materials can be collected curbside through municipal collection, contracted collection, subscription collection, or by self-haul to central locations through dropoff/ transfer collection. The basic details of these collection methods are described above.

Regarding curbside collection of recyclable materials, three methods can be used: source-separated, dual-stream, and single-stream. Source-separated and dual-stream recycling require greater effort by the customer and hauler, but the recycling facility's processing effort is decreased. Single-stream recycling involves much less effort by the customer and hauler, and often allows a larger group of material types to be recycled, but requires a more complex processing system and greater effort at the recycling facility to process the mixed recyclables.

Source-separated recycling requires residents to separate their recyclables into separate containers at the curb. This method makes processing much simpler and inexpensive, and tends to result in a cleaner recyclable material collected (which improves market value).

Dual-stream recycling is similar to source-separated recycling, with the recyclables commonly separated into two categories: bottles/ cans and paper fiber. Dual-stream recycling typically has the same benefits as source-separated recycling, but the collection method is slightly different. For example, cans, glass and plastics may go in one container while paper fiber (cardboard, newspaper, etc.) go in another. Both source-separated and dual-stream recycling operations require the hauler to either place recyclables from the curb into different containers in the recycling truck, or to make multiple collections, for transportation and delivery of the material to the recycling center. A variation of source-separated recycling is “curb-sort” services, where recyclables are placed at the curb commingled, and are then sorted into different collection truck compartments by the collection crew.

Single-stream recycling collects all of the recyclable materials in a single container at the curb. Some of the benefits of single-stream collection are ease of separating in the home, higher residential participation rates, higher quantities recycled, increased collection efficiency and the ease in which a municipality can incorporate small businesses and multi-family units into the program. Some of the disadvantages of single-stream recycling include lower recyclable material quality and market revenues, higher capital processing costs, decreased quality control at the curb, increased product contamination, and the potential to have to dispose of more material due to the contamination factor. Both dual-stream and single-stream collections require access to materials processing facilities in the region that can receive and further process the collected mixed recyclables.

There are many factors to consider when selecting a recycling program, such as what types and size of containers to give residents, what materials to collect, what type of truck will best suit the collection program, what types of recyclables processing infrastructure is available in the area, how the recycling program will be funded (i.e. include in a subscription cost, pay through local taxes, fund through a pay-as-you-throw program, etc.) These considerations may be dependent on the type of waste collection program used.

Blair County haulers currently utilize nearly all of these collection strategies. A few still curbside-sort their materials, since separated materials are accepted at no charge at several recycling facilities. A slightly larger portion collect recyclables dual-stream and deliver their material to Burgmeier’s. The remaining haulers collect single-stream and utilize the Waste Management facility (that ultimately takes their material to single-stream processing facility in Pittsburgh).

In many areas of the County, the only recyclables collection service that is offered is through the recyclables dropoff site option. The former County-sponsored recyclables program had a total of nine (9) recyclables drop-off sites scattered throughout Blair County. Under the current combination of private transfer/ processing facilities, IRC, municipal, and hauler-

sponsored dropoff sites (Table 4.1 and Table 4.2 facilities combined), there are now a total of twelve (12) locations for recyclables drop-offs in the County.

Only seven (7) municipalities in Blair County currently offer some form of curbside recyclables collection program. The four Act 101-mandated IRC communities (City of Altoona, Boroughs of Tyrone and Hollidaysburg, Logan Township) offer curbside recycling to all residents, either through hauler contracting or through local ordinance mandate. Three others (non-mandated municipalities under Act 101) require any subscription waste hauler servicing customers in the municipality to also provide recyclables collection upon customer request. In all of these municipalities, recyclables collection is provided by private waste haulers, and the cost for the program is either included in the resident's subscription cost with the haulers, or in the case of Tyrone Borough, is included in the hauler's bid price for service. The municipalities with mandated and non-mandated curbside recyclables collection are identified in Table 4.5.

5.3.1.3 Hauler Licensing or Oversight

In June 2002, Pennsylvania approved amendments to the existing solid waste management statutes (adopted as PA Act 90) that, among other provisions, established a statewide waste transportation safety program, including a registration program for all waste haulers doing business in Pennsylvania. Any waste hauler with a GVW (gross vehicle weight) of over 17,000 pounds and trailers with a registered gross vehicle weight greater than 10,000 pounds that transports municipal or residual waste to a waste processing or disposal facility in Pennsylvania must have a valid Waste Transporter Authorization issued by the Department of Environmental Protection. This program is administered by the State and prohibits counties or municipalities from implementing any new municipal waste or residual waste transportation authorizations or licensing programs. (Note – since the Act 90 program relates to licensing of larger waste vehicles, it leaves open the possibility of establishing a separate local licensing program for waste vehicles with less than a 17,000 pound GVW). Based on this legislation, all larger haulers doing business within Blair County need to meet the requirements of the State program, and hauler data collected from the State program is available on the Pennsylvania Department of Environmental Protection (PADEP) website at:

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=589642&mode=2>

It is up to individual counties to monitor waste hauling and disposal activities. The law prohibits processing and disposal facilities from accepting waste from regulated waste transportation vehicles that do not have a valid authorization.

Some counties in the Commonwealth continue to register (as opposed to licensing) haulers, usually with a minimal (or no) fee, to help ensure that basic information on the haulers, the

municipalities served and the materials collected, is reported to the county or municipality regularly.

Blair County currently does not have a hauler registration/licensing program. The topic of establishing a possible county vehicle registration or licensing, at least for waste vehicles under 17,000 pounds GVW, was raised in early discussions in the Blair County planning process; however, with the advent of the closure of the County Department of Solid Waste and Recycling, the County has neither the staff, the interest, nor the funding to administer a limited hauler licensing program for small-payload waste haulers. The IRC remains open to the possibility of licensing smaller waste and all recycling collection vehicles to assure optimal recycling collection that would facilitate higher quality material and more efficient collection practices.

5.3.2 Waste Transportation and Disposal

5.3.2.1 Transportation of MSW to Disposal Sites

Under Act 101, it is the responsibility of each municipality to provide for the proper collection and transportation of municipal waste generated from within their municipal borders to disposal facilities. A “disposal” facility in this context can be a regional transfer station, a landfill, or another type of permitted processing, dropoff or disposal facility. All municipal waste generated within Blair County must be transported to a duly permitted processing/disposal facility, with larger haulers duly licensed by the State as required by Act 90.

Currently, all municipalities within Blair County rely on either direct hauling by the generator, by private subscription services, or through a municipally-contracted private collection/hauling service for transportation of MSW from the curbside to a disposal facility.

Within the geographic boundaries of Blair County, there are two (2) centrally located permitted waste transfer stations (Blair County RRF and Waste Management). MSW from residents within the County can be transported to any one of these disposal facilities or taken directly to regional landfills, as long as the site accepts self-hauled waste.

5.3.2.2 Transportation of Recyclables to Collection/ Processing Site.

As with MSW, recyclables can be transported in three (3) ways to a collection/ processing facility or intermediate market: directly by residents and businesses, by waste haulers, or by municipalities. A “collection/processing” facility in this context includes a drop-off site, a transfer station, a materials recovery facility (MRF), or other suitable facility. Ultimately, the goal is for all segregated recyclables to be shipped to markets for reuse, or reused locally (such as inert materials for use as pipe bedding or aggregate).

Drop-off recycling sites can supplement curbside collection, and in areas where no curbside collection exists, provide the only opportunity for recycling. Drop-off recycling sites can enable a municipality to expand their current recycling program by enabling them to accept a broader range of materials from their residents than a hauler may collect. Typically, rural municipalities are not mandated to recycle under Act 101, and thus haulers may not offer curbside recyclable collection. Drop-off locations can provide residents the opportunity to recycle when their hauler does not offer it. The municipalities which are mandated to recycle within Blair County are identified in Table 4.5.

Drop-off locations can be permanent sites or mobile sites. Permanent drop-off sites are sites which contain recyclable drop-off containers at the same location year-round. Each drop-off site operates with specific hours and days of operation; this information is often available by calling the local municipality. A permanent drop-off site may be located at a municipal building, a local park, a local business parking lot or similar locations within the municipality. Mobile drop-off sites are typically moved from one location to another location, to offer recyclable collection to the maximum number of residents and geographic areas. Mobile sites may be beneficial in rural areas where a permanent site is not feasible, but where the residential desire to recycle more material is high.

Each permitted landfill and transfer station in Pennsylvania is also required by law to provide a permanent recyclables drop-off site at or near its facility. Residents, businesses, haulers and municipalities can also transport their recyclables to these drop-off sites. There are two (2) permitted transfer stations within Blair County, as noted above. These facilities act as recyclables drop-off locations within a larger waste transfer facility for residents and businesses, while haulers and municipalities who haul recyclables can bring larger loads to these facilities for sorting and processing. Transfer stations often have the capability of processing recyclables on-site (i.e. sorting, baling, compacting, etc. and subsequently transporting these recyclable materials to the best available markets).

Segregated recyclable materials, such as those collected at the IRC drop-off location at Buckhorn, can be hauled directly to intermediate brokers or processors/ markets. Quantity, cleanliness and purity of the material, lack of contamination, and length of contract and contract terms are often factors that affect the prices paid (or owed) for recyclable materials delivery.

5.3.2.3 Waste Disposal Capacity Assurance in Blair County

Under Act 101, each County in Pennsylvania must secure municipal waste (MSW) disposal capacity to meet its needs for the next ten (10) years. There are a number of ways in which this requirement can be met. In Blair County, the County Commissioners have elected for this

Plan Update to secure at least the minimum disposal capacity requirement at one or at multiple disposal facilities, and to permit municipal wastes to be disposed at any duly state-permitted processing/ disposal facility from Pennsylvania or from the state where it is located. This process to secure MSW disposal capacity was conducted in the fall of 2012 using a Solicitation of Interest (SOI). Disposal capacity and ceiling tipping fees were solicited for conventional MSW (from residential, commercial, and institutional sources), as well as for sewage sludge (in dewatered cake form), asbestos, incinerator ash, Infectious/ Chemotherapeutic waste (ICW), and Construction & Demolition Waste (C&D) disposal.

The SOI also asked for Respondents to indicate 1) their willingness to further discuss, apart from the SOI process, ways in which the facility could potentially support the sustainability of recycling and integrated waste management in Blair County, and 2) their willingness to offer free disposal capacity at their sites on an annual basis to help with open/ illegal dump cleanups in Blair County. These two items were optional, not mandatory, SOI requests of Respondents.

The SOI also requested waste transfer stations handling municipal wastes from Blair County to respond to the SOI and agree to 1) manifest all municipal waste handled by original county of waste origin, and to 2) deliver any Blair County municipal waste only to processing/ disposal facilities approved in the Plan Update.

Submission packages were received by Barton & Loguidice, P.C. (B&L) in the fall of 2012, and were reviewed in accordance with evaluation criteria outlined in the SOI. A total of seven (7) landfills and three (3) waste transfer stations responded to the SOI.

All disposal Respondents, except Waste Management's Southern Alleghenies Landfill and Mountain View Reclamation Landfill, reported the ability to accept a total tonnage per year of MSW and C&D waste that exceeds the projected tonnage of this material in Blair County. All disposal Respondents agreed to accept waste at their facilities for both the five (5) year initial and subsequent five (5) year renewal period, for a total of ten (10) years. Each of the IWS facilities, Mostoller and Sandy Run Landfills, agreed to donate 200 tons per year of landfill capacity for non-profit and public cleanup events. All of the Waste Management facilities that responded to the SOI agreed to donate a fraction of the Blair County waste accepted at their facility in the previous year for disposal of waste collected in cleanup events. All disposal submittals included a backup facility as required in the SOI, in the event the primary contracted facility could not continue to service the needs of Blair County as proposed. Not all facilities agreed to accept all fractions of MSW, including special handling wastes; however, among multiple facilities, these needs of Blair County were met. Additionally, all Respondents to the SOI were asked to confirm that they are properly permitted to accept municipal waste.

All three (3) transfer station Respondents agreed to all terms of the SOI, and returned a signed draft transfer station agreement to document their acceptance.

Appendix C contains Table 1 and Table 2, which outline the SOI responses from the waste disposal facilities, and Table 4, which lists the proposed backup disposal facility for each Submittal.

All Respondents' submission packages were reviewed and considered complete by B&L, the SWAC and the Blair County Commissioners, upon further consideration/ clarification of the submissions and SOI requirements. A review memorandum contained in Appendix C documents a summary of all submittals and the facilities that were recommended for inclusion in the Plan Update, based on review, discussion, and recommendation by the SWAC. The selected facilities are listed in Chapter 6 of the Plan Update.

As a result of SOI Submittal reviews, the SWAC has chosen to recommend to the County Commissioners contracting with four (4) disposal sites, along with three (3) transfer stations. Factors considered included proximity to Blair County, use of the primary existing facilities currently used by the private sector haulers, the need to contract with multiple sites in order to provide for acceptance of all categories of municipal wastes, reasonableness of disposal fees, and related factors. The details related to those selections are presented in Chapter 6 and in Appendix C. The four contracted disposal sites will provide more than the required minimum municipal waste disposal capacity assurance by Blair County for the next ten (10) years.

Since this Plan Update allows municipal waste to be taken to any duly-permitted disposal site in-state or out-of-state, it does not need to provide a process to add disposal facilities to the plan during the next ten (10) years. However, the County Commissioners reserve the right to consider submissions from, and to include, additional facilities in the Plan Update within the next ten (10) years if circumstances, in the opinion of the County and in the best interest of the County, require it. Any disposal facilities added to the Plan Update after the original 2012 SOI must pay any and all costs to revise the Plan and its documents as needed to include the respective facility, unless other arrangement are made with the County.

The facilities selected through the SOI process will enter into a waste disposal capacity agreement fully aware of the amount of waste they have to accept and the ramifications this would have on the life of their facilities and their permit status. Disposal facilities are also aware that they may receive limited amounts of waste or no waste at all from Blair County sources as explicitly stated in the agreement.

It is the intent of the County to enter all new waste transfer and waste disposal agreements with selected facilities by the time this Draft Plan Update is adopted by the County. At that

time, copies of the executed transfer and disposal contracts will be placed in Appendix A of this Plan Update.

5.3.2.4 Hauling Cost Considerations of Contracted Waste Transfer and Disposal Sites

The cost of waste services is a function of three factors: collection cost, hauling cost, and disposal tip fee. Typically, more distant sites, or sites that take longer to travel to, result in a higher hauling component of waste management costs. Also, hauling to nearby transfer stations can often lessen the hauling cost of the curbside waste collector, reduce wear and tear on his vehicles, and get his collection crew back on its routes to collect waste, while allowing for a more economical haul by large transfer trailers (bigger payload) to distant disposal sites.

As part of this Solid Waste Management Plan Update, Barton & Loguidice, P.C. developed a spreadsheet that listed the roundtrip distance from the center of the City of Altoona to the waste disposal facilities that responded to the SOI. B&L took into consideration road networks, natural barriers (mountains, rivers, etc.), hauling distances, urban congestion, and other factors that they felt affected the travel distance a waste hauler would take to reach a waste disposal facility. B&L assumed a cost of \$1.50 per mile for transportation of waste from the City of Altoona (a central point in the County) to a waste disposal facility. Additionally, B&L assumed a cost of \$3.00 per mile for transportation from the three transfer stations to the waste disposal facilities that responded to the SOI. Table 3, containing the results of the transportation cost analysis, is presented in Appendix C. This table may assist haulers in assessing the relative cost of using various disposal sites in the region.

Based on the locations of the MSW landfills, as shown on Figure 6-1 in Chapter 6, it is understandable, on a hauling cost basis, that most of Blair County's waste has been historically disposed at the Laurel Highlands Landfill and Mostoller Landfill. Additionally, the Blair County Resource Recovery Facility (Burgmeier's Transfer Station), the Breezewood Transfer Station, and the Waste Management Transfer Station of Altoona can be economical options for haulers to dispose of waste. These three (3) transfer stations are geographically situated to economically transfer waste from Blair County to various disposal sites, including the Laurel Highlands Landfill and the Mostoller Landfill.

5.3.3 Yard Waste and Food Waste/ Organics Composting

The IRC now operates a yard waste composting facility (the previous County composting site on Buckhorn Mountain), as well as the organics processing facility at the County's former Research and Development (R&D) site in Duncansville. A very preliminary analysis of the feasibility of adding food waste to the current operations has been considered in this Plan Update, although a more detailed analysis is beyond the scope and funding availability of the plan this time, and is recommended as follow-up work in the future.

The findings of this preliminary co-composting investigation have determined that:

The Buckhorn composting site and facilities could potentially be modified to accept food waste. The primary facility and operational modifications required would be the addition of a food waste receiving and storage area, until the food waste can be incorporated with yard waste in the compost windrows, as well as a plan for the mixing of the food waste with yard waste in the piles.

The Buckhorn site is ideal in many respects for food waste composting, due to its remote siting; its separation distance from neighbors; its location on the top of a hill with little chance of being impacted by run-on drainage; its good site ventilation; its existing downstream vegetative buffer strips that now accept and filter compost pad runoff, and that now help re-establish vegetation of some of the 400+ acres of adjacent former strip mine lands, land that could be further enhanced by receipt of the moisture and nutrient components of pad runoff from a co-composting operation.

To maximize use of the current equipment and facilities at the site, a windrow-type food waste and yard waste co-composting operation is most feasible at this location.

The mix of yard waste to food waste should be further evaluated to determine the appropriate mix ratio for a good windrow co-composting operation that minimizes odors and maximizes aerobic composting operations, but typically a 3:1 or 4:1 yard waste to food waste ratio is appropriate for windrow-type co-composting operations. The quantity of stockpiled yard waste on site will determine the quantity of food waste that can be accepted and processed.

The IRC has recently been assigned some County Section 902 recycling implementation grant funding that could be used to modify/ enlarge the current composting pad and possibly purchase screening equipment that would benefit both a yard waste and a combined co-composting operation.

The lone drawback to the Buckhorn site may be its isolation from the center of population and waste generation, and the need to traverse Buckhorn Mountain to access the site. In response, the R&D site in Duncansville has natural site features that may readily accommodate storage containers for the collection of food wastes, for the consolidation of these materials until they can be hauled to the Buckhorn site. Further, this site is located in an area developed with compatible utility and heavy business and industrial uses.

The IRC has identified a number of potential large food waste sources (such as grocery stores, food producers, retail convenience establishments) in the area that may be interested in further exploring the concept of food waste composting with the IRC. Such a joint effort could potentially reduce disposal fees for the food waste generator and at the same time support an environmentally sustainable and “green” activity, could bring in revenues to the IRC to help

support its composting activities, could result in the expansion of composting opportunities in the region, and could divert valuable organic resources from disposal in landfills.

5.4 Waste and Recycling System Recommendations

5.4.1 Waste and Recyclables Collection Recommendations

- Mandatory Waste Service
- Contracted Waste/Recycling Collection
- Voluntary Residential Curbside Recycling Collection

5.4.2 Waste and Recyclables Transportation

- Transfer of Waste
- Transfer of Recyclables

5.4.3 Waste Disposal

- Waste Disposal Capacity
- Management and Sustainability Programs
- Responsibilities of the IRC
- Program Support and Funding Options

5.4.5 Recyclable Dropoffs

5.4.6 Open Burning

- Anti-burn Ordinance for Recyclables
- Anti-burn Ordinance for Waste

5.4.7 Illegal Dumping

5.4.8 Yard and Food Waste/Organics Composting

- Curbside Organics Collection
- Operation of Compost Facilities
- Food Waste Composting

5.4.9 Increasing Recycling

- Corrugated Cardboard Recycling
- Electronics Recycling
- Household Hazardous Waste Collection
- C&D Waste and Recycling
- Education
- DEP Funding

5.4.10 Biosolids and Septage

- Biosolids
- Septage

The overarching goal of the 2013 Blair County Municipal Waste Plan Update is to offer an integrated program of waste management and recycling programs to the residents and businesses of Blair County that

- Is efficient
- Is affordable
- Protects the environment
- Maximizes the availability of practical recycling and waste reduction opportunities
- Is sustainable in the long term.

A long term goal of approaching zero waste would be built on a foundation of significant increased waste diversion during the term of this waste plan. The following measures are components of this recommended integrated waste and recyclables management program for Blair County.

5.4.1 Waste and Recyclables Collection Recommendations

5.4.1.1 Recommendation C1 Mandatory Waste Service – The Plan Update recommends that all residents and businesses in the County should have access to, and should utilize, proper municipal waste collection and disposal services. Everyone makes waste, even if only a small amount, and everyone should have service to properly dispose of or recycle that waste. The single biggest factor increasing improper disposal practices is a lack of convenient, affordable and required waste/recycling services. A significant number of municipalities do not oversee or facilitate waste or recycling services at all, and very few require that all residents and businesses have regular service. The Plan Update recognizes the subscription and contract bidding services that currently serve the County, as well as the purchased per-bag system serviced at the Burgmeier facility, and acknowledges that municipal or contracted collection may be another feasible option for consideration in the future. A requirement to have service does not mean that curbside collection service will necessarily be required in the most isolated parts of the County; it simply means that some sort of service be made available to everyone and that they are required to utilize some type of service.

5.4.1.2 Recommendation C2 Contracted Waste/Recycling Collection – The availability of cost-effective waste and recyclables collection services is recommended. Most areas of the County currently have subscription service only. Municipal bid collection services have been shown in this County and in other areas of Pennsylvania to be cost-effective and to provide an opportunity to include recycling, bulky waste pickup, and other services to be bundled with waste collection services in the bid package. Bidding often results in competitive pricing. As noted earlier in this chapter, the lowest waste and recycling service subscription cost in the entire county is the only one that is contracted to a single collector, Tyrone Borough at \$14.99 per household per month. While this is a local municipal decision, this Plan Update recommends that municipalities consider bidding for contract services as one means to expand

services, provide services to all residents, and ensure competition for cost-effective services. Particularly in the more suburban parts of the County (from Tyrone south to Newry), the Plan recommends that municipalities consider bidding for curbside recycling as part of a bundled service, or as a separate bid for recyclables collection only. A template bid document for a municipal bidding of services is provided in Appendix G.

5.4.1.3 **Recommendation C3 Voluntary Residential Curbside Recycling Collection**–

Mandatory curbside recycling for all suburban communities from Tyrone to Newry is ideal. Where a municipality does not require curbside recycling, this Plan Update recommends that “optional curbside recycling” be required via municipal adoption of an ordinance that requires any subscription hauler operating within the municipality to provide curbside recycling services to a customer that requests it. (This could be at additional cost to the customer or the municipality could require that fully integrated service be the standard service.) This should not be a financial hardship on waste haulers since they are often providing that service in adjacent municipalities already. It would also help fill a void left by the removal of recycling drop-offs formerly operated by the County. This “optional curbside recycling” approach is now being done in three (3) non-mandated municipalities in the County. A template ordinance to implement this is recommendation in Appendix G.

5.4.2 Waste and Recyclables Transportation

5.4.2.1 **Recommendation T1 Transfer of Waste**– The Plan Update supports the continued reliance on the private sector for waste hauling services, including the option of waste transfer to take the County’s municipal waste to out-of-County disposal sites. The Plan Update recommends the County enter contracts with three (3) private transfer stations (the two in-County sites, plus a third in Bedford County) that responded to the SOI, to provide waste transfer services and recordkeeping in accordance with the Plan Update.

5.4.2.2 **Recommendation T2 Transfer of Recyclables** – The private sector provides recyclables transfer services for materials that it either collects or that are dropped off to its system. The IRC and some municipalities also collect recyclables through dropoffs. The Plan Update recognizes the variety of public and private sector means used to collect and transport recyclables to processors, and to intermediate and end-markets. As the term of this Plan Update is ten years, the IRC recognizes that the recycling infrastructure within the County could change significantly by the end of that term. The IRC, therefore, reserves the option to explore and implement a greater role in the recycling system if the circumstances would make such a change be in the best interests of their recycling program.

5.4.3 Waste Disposal

5.4.3.1 Recommendation D1 Waste Disposal Capacity – The Plan Update calls for all municipal waste generated in the County, including Special Handling Waste, to be disposed at duly-permitted disposal sites for these wastes by the state in which they are located. To meet the minimum requirements of municipal waste capacity assurance, and for related reasons explained in Chapters 5 and 6, this Plan Update recommends the County enter contracts with four (4) selected disposal sites.

5.4.4 Management and Sustainability of Programs

5.4.4.1 Recommendation MS1 Responsibilities of the IRC – The IRC has taken over certain recycling and waste management duties of the former County Office of Solid Waste and Recycling, which closed in the fall of 2012. The Plan Update recognizes this transfer of some duties, such as the role of County Recycling Coordinator, to the IRC, and the need for the County to continue to be involved in other roles (such as contracting for waste disposal, applying for planning grants, etc.). The role of the IRC should include continuing to manage and coordinate the County’s recycling programs where affordable and feasible, to look for ways to expand feasible programs in the future, and to secure new funding sources and sponsorships to support current and expanded programs.

5.4.4.2 Recommendation MS2 Program Support and Funding Options– All of the SOI Respondents indicated a willingness to further discuss ways to support the sustainability of the County’s integrated waste and recycling programs in the future. This Plan Update recommends the IRC, in coordination with the County as appropriate, initiate further discussions with disposal sites to determine if new means of program support and sustainability can be developed. It is also recommended that the IRC continue to work with municipalities, haulers and other stakeholders to help facilitate new sponsorships of current or new recycling and waste diversion programs and educational efforts. Support from other municipalities is crucial to the financial sustainability of those special waste, recycling and composting efforts.

5.4.5 Recyclables Dropoffs

5.4.5.1 Recommendation DO1 Dropoff Recycling – This Plan Update recommends that the IRC continue to provide recyclables drop-off services at the Buckhorn site, and continue to look for opportunities to support and/or facilitate the establishment of additional sites by the IRC and others, and to accept additional types of recyclables, to expand recycling opportunities to the residents of Blair County in a cost-effective, environmentally sound and sustainable manner. Support from both municipal and private sector partners is also crucial specifically for drop-off recycling programs.

5.4.6 Open Burning

5.4.6.1 Recommendation OB1 Anti-burn Ordinance for Recyclables – Open burning of municipal wastes, including recyclables, is a waste of resources, creates air pollution, and can be an unsafe and risky practice, especially during times of high fire hazard risk. In order to qualify for some Act 101 grants, PADEP requires that areas served by the grant must prohibit the burning of recyclables. This Plan Update therefore mandates that all municipalities in the County adopt an anti-burning ordinance for recyclables. For purposes of this provision, this should include a ban on the burning of traditional curbside and commercial materials. At the time of Plan Update preparation, these included:

- All colors of glass bottles and jars
- Aluminum and steel cans
- Plastic bottles and jugs
- Mixed printed paper (including office paper and paper envelopes, newspaper, magazines and catalogs)
- Cardboard (including both paperboard and corrugated cardboard)

Appendix G contains an example ordinance template for municipal use in creating this anti-burn ordinance.

5.4.6.2 Recommendation OB2 Anti-burn Ordinance for Waste – Since so many different kinds of paper, cardboard and yard waste are now recyclable or compostable on a widespread basis, and since food and beverage containers (glass, metals and plastics) are easily recycled, there is very little left in the waste stream to legally or safely burn. For all of the reasons stated in OB1 and here, the Plan Update recommends that municipalities in the County consider adopting a burn ban on all municipal wastes within their borders. Appendix G contains sample bid templates for use in pursuing this recommendation.

5.4.7 Illegal Dumping

5.4.7.1 Recommendation ID1 Illegal Dumping – The Plan Update supports the elimination of illegal dumping in the County. It is especially important that municipalities understand that comprehensive, convenient and affordable waste and recycling services are the primary contributor to the reduction of improper disposal practices, and municipalities should, therefore, facilitate their implementation. Further, the Plan Update supports cleanup and educational efforts to help remove materials from existing illegal dumps and to educate residents and businesses on the reasons not to illegally dispose of municipal wastes and recyclables. To offer community service support, three (3) of the four (4) disposal capacity assurance contractors under this Plan Update include an allowance for public and non-profit groups to dispose of limited quantities of dump cleanup materials at the disposal sites for free;

the contracted disposal sites offering free disposal of dump cleanup waste over the next ten (10) years include Mostoller Landfill, Laurel Highlands Landfill, and Sandy Run Landfill.

5.4.8 Yard and Food Waste/ Organics Composting

5.4.8.1 Recommendation OC1 Curbside Organics Collection – It is recommended that the IRC continue to provide organics collection and/or composting services for the four (4) mandated municipalities in the County, and that it expand and offer organics receiving/composting services to additional municipalities in the County under negotiated financial or other support arrangements.

5.4.8.2 Recommendation OC2 Operation of Compost Facilities - It is recommended that the IRC continue operations of the Buckhorn composting site, and with the assistance of the County Conservation District, the operation of the Research and Development Site in Duncansville, for the receipt, composting, and processing of organics and the marketing of finished compost and mulch throughout the County.

5.4.8.3 Recommendation OC3 Food Waste Composting – This Plan Update recognizes that there is merit to the possibility of food waste composting at the Buckhorn site, or at another more centrally located site in the County that has not yet been identified. Further, the R&D site in Duncansville (or another not-yet-identified site) may have merit as a potential organics collection site, to allow for the economical accumulation and transfer of food waste to a composting site. Further feasibility analysis is required to refine the feasibility and details of such a program, and this feasibility study should be grant-eligible under an Act 101 Section 901 planning grant. It is recommended that the IRC pursue, through the County, the application for 901 planning funds to pay for up to 80% of this feasibility study.

5.4.9 Increasing Recycling

5.4.9.1 Recommendation R1 Corrugated Cardboard Recycling - With an aspiration to surpass 50% recycling and composting diversion in the coming decades (35% or more within the next ten (10) years, as projected in Table 3.4 in Chapter 3), it is recommended that corrugated cardboard recycling be maximized, and that all reasonable efforts be employed to avoid the disposal of this valuable resource. Since it is currently the most recycled material and it is the most readily available recyclable material both residential curbside and commercially in the County and throughout much of Pennsylvania, it is recommended that municipalities consider placing a ban on disposing of this material with their waste, at least in the more suburban and urban areas.

5.4.9.2 **Recommendation R2 Electronics Recycling** – This Plan Update recommends that the IRC/ County continue to provide a contractor and oversight of electronics and CDRA device recycling (Appendix J).

5.4.9.3 **Recommendation R3 Household Hazardous Waste Collections** – This Plan Update recommends the IRC continue to sponsor household hazardous waste (HHW) collection events in the County to help insure the proper collection and disposal of these materials. The scope and frequency of such collections shall be dependent upon the resources and support available to the IRC, particularly support from the non-mandated municipalities.

5.4.9.4 **Recommendation R4 C&D Waste and Recycling** - Blair County currently relies on existing infrastructure for managing C&D waste that involves a combination of recycling and disposal. Several private sector entities accept materials that can be recycled including drywall, concrete/masonry, and clean wood waste. The remainder is landfilled or used as clean fill by both private and public sector operators. The current system may be adequate to manage the processing of C&D waste generated in the County, but the implementation of widespread recycling is currently in the very early stages. Additional recycling of C&D wastes in the future is feasible and recommended in this Plan Update.

5.4.9.5 **Recommendation R5 Education** – This Plan Update recognizes that education of the public on proper waste management and recycling is crucial to the success of a growing, sustainable integrated waste and recycling program in Blair County. Section 4.9 of Chapter 4 lists a number of educational initiatives that have been identified by the SWAC as priorities in Blair County. The continuation and expansion of such educational efforts by the public and private sectors are recommended in this Plan Update. Support from both municipal and private sector partners is crucial for a sustainable educational effort.

5.4.9.6 **Recommendation R6 DEP Funding** – The County Solid Waste Advisory Committee (SWAC) has identified a large number of recycling and waste reduction goals and initiatives, as presented in Chapter 4 and also presented in Appendix E. The Plan Update recommends that the IRC, the County, its municipalities, its waste haulers, and its businesses and residents work together to pursue the further development of these goals and initiatives over the ten (10) year planning period, as a means to increase recycling, reduce waste disposal, and be good stewards of and protect the environment. It is also recommended that the IRC pursue Sections 901 and 902 funding to help plan and develop such programs, as appropriate.

5.4.10 Biosolids and Septage

5.4.10.1 **Recommendation B&S1 Biosolids** - The County should continue to rely on the current system for managing biosolids, which involves processing of wastewater at publicly-

operated facilities and the handling of WWTP biosolids (i.e. sewage sludge) through land application, landfilling, composting, or through otherwise recycling the materials back into a productive use. The current system is sufficient to manage the biosolids generated from County sources over the next ten (10) years. As part of this strategy, aggressive pre-treatment programs must continue throughout all county WWTPs to assure that the land-applied biosolids remain safe and protect the agricultural land and water resources in the county.

5.4.10.2 Recommendation B&S2 Septage - The County should continue to rely on the wastewater treatment plants located in the County as the primary treatment method for the stabilization of septic tank pumpings (i.e. septage), for eventual reuse or disposal as treated biosolids as noted in Recommendation B&S1. The SWAC believes that raw untreated septage should never be land applied. As indicated with biosolids, the current system is adequate to handle the septage processing needs of the County over the next ten (10) years.

CHAPTER 6 - LOCATION OF DISPOSAL FACILITIES

No municipal waste disposal facilities presently exist in Blair County. The County has decided that for this Plan Update, it will allow municipal waste generated in Blair County to be taken, at the generator's or hauler's option (as appropriate), to any duly licensed waste processing or disposal facility in the Commonwealth of Pennsylvania, or to any duly licensed processing or disposal facility in another state.

With this approach, Act 101 still requires that the County must contract with at least one (1) processing/ disposal site to secure the minimum municipal waste disposal capacity needs of the County for the next ten (10) years. To meet this minimum contracting obligation under Act 101, the County conducted a Solicitation of Interest (SOI) process in the fall of 2012. The SOI also solicited municipal waste transfer stations that handle Blair County's municipal waste to agree to minimum procedures to comply with the Plan Update, including proper reporting, waste manifesting, and delivery of Blair County's municipal waste to processing/ disposal facilities approved in the Plan Update.

A summary of the Submittals received in response to the SOI, and the results of the Submittal reviews by the County Solid Waste Advisory Committee, including the selection of multiple sites for waste transfer and contractual waste disposal capacity assurance, are documented in a memorandum in Appendix C of the SOI recommendation.

The following municipal waste transfer and disposal sites have been tentatively selected for inclusion in this Plan Update, subject to successful execution of transfer or disposal capacity contracts (as appropriate) with the County. These facilities were chosen so that all the perceived needs of the County would be addressed over the ten (10) year period. All three transfer facilities were included so as to facilitate the most cost-effective consolidation and transportation of solid waste. The four disposal facilities were chosen so that these needs would be met:

- The most geographically convenient
- The lowest disposal cost
- The facilities most-utilized at the time the Plan Update was drafted
- The multiple facilities that would be required to assure the disposal capacity for all types of "special handling" municipal wastes generated in the County (such as asbestos and infectious and chemotherapeutic waste)

It is noted that three (3) of the four (4) disposal capacity assurance contractors chosen under this Plan Update include an allowance for public and non-profit groups to dispose of limited quantities of dump cleanup materials at the disposal sites for free; the contracted disposal sites offering free disposal of dump cleanup waste over the next ten (10) years include Mostoller Landfill, Laurel Highlands Landfill, and Sandy Run Landfill.

The disposal facilities listed below have entered, or are expected to enter, into contract agreements with Blair County to accept waste from Blair County for a period of five (5) years. Blair County retains the authority to extend these contracts for an additional five (5) years, for a total of ten (10) years. Appendix A contains a copy of the draft transfer agreement and the draft disposal agreement from the SOI. Fully executed agreements will be placed in Appendix A when consummated. Facilities identified below that do not finalize and execute contracts with the County will be removed from this list of contracted facilities.

Transfer Station Facilities

Waste Management Altoona Transfer Station
East Sixth Avenue Road
Altoona, PA 16602

Breezewood Transfer Station
820 S. Breezewood Road
Breezewood, PA 15533

Blair County Resource
Recovery Facility
(Burgmeier Transfer Station)
1356 Old Sixth Avenue Road
PO Box 929
Altoona, PA 16601

Disposal Facilities

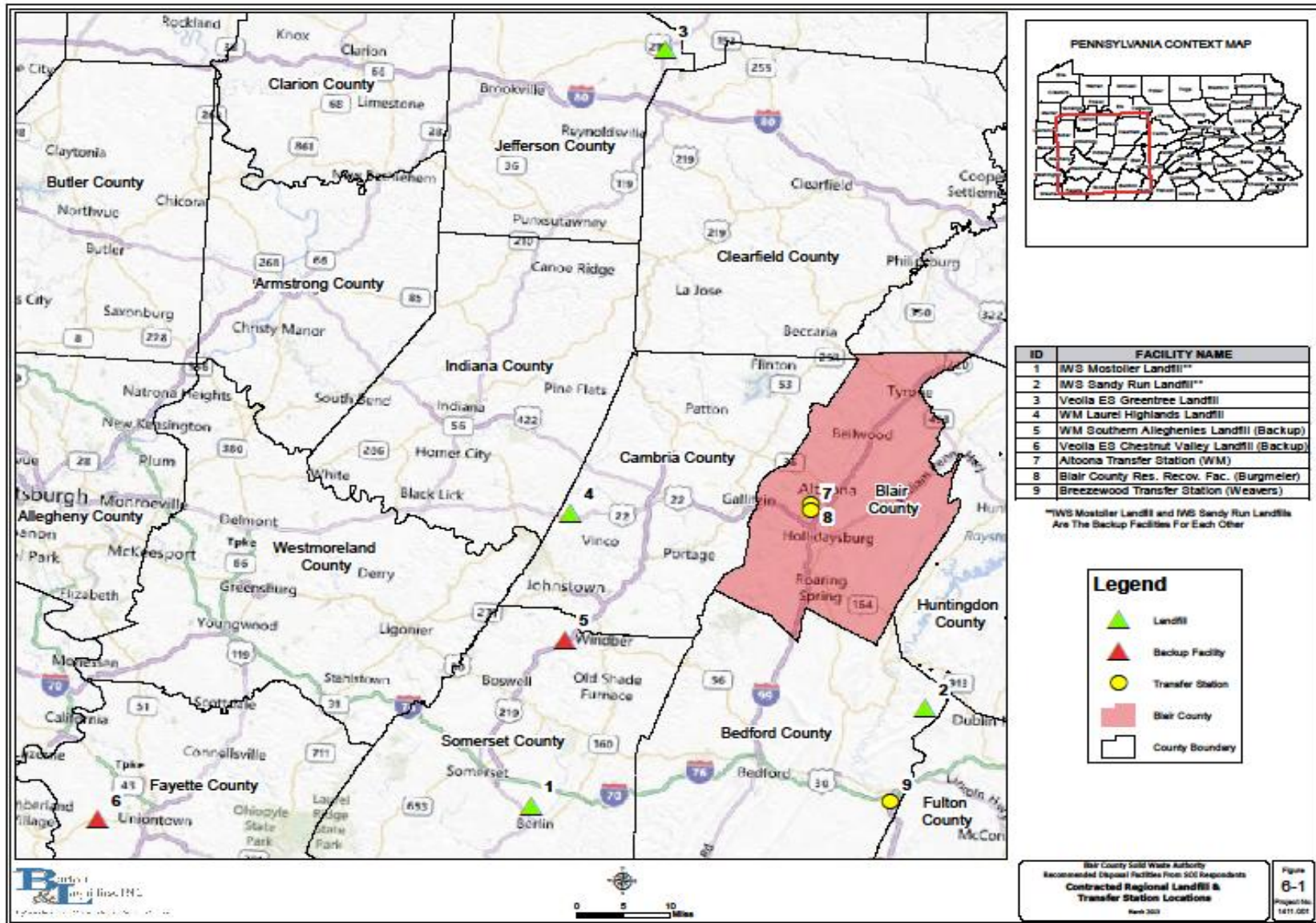
Laurel Highlands Landfill (WM)
260 Laurel Ridge Road
Johnstown, PA 15905

Sandy Run Landfill (IWS)
995 Landfill Road
Hopewell, PA 16650

Veolia ES Greentree Landfill
635 Toby Road
Kersey, PA 15846

Mostoller Landfill (IWS)
7095 Glades Pike
Somerset, PA 15501

The location of these designated transfer and disposal facilities is presented in Figure 6-1, Contracted Regional Landfill & Transfer Station Locations.



CHAPTER 7 - IMPLEMENTING ENTITY IDENTIFICATION

Due primarily to the loss of administrative fees to support the sustainability of the Blair County Department of Solid Waste and Recycling, the County Commissioners closed that department and its operations effective September 30, 2012. The Intermunicipal Relations Committee (IRC), through a delegation agreement with the Blair County Board of Commissioners, is responsible, effective October 1, 2013, with implementing parts of the Plan and Plan Update that involve the processing and disposal of municipal waste and recyclables. More specifically, the IRC, in conjunction with the County of Blair, oversees agreements executed (or to be executed) by the County to secure adequate disposal capacity for municipal wastes that will be generated within Blair County over the next ten (10) years. Furthermore, the IRC will continue to operate at least one (1) of the existing drop-off recycling depots and the Blair County Yard Waste Compost Recycling Facility. The IRC also may explore and implement additional recycling programs and facilities as deemed necessary or as cost-effective and affordable opportunities arise in the future. The IRC, through the delegation agreement with the Blair County Commissioners, has the full legal authority to implement the Plan Update on behalf of the County of Blair.

The IRC and Blair County will continue to offer assistance to the recycling programs of the four (4) mandated communities within Blair County, including the City of Altoona, Hollidaysburg Borough, Logan Township and Tyrone Borough. Likewise, the IRC and Blair County will continue to offer technical assistance to non-mandated Blair County municipalities that currently recycle on a voluntary basis or to those that may choose to establish a voluntary or mandatory recycling program in the future.

The duties and responsibilities of the County Recycling Coordinator also transferred from the former County Department of Solid Waste and Recycling to the IRC, effective October 1, 2012.

The following time schedule is presented for the planning and implementation of the component parts of this Plan.

Mid Spring 2013	Draft Substantial Plan Update is released, 90-day public comment period begins
Late Spring 2013	Disposal agreements are executed with waste transfer and disposal facilities
June 11, 2013	Municipal Waste Management Plan Update Public Hearing Mid Summer 2013. Municipal Waste Management Plan Update public comment period ends
Summer 2013	Discussions continue with municipalities and recyclers to restore rural drop-offs
June 30, 2013	Former Disposal Capacity Assurance Contracts with Blair County expire

July 1, 2013	New Disposal Capacity Assurance Contracts with Blair County commence
August 2013	Comment/ Response document prepared, final plan modifications are made based on public input.
Late Summer 2013	Final Plan Update adoption by Blair County Commissioners
Early September 2013	All municipalities receive plan, 90-day Municipal Waste Management Plan Update formal plan ratification period begins
Autumn 2013	IRC staff or committee members attend municipal meetings to discuss plan as needed
December 2013	Plan Update 90-day municipal ratification period ends
December 2013	Ratified plan is submitted to the PA Department of Environmental Protection for final approval
February 2014	Anticipated PADEP Plan Approval date
Early 2014	Plan recommendations are formally conveyed to municipalities
Feb. 2013- Feb. 2014	One-Year Plan Update implementation period from PADEP approval date

CHAPTER 8 - PUBLIC FUNCTION

The Delegation Agreement between the IRC and the Blair County Commissioners identifies the IRC as the most appropriate public entity to oversee the implementation of the recycling, composting, special wastes and related programs described within the Plan Update. Chapter 7 describes the Fall 2012 closure of the County Department of Solid Waste and Recycling, and the transfer of some duties and rights from the County to the IRC. The IRC is currently (as of the date of drafting of the 2013 Plan Update) a four-municipality Council of Governments, a public entity.

The County of Blair is the contractual signatory to the waste transfer station agreement and waste disposal capacity assurance agreements with other entities that were solicited under this Plan Update. The County Commissioners will, in conjunction with the IRC and in accordance with the Delegation Agreement between the County and the IRC, retain responsibility for implementation of disposal-related elements of the plan, including, but not necessarily limited to, execution and oversight of disposal capacity agreements. The County may also apply for, in conjunction with the IRC, grant funding to help finance future planning and implementation efforts to promote and implement elements of this Plan Update. Therefore, the County Commissioners and the IRC will maintain roles in the public function of this Plan Update.

It is the position of the Blair County Board of Commissioners that the most suitable and cost-effective method of disposal of the municipal waste generated throughout Blair County is at multiple out-of-County disposal facilities. Also, it is the County's position, at this time, that the in-County and potential out-of-County waste transfer facilities serving Blair County meet the current waste transfer needs of the County. Both the waste transfer facilities and the waste disposal facilities identified for contracts with the County in this Plan Update are currently owned and operated by the private sector. The County and its municipalities reserve the right to consider a public option for waste processing, transfer and/or disposal in the future should the needs of the residents and the position of Blair County change.

The IRC has taken over operation of the two (2) County composting facilities, one through ownership transfer and the other through lease transfer. The IRC has also taken over ownership and operation of one (1) drop-off facility, may expand current facilities and operations, and may own and/or operate further composting, drop-off facilities and/or recycling centers in the future. The IRC, its individual municipal members, and other municipalities within the County, reserve the option to own or operate a recyclables processing, recyclables and waste drop-off facilities, materials transfer facilities, and/or composting facilities in the future if it becomes in the best interest of the residents of Blair County, the IRC, or the individual municipalities to do so.

CHAPTER 9 - IMPLEMENTING DOCUMENTS: ORDINANCES AND RESOLUTIONS

A Solicitation of Interest (SOI) for municipal waste transfer and processing/ disposal services was prepared and distributed to interested facilities on behalf of the County of Blair to solicit proposals for the ten (10) year planning period. A sample copy of the SOI is provided in Appendix B. The results of the SOI are presented in Chapter 6.

Legal instruments for the control of Blair County's municipal waste stream are a requirement of Act 101 of 1988 which makes the County responsible for the proper disposal of the municipal wastes generated within its boundaries. The Plan Update incorporates multiple implementation documents that are required to implement the Plan Update. It also offers many forms of template documents that can be used by municipalities to implement plan recommendations.

Incorporated within this Plan Update are the following implementation documents:

- Sample Municipal Waste Disposal Capacity Agreement (Appendix A)
- Sample Municipal Waste Transfer Station Agreement (Appendix A)
- Delegation Agreement Between Blair County and the IRC (Appendix C)
- Samples of Various Types of Waste and Recycling Ordinances (Appendix G)
- Samples of Various Types of Anti-Burn Ordinances (Appendix G)
- Samples of Various Forms of Municipal Bid Documents for Waste and Recyclables Collection
- Disposal Contracting (Appendix G)
- Plan Finalization, Ratification and Approval Documents and Resolutions (Appendix H)

In this Plan Update, municipal waste collectors who operate within the County of Blair are permitted to deliver municipal waste collected within Blair County to any duly state-permitted facility for acceptance of such waste, whether in-state or out-of-state. Chapter 6 contains a list of transfer and disposal facilities that have contracted with, or intend to contract with, Blair County for the transfer or disposal of Blair County's municipal wastes. These contracts provide certain assurances to Blair County and contain ceiling tipping fee pricing for various types of wastes throughout the ten (10) year planning period. Appendix B contains the ceiling pricing structures of the contracted disposal facilities (Table 2 - Detailed Summary of SOI Responses).

CHAPTER 10 - ORDERLY EXTENSION

In the preparation of this Plan Update, demographic information prepared by the Blair County Planning Commission (BCPC) was utilized for an orderly extension of data in such a manner as to be consistent with the needs of the area. This plan has also taken into consideration applicable planning, zoning, population estimates, engineering and economics. The requirements of Act 101 and Chapter 272 of the Pennsylvania Department of Environmental Protection (PADEP) Regulations have been followed in this Plan Update process, including the requirements for a Substantial Plan Revision, which PADEP has determined applies to this Plan Update.

There is no existing in-County disposal facility. Therefore, an orderly extension of in-County disposal facilities is not of concern. Existing in-County and out-of-County waste transfer stations are utilized and made part of this Plan Update. The contractual arrangements resulting from the SOI for transfer and disposal services include facilities that currently handle the vast majority of municipal wastes generated by Blair County, and the Plan Update encourages extension of drop-off recycling facilities by both public and private sponsors. The IRC continues the operation of multiple composting sites in the County that were previously operated by the County, as well as one of the drop-off sites that accepts a wide variety of conventional and hard-to-recycle materials. The IRC also continues other specific functions that were previously provided by the County Department of Solid Waste and Recycling.

Continued use of existing processors by the commercial, institutional, and industrial sectors is also encouraged. Over the years, these sectors have been the main source of materials for the processors.

CHAPTER 11 - METHOD OF DISPOSAL

There are four options for the management of municipal waste throughout Blair County. They include the following:

- Reduction
- Recycling
- Processing
- Disposal

To effectively manage municipal waste, these four options are combined to form an integrated system of reduction, recycling, processing and disposal.

In the preparation of this Plan, for the reduction of municipal waste, it has been assumed that product designers and manufacturers and the purchasers of those products will work towards decreasing the amount of municipal waste created. Though local efforts are crucial, these broader packaging and manufacturing changes are also key changes in making significant movement toward a Zero Waste goal. There are also opportunities for homeowners to reduce the amount of municipal waste through the use of backyard composting of leaf and yard wastes; the use of mulching mowers; and the utilization of multi-use items, such as cloth grocery bags, in place of disposables.

The recommendations for recycling, processing and disposal of municipal waste in Blair County are discussed in detail in Chapter 5.

CHAPTER 12 - COUNTY OWNERSHIP

The County of Blair does not own disposal facilities (landfills) or processing facilities (transfer stations) at this time. The County, the IRC and/or the County's municipalities reserves the right to own a disposal and/or processing facility in the future if it meets the needs of the Blair County residents. The IRC does own and operate one (1) composting facility, and leases and operates a second yard waste processing site, and owns and operates two (2) recyclables drop-off sites, and reserves the right to lease, own and/ or operate additional recycling, processing and/or disposal facilities in the future to meet the needs of Blair County and its residents and businesses as they may arise in the future.

CHAPTER 13 - OTHER INFORMATION

13.1 SPECIAL MATERIAL COLLECTION PROGRAMS

13.1.1 Household Hazardous Wastes

The IRC intends to continue a County-wide household hazardous waste (HHW) collection program. The IRC has assisted the County in their HHW single day collection events in the past, and intends to continue that event as long as resources allow.

The IRC will also continue a drop-off site for some of the HHW items that the IRC is able to handle on a day-to-day basis at its Buckhorn facility. Materials are accepted from both households and small businesses and institutions. The materials currently accepted at the Buckhorn site include:

- Fluorescent Bulbs and Tubes
- Used Motor Oil and Automotive Fluids
- Televisions and Computer Monitors
- Computers and Servers

The IRC will also explore collecting a broader list of HHW items at the current site, or at a succeeding facility.

13.1.2 Special and Non-curbside Materials Recycling

There are a number of materials that are recyclable but which are not generated on a daily or weekly basis and which are not regularly collected at the curbside or in the workplace. The IRC is continuing to offer drop-off provisions at the Buckhorn facility for many of these materials, and further facilitates and publicizes private sector drop-off opportunities.

13.1.3 Electronics Recycling

In order to address the recovery of electronics that are now required to be recycled under the Covered Device Recycling Act (Act 108 of 2010), the County initiated an electronics recycling program at their Buckhorn facility. The IRC has continued that program and intends to maintain it for the long term. Further information on the CDRA Act and electronics recycling is included in Appendix D.

13.1.4 Appliance Recycling

The IRC intends to provide or facilitate regular appliance recycling opportunities to address the recovery of all metal appliances and furnishings. Specific provisions for proper recovery of Chlorofluorocarbon refrigerants will be required of whatever entity handles these materials, so as to comply with Section 608 of the US Clean Air Act.

13.1.5 Food Waste Recovery

The IRC intends to continue exploring food waste composting. Several significant generators have discussed the feasibility of food waste recovery, including the Region's largest health care institution, the largest educational institution and two significant food retailers. The IRC is adding composting pad capacity at the Buckhorn facility to handle the additional material, and may pursuing additional permitting, as appropriate, through the Pennsylvania Department of Environmental Protection (PADEP).

13.2 FUNDING FOR THE IRC

As part of the delegation agreement between Blair County and the IRC, access to some funding sources was granted to the IRC on the County's behalf. These include:

- The County Recycling Coordinator Grant through Section 903 of Act 101, which pays for 50% of the eligible costs associated with the County's recycling coordinator and office. These services now are provided through the IRC office and staff. The Recycling Performance Grant through Section 904 of Act 101, which rewards counties or municipalities for recycling materials within their borders. This County Plan Update will authorize the IRC to apply for these grants annually on behalf of the entire County. The Household Hazardous Waste Grant, that funds 50% of eligible expenditures associated with the collection of HHW. The IRC will continue to provide HHW services to municipalities that support the IRC through membership or in-kind program support. The County Waste Planning Grant through Section 901 of Act 101, that pays for 80% of eligible costs of composting, recycling and waste planning, feasibility studies, and related activities throughout the County. The Waste and Recycling Program Implementation Grants through Section 902, that pays for up to 90% of certain implementation costs for eligible composting and recycling facilities and equipment.
- Through an agreement with an electronics recycler, the IRC will receive rebates from the recycling of electronics collected at the Buckhorn facility.

The IRC will also continue to charge for the tipping of compostable materials and some special materials that are brought to their facilities for recycling. Compost and mulch also will be sold at the IRC's compost facilities. At some point during this ten (10) year plan term, the IRC may (even with these grants) exhaust their financial resources, requiring funds from member municipalities or user fees from residents and other non-residential entities within their borders. Such fees may also be required of non-mandated municipalities if incomes from the above sources cannot match expenditures necessary to fund the recycling and composting programs.

13.3 FUTURE CHALLENGES OF THE IRC

Beyond funding concerns, the IRC and Blair County would like to develop a method that engages all of the municipalities in the County to help them understand that solid waste management simply does not take care of itself. Many municipalities in the County seem to have taken this approach for decades and the IRC, in coordination with Blair County, would like to counteract this way of thinking. Research by the Professional Recyclers of Pennsylvania (PROP) has confirmed that municipalities and counties that fail to adequately address solid waste management and recycling experience:

- A lack of education and enforcement to convey the importance of proper waste management practices
- Inconvenient, or a complete lack of, access to waste and recycling services
- Higher costs for waste and recycling services

This ultimately results in a significantly greater likelihood of:

- Illegal dumping
- Open burning
- Waste accumulation on private property
- Blighted properties

Specific initiatives of this Plan Update to address better waste management, increased recycling, and ongoing education of residents and businesses are presented in Chapter 5.

CHAPTER 14 - NON-INTERFERENCE WITH EXISTING FACILITIES

There is no municipal waste processing or disposal facilities in Blair County which were developed pursuant to sub-county solid waste management plans. Therefore, the Municipal Waste Management Plan Update for Blair County will not interfere with the design, construction, operation, financing, or contractual obligations of any municipal waste processing or disposal facility, including any reasonable expansion of an existing facility which meets any of the requirements specified in the guidelines for preparation of municipal waste management plans of the Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101 of 1988).

CHAPTER 15 - PUBLIC PARTICIPATION

The County of Blair has utilized a combination of means and methods to provide for public participation both in the preparation of and in the implementation of the 2013 Update to the Blair County Municipal Waste Management Plan. The Board of Commissioners of Blair County reactivated the Blair County Solid Waste Advisory Committee (SWAC) mid-year 2011 at the start of the planning process. This reconstituted committee, representing a wide variety of public, waste and recycling industry, and environmental groups and agencies in the County, first met to discuss the Plan Update on August 9, 2011, and has since met in 2012 and 2013 to provide feedback and input to the planning process. The SWAC has provided review and comment on draft plan materials, summary documents, and draft chapters of the Plan Update as they were completed. Handouts and meeting notes from SWAC meetings are included in Appendix H.

Barton& Loguidice (B&L), the solid waste planning consultant for Blair County, established and has maintained a public information webpage on its corporate website (www.BartonandLoguidice.com) to disseminate information on the project electronically to the SWAC and the public, and to provide information access to those who could not attend the SWAC and other public meetings. The availability of the Solicitation of Interest (SOI) for waste transfer and processing/ disposal capacity was advertised on the B&L project webpage, in a national trade publication, in the Pennsylvania Bulletin, and through direct ad mailings to entities that have served Blair County's waste management needs in recent years.

The existing Municipal Waste Plan for Blair County, ratified and adopted as of July 2002, and prepared through its own public participation process, was utilized as a basis for this update of the County Plan. Changing conditions and updated information were evaluated and incorporated in the Plan Update. A public meeting of municipal officials, the County Commissioners, the IRC, their legal and planning consultants, and the general public was held on September 5, 2012 to discuss the lack of funding to sustain continuance of the County's Department of Solid Waste and Recycling, the impending closure of recycling drop-offs, the pending agreement for the IRC to take over some County recycling and waste management duties, the need for new sponsors for recycling drop-off sites/ facilities, and related matters. A copy of the minutes from the September 5, 2012 public meeting is included in Appendix H.

The 2013 Blair County Municipal Waste Management Plan Update was released for a formal 90-day public comment period on May 27, 2013 and was submitted for review and comment at the same time to the twenty four (24) constituent municipalities of Blair County (one (1) city, eight (8) boroughs, and fifteen (15) townships). Additionally, a public hearing was held to review the final draft Plan Update and to accept formal verbal and written comments on the Plan Update on June 11, 2013. Subsequent to this public hearing, and in consideration of comments received, the Blair County Board of Commissioners, following proper public notice, will adopt a final version of the Plan Update. Pursuant to the PADEP Chapter 272 Substantial Plan Revision

process, the final adopted Plan Update will then distributed to each of the twenty-four (24) municipalities in the County for a 90-day municipal ratification process. Upon approval of at least half of the County's municipalities representing at least half of the County population, the adopted and ratified Plan Update will be submitted to PADEP for final approval.