REGIONAL SOLID WASTE MANAGEMENT PLAN
COLUMBIA, LYCOMING, MONTOUR, SNYDER & UNION COUNTIES

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FINAL PLAN SUBMITTAL

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REGIONAL SOLID WASTE MANAGEMENT PLAN
COLUMBIA, LYCOMING, MONTOUR, SNYDER & UNION COUNTIES

February, 2013

INTRODUCTION

Pennsylvania Act 101 of 1988: According to § 4000.303 of Act 101: "Each county shall have the power and its duty shall be to insure the availability of adequate permitted processing and disposal capacity for the municipal waste which is generated within its boundaries. As part of this power, a county:

(1) May require all persons to obtain licenses to collect and transport municipal waste subject to the plan to a municipal waste processing or disposal facility designated pursuant to subsection (e).
(2) Shall have the power and duty to implement its approved plan, including a plan approved under section 501(b), as it relates to the processing and disposal of municipal waste generated within its boundaries.
(3) May plan for the processing and disposal of municipal waste generated outside its boundaries and to implement its approved plan as it relates to the processing and disposal of such waste.
(4) May adopt ordinances, resolutions, regulations and standards for the recycling of municipal waste or source-separated recyclable material if one of the following requirements is met:
(i) Such ordinances, resolutions, regulations or standards are set forth in the approved plan and do not interfere with the implementation of any municipal recycling program under section 1501.
(ii) Such ordinances, resolutions, regulations or standards are necessary to implement a municipal recycling program under section 1501 which the municipality has delegated to the county pursuant to section 304.
(5) May prohibit the siting of additional resource recovery facilities within its geographic boundaries where any additional resource recovery facility is inconsistent with the county plan pursuant to section 501(b) unless such facilities meet the criteria of section 502(c)(2) and (o)(1)(iii). [FN4]"

PADEP Regulations: 25 Pa. Code. §272.251 of the Commonwealth of Pennsylvania's Municipal Waste Regulations requires that counties submit a revised Plan to the PADEP at the earliest of the following events:

- at least three years prior to the expiration of the capacity assurances necessary to dispose or process the municipal waste generated in the county
- at least 3 years prior to the expiration of the term of the County's approved plan
- or, when otherwise required by the Department

Purpose and Intent of Plan Preparation: The five-County Region (the Region, herein) composed of Columbia, Lycoming, Montour, Snyder and Union Counties, has elected to develop a multi-county Regional Solid Waste Plan. This Plan will update and supersede

the current Municipal Waste Management Plans for each of the five Counties, and will be prepared under the guidelines required by Act 101.

This Plan was developed by a Team, consisting of the Regional Steering Committee, the Regional Solid Waste Advisory Committee (consisting of five Stakeholder Groups), and the Consulting Group selected for this Project. The Team's vision and approach in preparing this Regional Plan, and the understanding of the goals to be accomplished through this process were multifaceted:

- to gather accurate waste generation and recycling data, and to make realistic projections of future growth in population and waste/recycling generation in the Region
- to identify current waste hauling and disposal patterns, and to evaluate the availability of services for the collection, transportation and disposal of waste and the recovery of recyclables within the Region
- to provide a professional assessment of available waste processing and disposal technologies that could be considered in conjunction with current public operations
- to assess the economics of waste management in the Region; to accurately reflect the Regional marketplace under which the five Counties operate; and to establish/confirm how to stay competitive in the marketplace
- to assure adequate waste disposal capacity is available in the Region for at least the next 10 years (through December of 2022)
- to analyze ways to logically improve the quality of life and level of service to the Region's residents and businesses, including prospects for expanding recycling opportunities in the Region
- to identify improvements to the current waste management system, such as waste transfer, processing and waste diversion options, enhanced recycling, and voluntary fee collection and/or service options, that can improve the economics, level of service, and support for programs offered in the Region
- to encourage input and feedback from the municipal, business, recycling, waste industry, and citizens Stakeholder Groups throughout the planning process, and to develop consensus among the stakeholders for a preferred system of waste and recyclables management in the Region
- to develop a logical, practical, and implementable Regional Solid Waste Management Plan.

In addition, this revision also discusses the Regional recycling programs, including:

- review of current municipal recycling activities in each County
- methods for enhancement of recycling opportunities
- alternative approaches to waste reduction and minimization
- methods for the initiation and expansion of household hazardous waste (HHW) collection programs

Potential Benefits to the Region for implementation of this Plan are numerous, and include:

- improved health through the reduction of illegal dumping of waste materials
- improved safety resulting from fewer tire piles and illegal dumps, which can lead to fires, dangerous runoff and promotion of vermin
- economic opportunities to the local residents through expanded waste collection and recycling
- decreased liability associated with illicit disposal of waste materials or failure to comply with State and Federal requirements
- expansion of recycling within the Region, which will reduce the costs associated with landfill disposal and provide raw materials for innovative "green businesses"
- improved access to available grant funding, as a result of updated record keeping
- expanded access to waste disposal and recycling to portions of the Region that had been previously underserved

EXECUTIVE SUMMARY

The five-County Region (the Region, herein) composed of Columbia, Lycoming, Montour, Snyder and Union Counties, has elected to develop a multi-county Regional Solid Waste Plan. This Plan will update and supersede the current Municipal Waste Management Plans for each of the 5 Counties, and was prepared under Act 101 and the planning guidelines developed by the Pennsylvania Department of Environmental Protection (PADEP).

Since this was intended as a Regional Plan, it was developed by a Team, consisting of the Regional Steering Committee, the Regional Solid Waste Advisory Committee (consisting of 5 Stakeholder Groups), and a Consulting Team selected for this Project. The Consulting Team was composed of representatives of 6 consulting firms, each selected for their particular specialty.

The Goal of the Plan Development was to:

- gather accurate recent data, and develop realistic projections of future Regional waste generation
- recommend improvements in the current waste management system
- develop a Logical, Practical, Implementable and Defendable Regional Solid Waste Plan that meets the needs of the 5 Counties
- have the 5 Counties execute 10-yr Disposal Capacity Agreements with designated landfills and/ or waste processing sites
- encourage expanded recycling where appropriate

The Plan development process was initiated by representatives of the 5 Counties in 2008, the Consultant Team selected, and initial Public Meetings held in June of 2010. During the planning process, over 30 public/ stakeholder meetings were held to identify and discuss solid waste and recycling issues and solutions, and to solicit input and feedback on draft plan materials. A series of draft submittals were made to the various committees and to the PADEP, and the Final Draft submission was completed in March of 2012. After this series of Public Meetings are held in each of the 5 host counties to solicit comments on the Draft Regional Plan, and responses to comments generated during this process are developed, the Final Regional Plan version will be presented to the County Commissioners of each of the 5 counties for approval in August of 2012, with Municipal Ratification of the Regional Plan in each County anticipated by November of 2012. After receipt of final approval of the Ratified Plan from the PADEP, a one-year implementation period will follow, during which the various forms and agreements will be signed.

Because of the large number of participants, including the general public, numerous meetings were held to communicate the intent of the Regional Plan, and to solicit input from stakeholders. In addition, to accomplish the most effective means of communication, an internet website was established to provide a location to share documentation developed in the planning process and at the meetings. Throughout the Plan development, this website was maintained at the following location:

http://www.lrkimball.com/five-county-regional-waste-plan.aspx

This website includes copies of the following: general information regarding the project goals, a detailed history of the Plan development, description of the various Committees, a calendar of up-coming events, copies of the latest versions of the Draft Plan, attendance records and notes from each meeting, and contact information for each Team member.

The Plan has been developed in Final Draft form, and this version has been submitted to the Regional Steering Committee, the Regional Stakeholder Groups, the municipalities within the 5 counties, and the PADEP for comment. In addition, this version has been posted on the website listed above. The Final Draft Plan includes the following:

- Description of Waste & Estimated Future Capacity Requirements
- Description of Recyclable Materials
- Selection and Justification of Municipal Waste Management Program
- Discussion of the Public Function
- Waste and Recycling System Options and Recommendations
- Description of Facilities/ Orderly Extension of Waste Management Systems
- Implementation Documents
- Description of Public Participation Activities
- Implementation Schedule

As part of the Plan development, a Service Shed analysis was performed to identify local waste management and recycling needs and deficiencies, as well as the most logical and economical waste and recyclables handling solutions. Specific recommendations regarding: the collection of refuse and recyclables; and the handling of e-waste, construction & demolition waste, household hazardous waste, and pharmaceutical waste were also prepared and included in the Plan. Also, waste associated with Marcellus Shale drilling was considered, and illegal dumping and open burning issues were discussed. Recommendations regarding burning ordinances were included in the Plan, along with methods to promote recycling throughout the Region. A list of prospective measures to expand and sustain integrated waste and recyclables management programs in the Region was developed for consideration and possible future action.

A Solicitation of Interest (SOI) was prepared to pre-qualify interested waste transfer and disposal sites that meet minimum submission criteria, and to tentatively identify qualified disposal facilities from the SOI process as designated facilities in the Plan. A designated facility, once a contract is executed, would be permitted to receive municipal wastes generated from the Region over the next ten years, although the initial term of agreement for the designated disposal facilities will be 5 years. The Counties/ Regional Solid Waste Planning Committee will have the option to renew any or all disposal agreements for an additional term of 5 years. Thirteen disposal facilities submitted responses to the SOI and have been pre-qualified as designated sites. Multiple waste transfer stations also responded to the SOI, agreeing to utilize designated facilities in the Regional Plan for disposal of municipal wastes generated by the Region and handled by their transfer station. A summary of these facilities was included in the Final Draft Plan appendices, along with a table listing the specific response details.

CHAPTER 1 – DESCRIPTION OF WASTE (per 25 Pa. Code. § 272.223)

This section describes the types and quantities of Municipal Solid Waste (MSW) generated currently in the five-County Region, in a manner consistent with the Commonwealth of Pennsylvania's solid waste management planning criteria. These projections will allow the Region to best determine future waste projections, and assist in determining the best future management system through options that include, but are not limited to, recycling, composting, waste reduction, and landfilling remaining materials.

Estimates are based on the Regional waste destination reports provided by the Pennsylvania Department of Environmental Protection (PADEP), Municipal and County Recycling reports, and data provided through conversations, surveys and phone calls to various constituencies; including waste haulers, wastewater and water treatment plants, and hospitals and larger clinics (see Appendix A).

1.1 Background

Pennsylvania's Act 101, the "Municipal Waste Planning, Recycling and Waste Reduction Act" mandated that Pennsylvania's counties develop formal plans for management of all MSW generated within their boundaries, and review/update these plans every ten (10) years at a minimum. Each of the five counties represented in the Regional Solid Waste Management Plan had prepared Municipal Waste Management Plans in the past, and the information developed in these plans is summarized below:

Table 1.1

Summary of Previous County Solid Waste Plan Update

County	Columbia	Lycoming	Montour	Snyder	Union
Published Date	12/2000	10/2001	4/2001	12/1999	12/1998
Municipalities	33	52	11	21	14
Land Mass (square miles)	484	1,216	131	332	317
2000 Census Population	64,151	120,044	18,236	37,546	41,624
2010 Census Population	67,296	116,111	18,267	39,702	44,947
Total Waste Generated 1999 (tons)	87,243	134,215	17,430	38,934	46,325
- Municipal	62,515	79,419	11,185	28,811	34,029
- Residual	13,367	27,561	1,606	7,614	7,200
- Sewage/Sludge	2,220	8,876	1,840	438	1,841
- Infectious/Chemotherapeutic	92	183	320	30	95
- Construction/Demolition	9,049	17,817	2,392	1,847	3,160
- Household Haz Waste	not listed	359	87	194	not listed
Recycled Tons	23,432	12,136	1,308	6,915	5,631

Since the five County Plans were not prepared by the same author or at the same time, it is difficult to prepare exact comparisons between Plans. For a summary of each individual Plan, see Appendix C.

1.2 Population

Data for establishing population projections was obtained from a variety of sources, as noted below. Since 2010 was a Federal Census year, the data shown below has been adjusted to reflect the latest population information. Data was then projected from the 2010 census and other available information to 2020 and beyond. For this exercise, projections to 2030 (or 10 years beyond the Plan coverage date) were estimated.

Table 1.2
Regional Census Data and Population Projections
Pennsylvania Population Projections: 2000-2030

	2000	2010	2020	2030	% Change	% Change	% Change
County	**Census**	**Census**	**Projection**	**Projection**	**2000-2010**	**2010-2020**	**2020-2030**
Columbia	64,151	67,296	69,988	72,787	4.9%	4.0%	4.0%
Lycoming	120,044	116,111	117,573	119,047	-3.3%	1.3%	1.3%
Montour	18,236	18,267	17,962	18,033	0.2%	-1.7%	0.4%
Snyder	37,546	39,702	41,886	44,190	5.7%	5.5%	5.5%
Union	41,624	44,947	48,453	50,633	8.0%	7.8%	4.5%
Region Total	**281,601**	**286,323**	**295,862**	**304,690**	**1.7%**	**3.3%**	**3.0%**

Notes: The above information was obtained from the Federal Census Data, with 2020 and 2030 projections based on County % estimates

1.3 Waste Tonnage Landfilled

Table 1.3-1 shows the amount of waste produced within the Region, and deposited in landfills. The totals have been subdivided into primary categories, with the totals obtained from the PADEP using data supplied by the Counties. These tonnages do not include material that was recycled, deposited at Captive Industrial Landfills (landfills owned by the generator of the waste and used solely for the disposal of that waste) or land applied (sewage sludge), just material disposed at municipal waste landfills.

Table 1.3-1
Landfilled Waste Material (tons per year) Generated within the Region

	MSW	Residual Waste	Sewage Sludge	ICW	C&D Waste	Ash	Asbestos	Total
2005	194,989	73,646	33,513	1,517	28,561	4,788	379	337,393
2006	204,452	69,474	25,988	1,676	36,166	4,564	345	342,665
2007	191,923	68,058	22,087	1,737	27,726	4,752	292	316,575
2008	194,370	58,007	22,426	1,969	27,514	3,211	824	308,320
2009	175,317	44,995	19,762	2,059	17,523	4,172	2,327	266,153
Avg	**192,210**	**62,836**	**24,755**	**1,792**	**27,498**	**4,297**	**833**	**314,221**

According to PADEP definitions, the MSW portion consists of waste generated by residences, businesses, institutions, government facilities, offices, cafeterias, shopping areas, and similar facilities. Construction and Demolition (C&D) waste includes "all solid waste resulting from the construction or demolition of buildings and other structures, including but not limited to, wood, plaster, metals, asphaltic substances, bricks, blocks and un-segregated concrete." It does not include waste from land clearing (trees, brush, stumps, and vegetative matter) and uncontaminated soil, rock, stone, gravel, bricks and blocks. ICW represents Infectious/Chemotherapeutic Waste, primarily from hospitals and clinics. Residual, Sewage Sludge and Ash waste material tonnages are typically reported by industries or treatment plants within the Region, and Asbestos tonnages are a special category generally associated with C&D waste. This Regional Solid Waste Plan deals primarily with the "municipal" portion of the waste stream. See Figure 1.3 on the following page for a tabular presentation of the various types of waste.

The following table shows the total tonnage of material, generated within the Region, and disposed in permitted municipal waste landfills over the past 9 year period, as obtained from a different PADEP database. This data was obtained directly from the landfill companies, but note that the totals below agree quite well with the totals shown in Table 1.3-1.

Table 1.3-2
Tons of Waste Material Landfilled within the Region

2001	2002	2003	2004	2005	2006	2007	2008	2009
347,540	314,876	318,193	334,181	337,184	342,665	316,575	308,320	266,155

A more comprehensive table showing the total Landfilled Waste Material tonnage generated within each County is shown in Appendix A (Table A.1). Further information regarding landfills used for disposal of Regional waste is included in Section 2.2.

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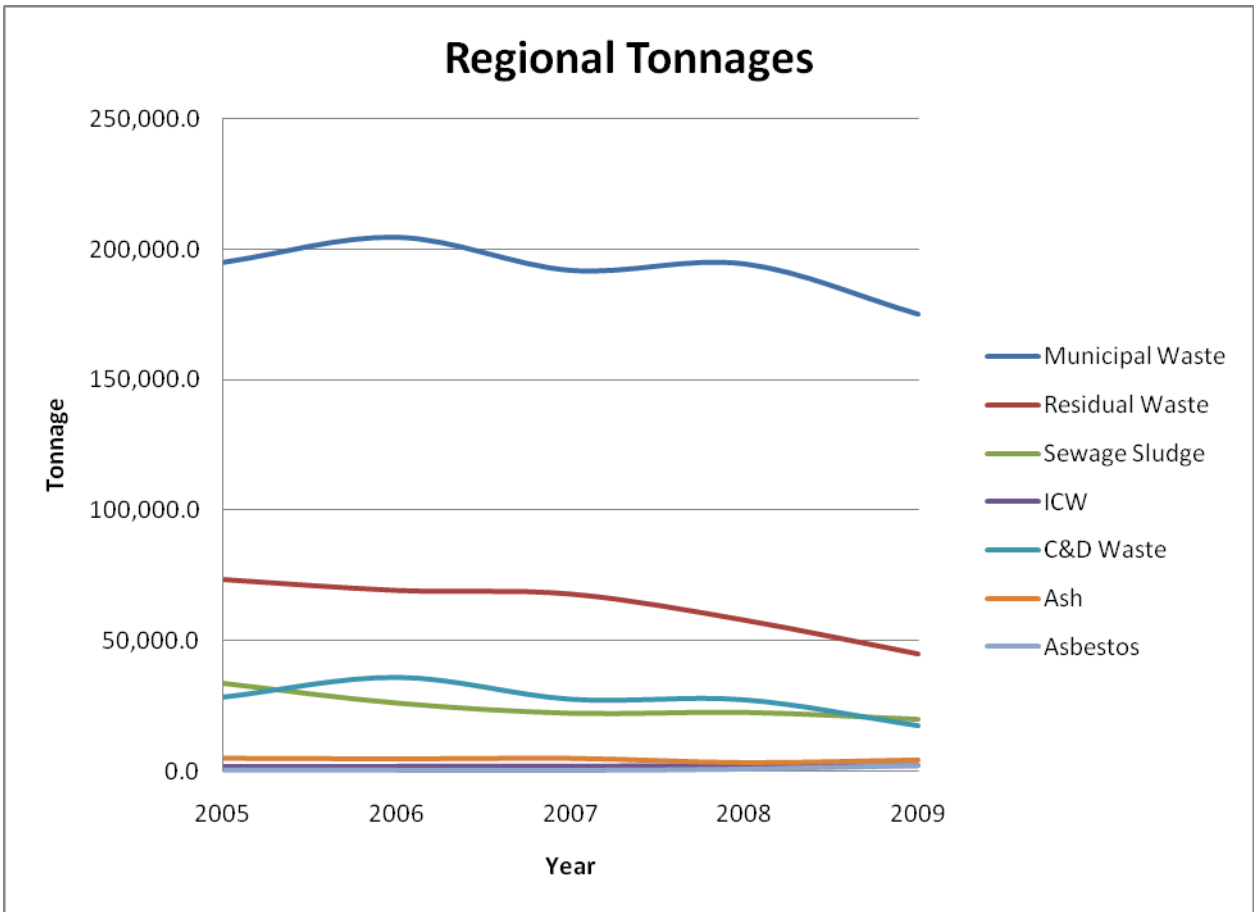
As shown on the following chart, the tonnage of material disposed at permitted municipal landfills within the Region has been steadily declining over the past 5 years, for nearly all categories assessed (although the totals for Ash and Asbestos are so small that small anomalies should be ignored). However, the average of the total landfilled waste is within 15% of the maximum for the 5-year period, indicating the trend is not dramatic. This is typical of National and State-wide trends noted over the past 10 years.



Note that the above discusses only that material that was generated in the Region, and disposed in permitted municipal landfills. The total waste generated within the Region is a function of this material, plus that portion of the waste that has been recycled, plus the portion that has been produced and disposed at industrial or agricultural facilities. For this Plan, we will focus on material disposed at permitted municipal waste landfills and that which is recycled. For a summary of the recycled materials, see Chapter 4, Section 4.1.

CHAPTER 2 – DESCRIPTION OF FACILITIES (per 25 Pa. Code. § 272.224)

2.1 Introduction

Currently, there are a total of 16 landfills and one waste-to-energy facility that have accepted at least 500 tons of municipal waste from the five-County Region between 2001 and 2009. One of the landfills (the Lycoming County Landfill) is located within the five-County Region, and the others are scattered throughout Pennsylvania. Exhibit 1 shows the location of disposal facilities that have accepted at least 500 tons of municipal waste from the Region since 2001. A complete list of those landfills (Table A.5), the tonnages of the various types of waste received from the region (Table A.1), and the average intakes from the Region for years 2001-2009 (Table A.4) are presented in Appendix A.

2.2 Current Facilities in the Region for Management of Waste and Recyclables

The facilities and infrastructure in or near the five-County Region that serve the waste management and recycling needs of the Region include a combination of landfills, transfer stations, drop-off sites and material recovery facilities (MRFs). These facilities are geographically located on Exhibits 1 and 2.

Table A.2 in Appendix A lists the municipal and non-municipal wastewater treatment plants in the Region that generate biosolids requiring disposal, and identifies the methods and locations of sludge disposal. Current disposal methods include land application on approved farm fields and disposal at landfills.

CHAPTER 3 – ESTIMATED FUTURE CAPACITY (per 25 Pa. Code. § 272.225)

3.1 Required Tonnage Capacity

The tonnage of waste material generated in the Region which will ultimately require disposal is a function of recycling percentages. Ignoring the waste disposed by industry and agriculture at captive facilities or on-farm (as previously discussed), the landfilled tonnage has been a function of the total "gross discards" minus recycled material tonnage. As noted in Section 4.1, the Region has recycled between 55,000 and 80,000 tons of material annually since 2005.

To determine the anticipated tonnage of material that will require disposal at an approved municipal landfill over the next 10 years, the projected total "gross discards" will need to be adjusted to account for the tons of recycled material anticipated over that same period.

In order to estimate the recycled tonnages, the 7 waste constituents discussed in Table 1.3-1 (MSW, residual, sewage sludge, ICW, C&D, ash and asbestos) must be reduced to reflect only those waste streams that typically have recycling components. Typically, the majority of recyclables come from the MSW and C&D waste streams, and the other 5 streams have no or minimal recycling. As such, only the MSW and C&D values for the 5-year period are used to compute the recycling percentages, as shown in the following (Table 3.1-1).

Table 3.1-1
Recycling Percentage

	MSW Tonnage	C&D Tonnage	MSW+C&D Tonnage	Recycled Tonnage	% Recycled
2005	194,989	27,498	222,487	80,267	36.1%
2006	204,452	36,166	240,618	69,727	29.0%
2007	191,923	27,726	219,649	55,051	25.1%
2008	194,370	27,514	221,884	65,739	29.6%
2009	175,317	17,523	192,840	69,116	35.8%
Avg	192,210	27,285	219,496	**67,980**	31.0%

The landfilled and recycled material can also be shown on a per capita basis using the population estimates for this same 5-year time period, as presented below (Table 3.1-2).

Table 3.1-2
Regional Per Capita Landfilled and Recycled Waste

	Regional Population	MSW+C&D Tonnage	MSW+C&D Tons/capita	Recycled Tonnage	Recycling tons/capita	MSW+C&D +Recycled	MSW+C&D +Recycling tons/capita
2005	285,376	222,487	0.78	80,267	0.28	302,754	1.06
2006	286,131	240,618	0.84	69,727	0.24	310,345	1.08
2007	286,886	219,649	0.77	55,051	0.19	274,700	0.96
2008	287,641	221,884	0.77	65,739	0.23	287,623	1.00
2009	288,396	192,840	0.67	69,116	0.24	261,956	0.91
Avg.	**286,886**	**219,496**	**0.77**	**67,980**	**0.24**	**287,476**	**1.00**

Using these average per capita estimates, and the projected regional populations (as shown in Table 1.2), it is possible to predict the tonnage of MSW and C&D that will require disposal in a municipal landfill.

As discussed above, the total tonnage of material that will require landfilling is a function of the "gross discards" within the region, minus the tons of material recycled. In order to predict this for future years, the following approach is used:

- assume that the total MSW+C&D+Recyclable tonnage will continue to be a function of the average per capita tonnage estimated in Table 3.1-2
- assume that the tonnage of landfilled material associated with the other five waste streams (residual, sewage sludge, ICW, ash and asbestos) will continue at the same average as shown in Table 3.1-1 for the next ten years – these will be referred to in the following section as "5 waste streams" (note that the data collected do not show a correlation between population and these 5 waste streams – as such, and given that each of these waste streams showed a steady drop in tonnage, this would appear to be a conservative assumption) Each of these waste streams (other than sewage sludge) are more closely linked to industrial activities than municipal, so are not so closely linked to population changes. While sewage sludge would seem to be linked to population, the data showed a steady decline in tonnage (from 33,513 tons in 2005 to 19,762 tons in 2009) which does not correspond to the 1.7% increase in population over the 4 year data period. With that in mind, it was conservatively assumed that the average total of these 5 waste streams will continue for the next 20 years, in spite of the data which shows a steady drop.
- the sum of these items will represent the total "gross discards" for the region
- the recycling tonnage will continue at the same average per capita rate as computed in Table 3.1-2
- the projected annual landfill tonnage will equal the "gross discards" minus the recycled tonnage

Table 3.1-3 estimates the landfill disposal tonnage capacity needed by the Region between 2010 and 2030.

Table 3.1-3
Projected Regional Per Capita Landfilled/Recycled Waste

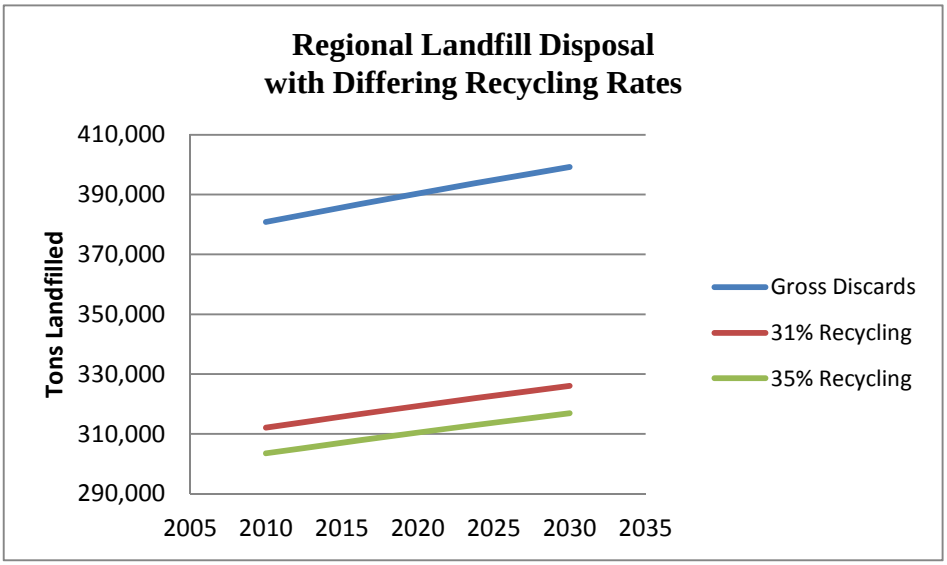
	Population	M+C+R tons/capita	M+C+R tonnage	5 waste streams tonnage	"Gross Discards"	Recycling tons/capita	Recycled tons	Landfilled Tons
2010	286,323	1.00	286,323	94,513	380,836	0.24	68,718	312,118
2020	295,862	1.00	295,862	94,513	390,375	0.24	71,007	319,368
2030	304,690	1.00	304,690	94,513	399,203	0.24	73,126	326,077

Please note that the goal for the Region is to continue to increase recyclables toward the PADEP goal of 35%, and if the average recycling rate were to increase during this 10-year period, the total tonnage of landfilled material will decrease. As an example, if the recycling percentage were to increase from the Table 3.1-1 average of 31.0% of the MSW and C&D waste to 35.0%, the above table would change to that shown in Table 3.1-4, below. (Note that if 0.24 tons/capita represents 31.0% of the MSW/C&D, then 35% would represent roughly 0.27 tons/capita recycled)

Table 3.1-4
Projected Regional Per Capita Landfilled/Recycled Waste

	Population	M+C+R tons/capita	M+C+R tonnage	5 waste streams tonnage	"Gross Discards"	Recycling tons/capita	Recycled tons	Landfilled Tons
2010	286,323	1.00	286,323	94,513	380,836	0.27	77,307	303,529
2020	295,862	1.00	295,862	94,513	390,375	0.27	79,883	310,492
2030	304,690	1.00	304,690	94,513	399,203	0.27	82,266	316,937

The following chart shows the regional landfill disposal tonnages based on the recycling percentages presented in Tables 3.1-3 and 3.1-4, above. The “Gross Discards” total is shown as well for perspective, representing the sum of the landfilled and recycling tonnages.



3.2 Other Waste Streams

Targeted surveys were sent out in the Fall of 2010 to estimate the amount of septage waste, sludge from wastewater and water treatment plants, and infectious and chemotherapeutic waste generated in the Region. Summaries of these surveys are included as attachments in Appendix A.

Follow-up phone calls were also made to determine correct addresses, and to supplement responses. Calls were also made to knowledgeable parties in order to cross check information.

The tonnages shown in Table 1.3-1 for all waste streams have been reported by the PADEP from 2005 – 2009 under the Regional waste destination reports. Survey responses were compared to these reported tonnages; however, the totals were not directly relatable since some were reported in gallons of waste and others were reported as tons of sludge.

Biosolids/Sewage Sludge - Results from the plants which returned surveys are shown in the table labeled **A.2 Water and Wastewater Surveys** in Appendix A. A summary of total Biosolids/Sewage Sludge reported by the PADEP for the five-County Region is shown below:

Table 3.2-1
Biosolids / Sewage Sludge (tons/year)

2005	2006	2007	2008	2009
33,513	25,988	22,087	22,426	19,762

Infectious/Chemotherapeutic Waste - Results from the hospitals and care centers which returned surveys are shown in the table labeled **Table A.3 Hospital Surveys** in Appendix A. A summary of total Infectious/Chemotherapeutic Waste reported by the PADEP for the five-County Region is shown below:

Table 3.2-2
Infectious / Chemotherapeutic Waste (tons/year)

2005	2006	2007	2008	2009
1,517	1,676	1,737	1,969	2,059

CHAPTER 4 – DESCRIPTION OF RECYCLEABLE MATERIALS (per 25 Pa. Code. § 272.226)

4.1 Amounts of Materials Recycled

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:

1. **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.
2. **Residential Drop-Off Programs** – from reports submitted to the municipality or county by the recycling facility that receives and processes the material.
3. **Commercial/Institutional Programs** - from each individual establishment which had initiated a recycling program or from the private sector firm providing the recycling service.

Some of the residential recycling programs (primarily those in Mandated Communities, as further defined in Section 4.2) are directly controlled by municipal governments, thus assuring that the amount reported is fairly representative of the amount of material actually recycled. Others rely primarily on community drop-off locations, and the reports are provided mainly by the recycling facilities receiving the material, which again are considered very accurate. (See a further discussion in Tables B.2 through B.6, in Appendix B, which discuss each municipal program.) However, 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 (see Section 7.2—Implementing Entity Identification-Local Governments).

The previous Solid Waste Management Plans developed by each of the five Counties in the Region included descriptions of recycled materials, and included a discussion of types and quantities of materials recycled, as well as a history of recycling operations prior to 2001. They also discussed alternative commercial recycling processing facilities within the region. In these Plans, each County addressed recycling in a different manner (county-owned facility, as in Lycoming County; municipal facilities, as in Columbia and Union Counties; or reliance on the private sector, such as in Montour, and Snyder Counties).

In the intervening years (since publication of the previous County plans), there have been a few alterations to those plans. While Lycoming County still relies on the County-owned Lycoming County Materials Recovery Facility (LCMRF) to process material, the LCMRF now also provides hauling and processing for much of Union and Snyder Counties. JAWS Recycling (a private waste company) hauls and processes some

curbside and drop–off recyclable material in Montour County, but also provides curbside collection for some municipalities and commercial establishments in other counties, such as Columbia. The Town of Bloomsburg processes material from their own municipality, as well as from surrounding areas, with anyone welcome to use their drop-off facilities. Team Green Recycling offers services in Berwick, Columbia Co. For the 2012 Plan Update, the Region has decided to continue with this approach, to pursue collection and recycling services through a combination of County- or municipally-owned facilities, and the private sector.

The types and amounts of materials recycled during the five year period from 2005 to 2009 are presented in Appendix B in three different ways: by individual County and as a summary across the Region (see Table B.7), and as several charts showing recycling trends (see 5 Charts labeled B.8).

A summary of that information is shown in Table 4.1-1, 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 of paper, office paper, OCC and chipboard, and newsprint. Other recyclable materials are summarized below in the "non-Act 101 materials" category.

TABLE 4.1-1
REGIONAL MATERIALS RECYCLED (TONS)
2005-2009

Type	2005	2006	2007	2008	2009
Act 101 Materials	43,804.6	47,546.0	39,927.2	46,052.0	45,741.4
Non-Act 101 Materials	36,462.9	22,180.9	15,124.0	19,687.3	23,374.2
Recycling Totals	80,267.5	69,726.9	55,051.2	65,739.3	69,115.6

The table shows a fluctuation in materials recycled throughout the past five years, with 2005 having the highest reported recycling tonnages in this time frame, and 2007 having the lowest tonnages reported. Other years are fairly consistent, with small fluctuations. The table also shows that the Region has consistently recycled materials beyond those listed in Act 101, with the largest portion of this coming from Wood Waste (representing nearly 28% of the total recyclable tonnages). (For a breakdown of all recycled materials, by County, as well as just those identified as Act 101 recyclables, see Tables B.7 and B.9 in Appendix B)

Using the data obtained from the PADEP website (see Table 1.3-1, in Section 1.3, above), the amount of municipal waste disposed in landfills between 2005 and 2009 varied from 266,153 tons (in 2009) to 342,665 tons (in 2006). However, with respect to recycling, the waste streams that offer a primary opportunity for recycling are typically considered MSW and C&D. Over this same period, these two waste streams had a

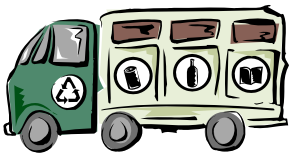
minimum and maximum tonnage of 192,840 (2009) and 240,618 (2006) tons. We can assume that the total population responsible for generation of MSW and C&D material is the average of that in 2000 and in 2010, or 283,962 people (see Table 1.2, in Section 1.2, above). This results in a municipal waste landfill disposal rate range of 0.85 to 0.68 tons per person per year, with an average of 0.77 over the 5-year span. (See Section 1.4 for a more detailed discussion of projected tonnages.)

As presented in Table 3.1-2, the recycling rate range (as a function of the MSW and C&D waste streams) in the Region can be computed to be between 0.19 tons per person per year in 2007, and 0.28 tons per person per year in 2005, with an average of 0.24 over the 5-year span.

Based on these same figures, and as defined in Table 3.1-1, the percentage of material recycled versus the landfilled MSW and C&D waste streams ranged from:

- 25.1% in 2007 (55,051 tons recycled versus 219,649 tons landfilled) to
- 36.1% in 2005 (80,267 tons recycled versus 222,487 tons landfilled).
- An average of 31.0% was noted for the 5-year period.

Although these amounts are significant, showing a substantial effort placed on the Region's recycling programs, PADEP no longer publishes recycling rates since they are difficult to compare across counties, and may present an inaccurate picture of what is actually happening in an area. For example: both plastic and glass bottles have become lighter in recent years; newspaper advertising fluctuates, causing variations in tonnages collected; and there is an increased emphasis on special programs such as electronics collections, tires, household hazardous waste, and other hard-to-recycle items, which may weigh less but contain larger amounts of toxic materials. In addition, recycling rates include items which were recycled prior to the passage of Act 101, or without any effort on behalf of the municipal recycling programs, such as metals, cardboard and other commercial materials from large generators, which are typically under-reported.



Estimates from the Region show that all of the Act 101 designated materials are collected in each county. Newspapers, magazines and catalogs, glass bottles and jars, plastic bottles, and aluminum and steel cans, along with various types of yard waste, are all collected both through curbside and drop-off programs.

In addition, the Region contains a small number of Act 101 mandated communities: four in Lycoming, two in Columbia, two in Union, none in Montour, and one in Snyder. In addition, two municipalities (Montoursville in Lycoming County and Shamokin Dam in Snyder County) do not meet the Act 101 criteria but act as mandated municipalities. There is also municipally-mandated curbside collection in two municipalities in Montour County, and thirteen communities in Lycoming County. However, many of the curbside programs collect a small number of materials, with only two Montour and two Columbia County communities, along with one in Union County, collecting newspaper curbside, an item which adds significant weight to materials collected. (See a map showing the location of curbside recycling facilities in Exhibit 3.)

It is always a challenge to increase recycling, especially in areas of low population density. Much of the recycling in the region is done through a well-managed system of drop-off facilities, many of them staffed/operated by county or municipal government, often through a cooperative effort between the two. These drop-off facilities accept a wide variety of materials including; three colors of glass bottles, #1 and #2 plastic bottles, other types of plastics, newspapers and magazines, aluminum and steel cans, yard waste, and office paper and unwanted mail. Recycling processors comment on the high quality of incoming material, both curbside and drop-off. What the region may lack in numbers of curbside programs, it more than offsets with the high quality of collected recyclables from drop-offs. It will remain a constant challenge to maintain these same high standards as the amount of collected material increases, both through increased curbside and drop-off programs, and through the possible addition of "dual-stream" recycling.

(For the purposes of this document, "dual-stream recycling" is defined as the collection of a defined list of recyclable commodities, with those materials being separated into two distinct groups. In this case, dual-stream would normally encompass recyclable containers (aluminum and bimetal cans, and plastic bottles) as Stream A (glass containers are sometimes included in this component of dual-stream programs); and fiber (newsprint, office paper, mixed paper, magazines, unsoiled cardboard and chipboard) as Stream B. These two streams of material would then be further sorted at a recyclable materials recovery facility (MRF). This is an alternative to traditional "source-separated" recycling collection (where the generator of the waste must sort each material type individually in separate containers) and "single-stream" recycling collection (where all recyclable materials on the list of accepted commodities are combined in one container). Dual-stream collections could be either curbside or at drop-off locations, and other recyclable materials that are not included on the lists for curbside recyclables collection under any of these systems, would be collected at designated drop-off locations.)

In addition, some of the counties hold special collections for electronics, tires, textiles, and even unwanted greeting cards, and medical equipment (Snyder – see Section 4.2), at various times throughout the year. They also provide education on recycling issues through websites, and other educational resources, notifying their residents when and where they can dispose of hard-to-recycle items throughout the year, such as motor oil, electronics, antifreeze, and other items.

Although all of these ideas may not work in each county, there needs to be a greater emphasis on cooperation, with an analysis of what can realistically be achieved. With decreased grant money to spend on programs, each county must decide what its achievable goals are, and take incremental steps toward realizing the desired end result.

Specific recommendations for future recycling efforts are included in Chapter 5.

4.2 Municipal Recycling Programs

For the most part, the Region has done a commendable job in following the mandates of Pennsylvania's Act 101 which requires curbside recycling by residents, businesses and institutions in Pennsylvania's larger communities.

Within the Region, there are a total of 132 municipalities (Columbia 34, Lycoming 52, Montour 11, Snyder 21, Union 14). (See Tables B.2 through B.6 in Appendix B.) Of these, only 10 municipalities have been designated as Mandated Recycling Communities, based on the criteria contained in Act 101, so much of the Region's recycling is done by non-mandated communities. The Act states that communities with populations of at least 10,000, or communities with populations between 5,000 and 10,000 and a population density greater than 300 persons per square mile, must implement curbside recycling programs. Each of the designated mandated municipalities has well defined recycling plans in place, often with a combination of curbside and drop-off programs, as well as sites for composting or grinding wood waste and ward waste.

In addition, most of the smaller communities in the Region have access to drop-off site recycling programs, and two non-mandated communities in Montour County (Danville and Mahoning Township) provide curbside collection. Lycoming County offers curbside recycling to 13 communities, 5 of them Mandated. Along with providing for recycling drop-off within their own community, there are also 65 recycling drop-off centers located throughout the region, including: 3 in Montour County (including a drop-off at the JAWS Recycling Center), 28 in Lycoming County, 9 in Snyder County, 8 in Union County, and 17 in Columbia County. Although some of the locations accept recyclables from only their residents, many will take material from any customer. In addition, the materials collected vary from location to location.

This region includes the Town of Bloomsburg, one of the Commonwealth's oldest and most successful recycling programs. Bloomsburg's first curbside collection began in 1977, and became mandatory in 1983, five years before the passage of Act 101. Their drop-off site accepts material from anyone wishing to use the facility.

The municipalities within the five-County Region have fulfilled the Act 101 yard waste collection requirements, with all mandated, and some non-mandated communities, operating compost sites, as well as sites for grinding wood and yard waste.

The Region's residents recycled over 69,000 tons of material in 2009, with over 45,000 tons comprised of Act 101 material, including commingled containers, paper products, and yard waste.

Each County within the Region educates its residents in different ways. Some maintain an internet website with important information regarding solid waste management throughout the county, as well as providing specific information for each municipality. For those Counties that do provide a website, a link to these recycling information locations is as shown below:

Lycoming County, at:
http://www.lyco.org/Home/ResourceManagementServices/Recycling.aspx

Snyder County, at:
http://www.snydercounty.org/Pages/Recycling.aspx

Union County, at:
http://www.unioncountypa.org/residents/government/human/recycling/www.asp

Town of Bloomsburg Recycling Information:
http://www.bloomsburgpa.org/recycle.htm

A summary spreadsheet showing the current Municipal Waste Collection and Recycling Programs is included in Tables B.2 through B.6 in Appendix B, and a map of the recycling facilities throughout the Region is shown in Exhibits 2, 3 and 4.

4.3 County Recycling Programs

The following is a summary of the programs currently in place in each County:

Columbia County – Columbia County has been hit hard by the loss of the landfill administrative fee, which previously funded some County and municipal programs. For example, Columbia County experienced a loss of $177,501.03 (actual 2003) and $120,000 (estimated 2004) as a result of eliminating the Administrative Fee. By 2004, 13 municipalities had abandoned their recycling efforts due to the lack of funding. (For a detailed explanation of Administrative Fees and the court decisions that limited the County's ability to collect Fees, see Section 5.2.) A 2004 Columbia County annual report indicated that 13 municipalities abandoned recycling programs when they lost this source of revenue. With the fee, the County was able to provide municipalities with direct revenue to operate recycling services and drop-offs; therefore, finding a mechanism to replace the fee on trash is important for the County to restore prior levels of service.

Currently, the County does not directly operate any recycling programs but does provide advice and technical assistance to their municipalities, along with some educational programs. Many municipalities in the County, however, have maintained drop-off programs. There are 16 communities with recycling drop-off sites, and 8 with compost sites, along with two private compost operations. The Town of Bloomsburg accepts a wide variety of materials at its recycling center on Patterson Drive, from anyone in the County. (See section 6.1 for a more detailed description of the Bloomsburg facility.) Team Green Recycling, a private recycling company, offers services in Berwick, Columbia Co.

Lycoming County – The Lycoming County Resource Management Services (LCRMS) offers a wide variety of services to its County residents, as well as to residents in surrounding counties. (See section 6.1 for a more detailed description of the LCRMS facility and operations.)

Montour County – Montour County provides assistance to its communities concerning recycling, composting and solid waste management whenever possible. However, it does not provide any County sponsored special programs or drop-off collections, although JAWS Recycling, Danville, does offer a drop-off for many recyclable items. (See section 6.1 for a more detailed description of the JAWS facility.) The Montour County communities of Danville and Mahoning Twp receive credit for the tonnage brought to the drop-off site on designated days, although anyone may use the facility during its hours of operation. The County recycling coordinator provides education to schools and community groups through a variety of programs and outreach programs.

Snyder County – Snyder County provides its residents with a number of County-sponsored drop-off recycling locations, as well as providing recycling education and a special event collection for "difficult-to-recycle" materials. There is one materials processing facility in the County (ABC Recycling, which is a scrap dealer), and the Snyder County Solid Waste Management Authority provides assistance to its municipalities to facilitate collection. Through a cooperative effort between Snyder County and its municipalities, Snyder County residents are given various options for the collection of recyclables. The majority of the County is served by the LCRMS, although McClure Borough works with Pheasant Valley Recycling, and Spring Township works with Cocolamus Creek Disposal.

There are 21 municipalities in Snyder County and only Selinsgrove Borough (with a population of 5,432 in 2009) is mandated to recycle. Selinsgrove provides curbside recycling, as well as composting services, to its residents. The majority of the County's recycling is done through a system of drop-offs at various locations. There is limited recycling available in the western portion of the County, as the population density is sparse. McClure Borough and Spring Township have programs in place; however, many of the residents can drop off recyclables at more centrally located facilities.

There are 4 recycling drop-off locations operated as a cooperative effort between the municipalities and the Snyder County Solid Waste Management Authority (SWMA). These are located in Kreamer (Middlecreek Township), Middleburg/Franklin Township, Penn Township, and Port Treverton (Chapman and Union Townships). They are hauled by the LCRMS at a nominal cost to Snyder County and its municipalities. There are also other drop-off centers located throughout the County which are not operated with SWMA assistance (beyond educational support for residents and municipal officials), including those in; Monroe Twp, Selinsgrove Boro, Spring Twp (in conjunction with Adams, West Beaver, and Beavertown Boro), Shamokin Dam, and at the Selinsgrove Center (a state facility which accepts various paper products for recycling).

There are various composting sites located in Snyder County, including sites operated by Penn Township, which will accept material from any County resident. Selinsgrove operates a composting site for the use of its residents, only. Two private landscapers allow residents to drop off brush and yard waste: Shaffer Landscapes Inc, (Middleburg Borough) and Hawk's Landscaping and Nursery (Monroe Township). Mahlon Boop on Route 204 offers residents a site to drop-off brush and yard waste. As with recycling

collection and drop-off, it is much easier for residents in the eastern portion of the County to deliver material to composting facilities than for those who live in the western section.

Snyder County assists its residents by offering a two day spring-special collection event in Eastern Snyder County (Monroe Township), and in western Snyder County at the Beavertown Carnival grounds. There is no charge for most items accepted, except for an historic $10 fee for televisions, copiers, and any appliance containing freon. During this collection event, residents may bring most major appliances, computers and electronics; metal; clothing and textiles; crutches, canes, walkers and wheelchairs (given to earthquake victims); and various types of books. This event has been held since 2003 and has serviced at least 500 vehicles per year. Because of its record of success, the County has contracted to offer a household hazardous waste collection in 2011.

The Snyder County Solid Waste Authority would like to increase recycling drop-off and composting locations, and add materials at its current drop-off sites. They would also like to assist schools with recycling efforts. More funds will be needed to accomplish these goals. They also need to work out details for an increased collection schedule with the LCRMS, which would provide transportation to additional Snyder County permanent drop-off sites. It is cost-prohibitive to pull partially full containers from one site to another.

The County recently received a PADEP grant in excess of $300,000, and the County Commissioners hope to use this money to open several new, and improve other recycling drop-off facilities throughout Snyder County. The Commissioners are contemplating an expanded recycling center in Penn Township. Penn Township was chosen because it is strategically located and could be used to consolidate material for transfer to LCRMS or another processing center.

Union County – Union County has an excellent system of drop-offs, with Lewisburg Borough and East Buffalo Township having curbside collection. However, since curbside collection includes only 5 items in Lewisburg (aluminum cans, three colors of glass containers, and newspaper), and 4 items in East Buffalo (aluminum cans and three colors of glass containers), most of the recycling in the County is done through the drop-offs. The 8 drop-offs are well maintained, with excellent signage, and are conveniently located in the following areas: East Buffalo Township, Kelly Township, Lewisburg Borough, Mifflinburg Borough, New Berlin Borough, Union Township, West End Recycling, and White Deer Township.

In addition, Lewisburg Borough, which provides municipal collection for both trash and recycling, also operates a yard waste drop-off where its residents can bring material during scheduled hours. Several other municipalities have arranged for yard waste collection and drop-off as well: East Buffalo Township has implemented leaf and yard waste collection programs; Mifflinburg Borough provides leaf collection; Union

Township has a brush collection program for their residents; and New Berlin Borough collects yard waste each spring from its residents.

All drop-off containers in the County are pulled by LCRMS to their recycling center. Since many of the sites are either staffed or have security cameras, the material collected is of high quality. The permanent drop-off sites allow the LCRMS to haul high volumes of materials efficiently to the processing center. The drop-off locations all accept the same materials, including; aluminum and bi-metal cans, corrugated cardboard, chip board and junk mail (at some but not all of the drop-offs), glass containers, newspapers and magazines, and #1 and #2 plastic bottles. In addition, Lewisburg Borough, Mifflinburg Borough, and East Buffalo, Kelly and Union Townships accept office paper. Lewisburg Borough also accepts CFL bulbs and tubes.

Union County would like to accept more items at the drop-off if the cost could be kept minimal. It has already expanded drop-off collections to include chip-board in Lewisburg Borough, East Buffalo and Kelly Townships, with others to follow in the near future. It would also like to increase special collections for a variety of materials as markets become available. On its website, it posts locations for used oil, antifreeze, and battery collection, along with other special collections which might be held throughout the year in revolving locations in the County.

Union County holds very successful two day special collection events twice each year (in the spring and fall) at revolving locations around the county. Participants may bring a variety of materials including appliances, most types of metals, electronics, computers, clothing and textiles, and items such as lawnmowers, gas grills and tanks, and tire rims. The collection is free for most materials, and any freon containing appliances. The local municipality partners with the County on these events by providing the site and volunteers. The County estimates that between 150 and 200 residents attend each event. The next event will be held over two days in May 2012.

The County provides a recycling guide and pamphlet/magnet showing the location of County recycling facilities. (See items B.12 and B.13 in Appendix B)

4.4 Changes in Act 101 and Impact of These Changes to the Region

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). (Additional amendments were being considered in the PA House and Senate, but were not available in final form at the time of publication of this Plan Update.) This amendment created a series of changes (including extension of the sunset date for the PADEP recycling fee to January 1, 2012). 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. In addition, Act 101 was reauthorized in May of 2010, and the sunset date for the PADEP administrative fees

was extended until 2020. (The PADEP administrative fee of $2/ton of waste disposed or processed is used to establish a grant program (the Recycling Fund) for recycling, planning and related purposes. This fee was set to expire in April of 2011, and no means of continuing to fund recycling grant programs had been established.)

Under Section 2(d)(4), the amendment noted that all mandated municipalities and any non-mandated municipality receiving more than $10,000 in funding must demonstrate to the Department'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).", and Section 2(e) says 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 funding awarded through Section 904 to mandated municipalities throughout the Commonwealth in the last 2 years. It is felt that this reduction in funding awards may be, in part, the result of a lack of municipal personnel to provide the services and prepare the documentation necessary to support the requirements of the Act. With that in mind, it is recommended that each County evaluate the role of their solid waste and recycling personnel, and consider expansion of their responsibilities to assist mandated (and non-mandated) municipalities with grant applications and Act 140 compliance issues.

Specifically, it appears that the principal issues associated with non-compliance have revolved around the following, each of which may arguably be best addressed with assistance from the appropriate County recycling and/or solid waste staff:

- A lack of commercial recycling and periodic public education
- A lack of commercial recycling ordinances
- A lack of an enforcement program

4.5 Costs Associated with Recycling

Other than the Town of Bloomsburg, none of the other municipalities with recycling collection programs market their own recyclables, so an increase in volume will not provide a significant cost benefit to the municipality, although it may benefit the resident if the hauler offers a "pay as you throw" trash collection option, where the resident or business pays a fee per bag/can for only the waste they produce.

Most of the collection and processing/sale of recycled items are conducted by the LCRMS, JAWS Recycling, or the Town of Bloomsburg, or by contracted private haulers. Detailed costs for collection and processing, as well as potential recycling revenues are not readily available. However, costs and potential revenues have been estimated as part of the effort to establish Recycling Sustainability Needs for the Region. These estimates are discussed in more detail in Section 5.25, and a summary Table discussing "sustainability needs" is defined (description and estimated annual cost) in Exhibit 1 of the SOI (see Appendix D).

Municipal cost avoidance on recycled waste would most likely be offset by additional costs associated with increased collection, and any specific cost avoidance benefits would most likely be associated with commercial businesses, or by residents if the hauler instituted a fee per bag/can, or limited service option.

Minimal revenue is generated at special collections in order to fund other programs where no fees are collected. New recycling programs are structured as partnerships to ensure that the hauler generates sufficient revenue to continue the program.

The LCRMS generates revenue associated with the landfill and recycling facility, but this revenue is used to partially offset the costs associated with operation of the facility.

Columbia County was forced to discontinue 13 municipal recycling programs when it experienced revenue shortfalls from the loss of the landfill administrative fee. Snyder County closed recycling programs in the western region, discontinued some special collections and educational programs, and cut back on staff time. The other regional counties could use additional revenue to cover operating costs, pay staff, and, increase programs. Replacing the revenues previously generated through a fee on landfilled trash would assist counties in many ways including:

- Increased special collections
- Increased hours and materials accepted at drop-off locations
- Explore possibility of additional, permanent drop-off sites
- Fund regional education outreach programs such as websites and brochures
- Provide funding to municipal programs which were reduced or eliminated as a result of past revenue shortfalls, including the elimination of the administrative fee.

4.6 Future Recycling Goals and Efforts

The five-County Region not only extends over a significant geographic area (nearly 2,500 square miles), but also includes a wide variety of socio-economic conditions. Nevertheless, there are similarities among the counties:

- Each county has a central location with a higher population density; supported by smaller, more rural communities. People come to these central locations on a regular basis to shop, attend cultural and social events.
- The area also includes several colleges and universities within its boundaries.
- The Geisinger Medical Center, one of the Commonwealth's largest medical facilities, is also centrally located within the Region.
- The Region also has several large manufacturing and retail centers.

The Region has made great strides in recycling and composting. As defined in Table 3.1-1, the percentage of material recycled versus the landfilled MSW and C&D waste streams ranged from:

- 25.1% in 2007 (55,051 tons recycled versus 219,649 tons landfilled) to
- 36.1% in 2005 (80,267 tons recycled versus 222,487 tons landfilled).
- An average of 31.0% was noted for the 5-year period.

However, twenty years after the passage of Act 101, there is still room for improvement. In order to continue to expand the Region's level of success toward the goal of achieving 35% recycling recovery, it is important to reassess strengths and weaknesses, and plan for future improvements. Specific recommendations for future recycling efforts are further discussed in Chapter 5.

CHAPTER 5 – SELECTION AND JUSTIFICATION OF MUNICIPAL WASTE MANAGEMENT PROGRAM (per 25 Pa. Code. § 272.227)

The purpose of this chapter is to describe the process used to select and recommend components to the overall waste management system for Columbia, Lycoming, Montour, Snyder and Union Counties, and to provide justification for the selections and recommendations. The Counties 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 10 years. This chapter examines processing and disposal alternatives for municipal waste from all five counties; determines the compatibility of each alternative with the existing components of the waste and recycling systems in the Region; and assesses the feasibility of using those alternatives to help meet the future needs of the Region.

5.1 Background

Columbia, Lycoming, Montour, Snyder and Union Counties currently generate a total of approximately 266,000 tons of MSW each year (all categories, after recycling). Approximately 87% of this total is disposed of at the Lycoming County Landfill. The remaining 13% of the waste generated within these five counties is disposed of at 14 landfills which span the state of Pennsylvania (see Exhibit 1). It is noted that Northumberland County, geographically located just south of the region covered by this plan, currently disposes of an additional 60,000+/- tons per year of MSW at the Lycoming County Landfill. This represents about two-thirds of the disposed MSW from Northumberland County. Northumberland County has conducted its own plan update process, separate from this five-County Regional Plan preparation; it recently took action to agree to include the Lycoming County Landfill as a designated disposal site in its new Plan Update.

Currently, waste haulers that operate within the five-County Region 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 Plan, from which the waste was generated. The landfills designated to accept waste from the five Counties as listed in the most recent solid waste management plan updates for each county (circa 1999/2000) included: Lycoming County Landfill, Pine Grove Landfill, Dauphin Meadows Landfill, Mountain View Landfill, Phoenix Resources C&D Landfill, Superior Greentree Landfill, Alliance Sanitary Landfill, Cumberland County Landfill, Sandy Run Landfill, Mosteller Landfill, Shade Landfill, Laurel Highlands Landfill, White Pines Residual Waste Landfill and the Wayne Township (Clinton County) Landfill. Additionally, according to waste destination reports from PADEP, the Mifflin County Solid Waste Authority (Barner) Landfill, Southern Alleghenies Landfill, IESI Blue Ridge Landfill, Lancaster County Resource Recovery Facility, LCSWMA Frey Farm Landfill, Modern Landfill, Bradford County Landfill, Keystone Sanitary Landfill, County Landfill and Commonwealth Environmental Systems Landfill all accepted waste (at some point) from the five-County Region between 2001 and 2009. Since these previous plan updates were written, the Mifflin County Solid Waste Authority Landfill, the Dauphin

Meadows Landfill and the County Landfill have all closed. The Pine Grove Landfill is projected to reach its useful life between 2012 and 2013. Table A.4 in Appendix A lists the landfills which currently accept waste from the five Counties as well as the percentage of waste each landfill accepts. Table A.5 breaks these totals down on an annual basis from 2001 to 2009.

Chapter 4 examined options for collecting and processing recyclable materials and organic wastes. Based on the recommended County recycling strategy, the quantity of waste expected to be diverted from disposal due to recycling and composting was estimated and deducted from gross waste generation estimates. Table A.1 in Appendix A depicts net (after recycling) waste quantities for the Counties, as was demonstrated in Tables 1.3-1 and 1.3-2 in Chapter 1, Section 1.3. Table 3.1-3 in Chapter 3, Section 3.1 reveals that by 2020, approximately 319,400 tons (about 1,225 tons per day, 5 days per week basis) of solid waste (including all 5 waste streams discussed in Section 1.3) will require disposal from the Region. Excluding Residual Waste, which is generally disposed directly by the Generator (so the Counties do not typically have to address), the total tonnage by 2020 is expected to be roughly 258,500 tons (or about 992 tons per day, 5 days per week basis).

Section 5.4 of this chapter describes the current marketplace conditions of the region for MSW management. Section 5.5 provides a summary assessment of existing waste and recycling management facilities in the Region, and identifies potential underserved areas. Section 5.6 describes the technologies that can be employed to process and/or dispose of this waste. Section 5.7 assesses the compatibility of each of these alternatives with the region's needs and existing facilities. Sections 5.8 through 5.11 present recommended waste collection, transportation and processing/disposal strategies for the five-County Region. This section includes discussions on waste collection, waste reduction and recycling, transportation, disposal, construction and demolition waste, special waste handling and other related topics.

Chapter 8 briefly addresses the current method for handling of special wastes as well as potential future methods that may be developed by the five-County Region. Chapter 5 presents the waste and recycling system recommendations, as well as the process recommended to be used to secure waste disposal capacity for Regional wastes over the next 10 years. A listing of the disposal facilities expected to be designated for disposal of the five-County Region's municipal wastes is presented in Section 5.23, and a procedure to add additional disposal facilities to the plan in the future is presented in Section 5.26.

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 this five-County Region. 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) are typically classified as residual waste. These wastes may impact the available capacity of municipal waste landfills that service the five-County Region, should those residual wastes displace landfill capacity that is needed for municipal waste disposal. A number of landfills in (or near) the five-County Region currently accept Marcellus drill residuals, including the Clinton County Landfill, the Bradford County (Northern Tier SWA) Landfill, and the White Pines Landfill (a residual waste landfill). Additionally, there are some landfills who may take Marcellus Shale in the future, i.e. Phoenix Resources, Inc. Landfill in Tioga County. The Lycoming County Landfill has indicated that they do not intend to accept Marcellus residuals at its landfill site over the next 10 years.

As the Marcellus Shale drilling industry is still in its infancy, it is expected to grow several-fold over the next five years, and will be in operation for decades. The potential impact of this industry's residuals on available municipal waste disposal capacity in this region cannot be ignored in this plan. Contracts for long-term disposal capacity of municipal waste generated in the five-County Region need to confirm that municipal waste disposal capacity is "set aside" for the five-County Region's use, and will not be negatively impacted by Marcellus Shale residuals disposal needs. This fact underscores the need for the five-County Region to secure long-term MSW disposal capacity as part of this planning process.

Open (Illegal) Dumping Considerations

Issues and Causes: Like most counties in Pennsylvania, illegal dumping is prevalent in rural areas of this Region. 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 the counties 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 those in the five-County Region, may have a more severe problem because of the large number of municipalities that manage residential waste through individual subscription systems. In these municipalities, some residents choose to dump their waste illegally rather than pay for 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 counties, thus forcing residents to transport 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.

PA CleanWays and Surveys: PA CleanWays is a non-profit organization that works to eliminate illegal dumping and littering. PA CleanWays began surveying illegal dump sites in 2005. The company'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 roadsides in illegal dumps, and are extremely toxic.

Environmentally, 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 parks and state forests, parks, and game lands.

Economically, illegal dumps are expensive to remediate. 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 can also impact property values, can be a liability for property owners, and affect property purchases and transfers. Tourism revenues can also be affected by illegal dumps.

In 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 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 you may find 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.

PA CleanWays on The Causes: According to 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, although higher costs may be partially offset by increased competition.
- 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 of these parameters must pay for recycling on their own. Depending on the county, many or all of these communities do not have funding to support a curbside recycling program. Curbside recycling communities have reported a lower incidence of residential waste accumulation problems and a slightly lower incidence of dumping problems.
- 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 teach the public proper and safe disposal practices.

PA CleanWays Studies in the Five-County Region: PA CleanWays conducted a survey of open dumping practices in Columbia County in 2007, Snyder County in 2009, Union County in 2010, and Lycoming and Montour Counties were completed in 2011.

In Columbia County, PA CleanWays identified thirty-nine (39) dumpsites containing an estimated total of 382 tons of trash. The thirty-nine (39) dumpsites were located in twelve (12) municipalities. These dumpsites ranged in size from 0.5 tons to 100 tons of waste. Ninety-two percent (92%) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. Only two (2) of these dump sites had "No Dumping" signs present; however, both of these sites were considered to be active dumpsites. Ninety-eight percent (98%) of the dumpsites were visible or partly visible from the roadway. Forty-six percent (46%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Five (5) of these dumpsites had waste materials directly in the waterway itself. The materials most commonly found in these illegal dumpsites were tires, appliances and other bulky items. Recyclables were also commonly found while surveying. The following municipalities had illegal dumpsites surveyed by PA CleanWays: Benton Township, Briar Creek Township, Centralia Borough, Cleveland Township, Conyngham Township, Fishing Creek Township, Greenwood Township, Hemlock Township, Madison Township, Montour Township, Mount Pleasant Township, Pine Township and Sugarloaf Township.

In Montour County, Keep Pennsylvania Beautiful identified seven (7) dumpsites containing an estimated total of eleven (11) tons of trash. The seven (7) dumpsites were located in five (5) municipalities. These dumpsites ranged in size from 0.5 tons to 3.5 tons of waste. Eighty-six (86) percent of the dumpsites were considered to be a continuous problem where dumping occurs routinely. Only two (2) of these dump sites had "No Dumping" signs present; however, both of these sites were considered to be active dump sites. Seventy-one (71) percent of the dumpsites were visible or partly visible from the roadway. Six (6) or 86% of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Four (4) of these dumpsites had waste materials directly in the waterway itself. The materials most commonly found in these illegal dumpsites were tires, household trash, construction and demolition materials and leaf waste. Recyclables were also commonly found while surveying. The following municipalities had illegal dumpsites surveyed by Keep Pennsylvania Beautiful: Anthony Township, Derry Township, Liberty Township, Mahoning Township and Valley Township.

In the 2009 Snyder County survey, PA CleanWays identified forty-five (45) dumpsites containing an estimated 58 tons of trash. The forty-five (45) dumpsites were located in fourteen (14) municipalities. These dumpsites ranged in size from 0.125 tons to 6 tons of waste. Ninety-six percent (96%) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. None of these dump sites had "No Dumping" signs present. Fifty-six percent (56%) of the dumpsites were visible from the roadway, while thirty-three percent (33%) of the dumpsites were partly visible from the roadway. Thirty-six percent (36%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Seven (7) of these dumpsites had waste materials directly in the waterway itself. The materials most commonly found in these illegal dumpsites were tires, appliances, household trash and other bulky items. Recyclables were also commonly found while surveying. The following municipalities had illegal dumpsites surveyed by PA CleanWays: Adams Township, Center Township, Chapman Township, Franklin Township, Jackson Township, Middlecreek Township, Monroe Township, Penn Township, Perry Township, Spring Township, Union Township, Washington Township, West Beaver Township and West Perry Township.

The 2010 Union County PA CleanWays survey identified twenty-one (21) dumpsites containing an estimated 43 tons of trash. The twenty-one (21) dumpsites were located in seven (7) municipalities. These dumpsites ranged in size from 0.125 tons to 6 tons of waste. Seventy-six percent (76%) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. None of these dump sites had "No Dumping" signs present. Fifty-seven percent (57%) of the dumpsites were visible from the roadway, while thirty-eight percent (38%) of the dumpsites were partly visible from the roadway. Twenty-four percent (24%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Two (2) of these dumpsites had waste materials directly in the waterway itself. Sixty-seven percent (67%) of the dumpsites contained household trash and yard waste, while sixty-two percent (62%) of the dumpsites contained tires, recyclables and construction and demolition waste. The following municipalities had illegal dumpsites surveyed by PA CleanWays: Buffalo Township, Gregg Township, Hartley Township, Lewis Township, Limestone Township, Union Township and White Deer Township.

The 2011 Lycoming County PA CleanWays survey identified fifty (50) dumpsites containing an estimated 106.75 tons of trash, located in twenty-two (22) municipalities. These dumpsites ranged in size from 0.25 to 12.5 tons of waste. Eighty-two percent (82 %) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. Three sites (6%) had "No Dumping" signs present. Twelve percent (12%) of the dumpsites were visible from the roadway, while seventy-two percent (72%) were partially visible from the roadway. Thirty-five, or seventy percent (70%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Twelve, or twenty-four percent (24%) of these dumpsites, had materials directly in the waterway itself. Eighty-six percent (86%) of the dumpsites contained household trash and recyclables, eighty-four percent (84%) contained tires, sixty-eight percent (68%) had construction and demolition waste, and sixty-six (66%) had bagged trash. The following municipalities had illegal dumpsites identified by PA CleanWays: Anthony

Township, Cogan House Township, Eldred Township, Gamble Township, Hepburn Township, Jackson Township, Jordan Township, Limestone Township, Lycoming Township, McHenry Township, McNett Township, Mifflin Township, Muncy Creek Township, Nippenose Township, Piatt Township, Pine Township, Porter Township, Susquehanna Township, Watson Township, Williamsport City, Wolf Township, and Woodward Township.

Open Burning

Open burning of wastes (like open dumping) is prevalent in the more rural parts of the five-County Region. Burn bans are often implemented and are most successful in more dense boroughs, where neighbors are closer to one another. 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. The "right" to burn one's waste in the backyard often becomes an electrically charged debate. PADEP has noted that the burning of solid waste is illegal under Act 97, the Solid Waste Management Act. Section 601(3) of the Solid Waste Management Act, 35 P.S. § 6018.610(3), provides that it shall be unlawful for any person or municipality to burn solid wastes without a permit from the Department. The burning of recyclables is unlawful under Section 1501 of Act 101, and in fact, the PADEP 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. From a practical standpoint, the PADEP has typically relied on local municipalities to enforce these regulations, resulting in the need for local ordinances to define "allowable" practices within each municipality. The prevalence of open burning in the region, its impacts and its politics, has been raised in discussions at stakeholder meetings in this five-County Region.

5.2 Waste Flow Control Considerations

Waste Flow Control – The Law

Many legal and regulatory actions have impacted the ability of counties to control waste and collect fees for the proper management of recyclable and disposable materials. In 1994, the U.S. Supreme Court issued a wide-reaching flow control decision in *C. & A. Carbone, Inc. et al., v. Town of Clarkstown, NY,* which was subsequently interpreted by lower courts to place serious limitations on the use of County waste flow control ordinances. It effectively resulted in a change of many county solid waste plans, from flow-control-based plans to menu plans. The 2007 *United Haulers Association, Inc., et al. v. Oneida-Herkimer Solid Waste Management Authority, et al.* U.S. Supreme Court case provides relief to the Carbone ruling, in cases of publicly-owned waste management facilities and flow-control powers of public entities. Oneida-Herkimer's application to current flow control options is further explained in the section below on Legislative Flow Control.

In 2004 the PA Waste Industries Association (PIWHA) contested the administrative fees collected by the Lycoming County Landfill for the Snyder County Solid Waste Authority and four north central counties, Union, Columbia, Northumberland and Montour. Lycoming County Judge Dudley Anderson concluded that "the Defendant Counties may impose the administrative fee only if expressly authorized to do so by the Act" in February 2005. Since he perceived no explicit authorization in any of the acts the fees were declared illegal. The case was appealed but the original ruling was upheld by Commonwealth Court in an October 14, 2005 decision. Being a solid waste authority that is authorized to collect fees by the Municipal Authorities Act, Snyder County SWA appealed the decision to the State Supreme Court via a Petition for Allowance of Appeal on November 22, 2006. The Supreme Court denied that request on March 16, 2007.

Flow Control Alternatives

Generally, there are three types of waste "flow control" that have been practiced, with varying degrees of success, in the United States.

- ***Legislative Flow Control*** consists of laws and regulations that are enacted at a local level to mandate the delivery of the waste to a destination point (e.g. to a landfill, transfer station, waste-to-energy facility, etc.). This form of flow control, when it restricts the free flow of waste as a commodity under interstate commerce protections, was originally determined to be unconstitutional by the U.S. Supreme Court in the Carbone case. In 2007, this ruling was overturned in the Oneida-Herkimer case, as it relates to flow control of waste to public facilities. Thus, legislative flow control has now been determined to be legal if the County implementing the flow control legislation has a financial holding in the disposal facility for which it is sending waste to, and if it can demonstrate public service benefits to its users. For example, if a County is operating a waste management facility, and the operations of that facility are dependent on receiving the waste from that County, then the County can legally enforce legislative flow control to direct waste to the County disposal facility, if it can demonstrate that it meets certain beneficial thresholds to the region. It is believed that other counties could also similarly direct waste to a publicly-owned facility, in another county, in conformance with the Oneida-Herkimer decision. This type of flow control is commonly implemented through a county ordinance, along with other coordinated steps.

- ***Economic Flow Control*** occurs when the waste management system is structured to provide the most economical means of waste management at the designated facility. As an example, if tipping fees at the designated facility can be reduced (generally through subsidies from other revenue sources) to a point where it is more economical for haulers to take waste to the designated facility than elsewhere, then economic flow control can often be achieved. One way in which this has been accomplished is to finance some facility costs by incorporating revenues via the tax

base to cover some costs rather than strictly through tipping fees. When this is done, the resulting tip fee can be potentially lowered or eliminated altogether. In this arrangement, a hauler has a distinct economic incentive to deliver waste to the facility. Another way to help accomplish this form of waste security is to operate more efficiently and to control costs in order to offer more competitive, economical tip fees than the competition.

- ***Contractual Flow Control*** occurs when an entity (such as a transfer station or disposal site) contracts directly with haulers to provide disposal services under pre-established compensation terms (i.e, tip fees). Contractual flow control has been the most commonly used method to secure long-term delivery commitments for waste since the Carbone ruling in 1994.

  Another form of contractual flow control that is commonly utilized in Pennsylvania is through a "municipal waste collection bid contract". A municipality is responsible for the health, safety and welfare of its residents, and has the power to insure the proper handling and disposal of wastes generated from within its borders through a municipal waste (and recyclables, if desired) collection and disposal contract. This contract can include the designation of the facility or facilities where the municipality requires the waste (and recyclables) to be contractually delivered to. If, for example, all municipalities within a county designate a certain facility to receive their wastes, this would in essence control the flow of all regulated waste from within that county to the facility by contract. Similarly, school districts, businesses, industries, etc., that contract for waste collection, can also designate the services they require and the disposal site for collected waste (and recyclables) if they wish to do so.

Securing Waste Disposal Capacity for Columbia, Lycoming, Montour, Snyder and Union Counties

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. Prior to 1994, counties in this five-County Region mandated, by county ordinance, that the Lycoming County Landfill be the depository for municipal waste generated from within the five-County Region, plus Northumberland County. However, the landmark Carbone Case in 1994 overturned many forms of flow control, including most legislated forms such as the one that was in place in this Region. Since then, waste from the area has been delivered to disposal sites based on:

1) its listing as a designated site in a county municipal waste plan, and
2) prevailing market conditions.

Haulers are generally free to take municipal waste from a given county to any disposal site of their choosing, as long as the site is designated in that County's municipal waste plan.

Currently, under the free market waste system in place in the Region, over 98% of municipal wastes generated from the five-County Region are disposed at two publicly-owned and operated landfills, the Lycoming County Landfill and the Clinton County Landfill. These public investments are supported primarily by revenues generated from tipping fees on incoming wastes. Publicly-financed facilities often provide other waste management "value-added" services that many private landfills do not provide (recycling, mulching/ composting, special waste disposal, etc.) Should waste deliveries to these public landfills decrease in the future, these public investments, as well as the multiple services they provide, are increasingly at financial risk.

Flow Control Considerations in this Five-County Regional Study

The recent (May 2007), Oneida-Herkimer court case has opened the possibility for a new form of legislative flow control to be considered in this region. The concept of waste flow control by county ordinance was considered at the outset of this five-County Regional Study. It was discussed at each of the five County Public Kickoff Meetings, and was also discussed in some detail at the Solid Waste Haulers Stakeholder Group meetings. After initial consideration, several of the county commissioner boards from the five-County Region publicly stated that they were not at this time in support of utilizing what is, essentially, legislative flow control through a county ordinance, to direct waste from the study region to one or more public disposal facilities. The Solid Waste Haulers Stakeholders Group also voiced their opposition to implementation of such a form of legislative flow control.

Therefore, this five-County Regional Plan will not further consider the alternative of implementing legislative county flow control by county ordinance, due to a lack of political support from its county leaders, and acknowledging the current opposition from the local haulers to this concept. Should some form of flow control be determined to be needed in the future, and should it gain the support of the county leaders, this concept could be reassessed in the future.

This still leaves other "tools" to help secure waste deliveries to a public facility, including other forms of legislative, economic and contractual means. This five-County Regional Plan will employ a "Menu Plan" approach to secure 10 years of MSW disposal capacity, prequalifying multiple disposal facilities through an open and competitive process. Qualifying facilities can then be designated to receive municipal wastes generated in the five-County Region. Once these sites are designated under this Regional Plan, municipal wastes from the five-County Region will need to be taken to the facilities that are designated in the plan for disposal. A process will also be established in this Plan to allow additional facilities to request consideration for inclusion in the Plan as a designated facility in the future.

Note of clarification to readers: in a 2010 Guidance Document issued by PADEP on the preparation of Municipal Waste Management Plans, PADEP states the following regarding what is commonly referred to as "Menu Plans" that are in widespread use, and are widely accepted in Pennsylvania. "The term "flow control" is often used to

describe the situation where the county requires by law that waste generated within its boundaries be delivered only to facilities designated in the county plan. (Flow control is also generally used to describe a situation where an exclusive franchise for waste pickup is granted to a single waste hauler by a municipality.) An Act 101 plan will be considered a "Flow Control" plan even if a county designates more than one facility which may lawfully receive waste generated within the county. It is only when a county allows waste to be disposed or processed at any permitted facility that the plan will not be considered to include "flow control." A county which decided not to use "flow control" as part of its plan must still assure that it has adequate processing and disposal capacity for all county-generated municipal waste during the next ten years." Thus, the Menu Plan approach that is being used in this five-County Region is still technically referred to as a "Flow Control" Plan by PADEP. However, this is not the form of Flow Control plan that has received negative support from county commissioners and the Solid Waste Haulers Stakeholder Group at the outset of the planning process. Rather, it is believed this Menu Plan approach, a planning approach commonly used throughout Pennsylvania to secure waste disposal capacity for a county, will have the support of both the county commissioners in this five-County Region and the waste haulers in this five-County Region.

5.3 Waste and Recyclables Collection and Transportation

This section discusses the various methods currently in use, or potentially available, to the municipalities located in the Region for collection and transportation of waste and recyclables. An effort was made to obtain specific collection and transportation cost and revenue information; however, the vast majority of the Region is serviced by Private Subscription from Private Hauling Companies. The Private Haulers felt that sharing cost and revenue information with their competition would be detrimental to business, so this information was not available.

Collection

Municipal Solid Waste (MSW)

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

- Individual households and businesses can each contract directly with a private waste hauler for refuse collection services, with limited or no municipal involvement. This is referred to as subscription 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). This is referred to as contracted collection.
- The municipality itself (or a series of municipalities can join together) can provide the collection and transportation of MSW to the disposal site. This is known as municipal collection.

Lewisburg Borough is the only municipality within the five-County Region that uses municipal collection. Annual costs associated with waste collection and transport in Lewisburg Borough have ranged from $402,519.21 (in 2004) to $695,952.37 (budgeted for 2012), and revenues have averaged roughly $75,000 greater than expenditures. A program of this type requires significant capital costs for equipment, along with municipal staffing commitments, and therefore it is often not economically feasible for smaller municipalities within the five-County Region to employ this method of collection.

Subscription collection is the most common method of waste collection within the five-County Region. In this method of collection, residents, commercial, industrial and institutional customers contract directly with private haulers. With the exception of Lewisburg Borough, all of the municipalities within the five-County Region use subscription waste collection. The advantages of subscription collection include:

- Competition – subscription collection encourages the entry of multiple haulers into the market. This provides competition among the haulers servicing a certain municipality and often creates cost benefits to the residents as well as various service options to fit resident's needs. Subscription collection allows residents to choose their trash hauler and collection options.
- Recycling – Most haulers that operate by subscription offer a range of services, including various types of "pay-as-you-throw". Customers who recycle can thus see an economic benefit related to reduced waste material (as they reduce the number of bags of waste generated). The number of subscription haulers in the region that currently offer curbside recycling collection along with waste pickup are limited.
- Local Markets – Most local haulers do business with other local businesses; consequently, they are integrated into the economies of the local communities they serve.
- Small Business – Because of the competitive nature of subscription collection, small "mom-and-pop" haulers (that have lower overhead costs) can compete successfully with larger companies for customers.
- Minimal Municipal Involvement – Subscription collection requires the least municipal involvement of all the collection methods. Subscription collection does not require the municipality's involvement in collecting fees which can be a benefit to understaffed municipalities.

The disadvantages of subscription collection include:

- Increased Truck Traffic – In areas serviced by subscription collection, haulers may be collecting waste in one municipality, even on one street, Monday through Saturday. Multiple haulers serving one area often means multiple days of collection, therefore creating increased truck traffic, air pollution and noise pollution.
- Inefficiencies in Collection – Multiple haulers may lead to inefficient collections and/or missed collections within a municipality. Where there are inefficiencies in

collection, some subscription haulers may not be able to offer services for the same price as one hauler who serves an entire area.

- Rural Collection – It may not be economically feasible to collect waste in rural areas through subscription collection due to the limited number of residents available to be served and the length of travel distance between collection routes.

Although the current system has clear advantages, there are also disadvantages that a municipality may want to address. To do this, the municipalities within the five-County Region may want to consider municipal bidding for contracted collection of residential/institutional/small commercial customer refuse. No municipalities within the five-County Region currently bid for contract waste collection services. However, 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. This often occurs because, when a municipality bids for collection services for an entire area, the hauler can offer services more economically, since they are guaranteed to pick up all customers within that area, and may service a larger number of customers (economies of scale) than may be possible with subscription service.

In addition to the potential financial benefits of contracted collection, there are additional advantages as well:

- Control of Collection Services - 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; with or without direct customer billing; with or without disposal costs included; with reporting requirements for wastes and recyclables collected; etc.).
- Designation of a Disposal Facility - 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 (services, insurances, guarantees, etc.) that small haulers cannot easily comply with.
- Reduction in Waste Vehicles – 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.
- Reduction in Illegal Dumping Activities - contracted collection can 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.

There are also disadvantages to contracted collection. These include:

- Reduction in Solid Waste Haulers - Contracted collection may take business away from haulers servicing that municipality, if the hauler is not the selected waste hauler for the contract. In some situations this may lead to smaller haulers no longer doing business within the Region.
- Increased Municipality Involvement – Contracted collection requires more involvement on a municipality level. Municipalities are often responsible for collecting the fees from residents associated with their waste service, as well as handling complaints and general residential issues relating to waste and/or recycling collection. This may require more municipal staff or staff time.
- Rural Collection - a municipality that is immensely rural in nature may not benefit from contracted collection. Residents may be required to pay a higher rate for waste and/or recyclables collection due to the nature of the collection routes, and haulers may not even bid on providing curbside collection service in some rural areas, similar to a subscription hauler's reluctance to serve some very rural areas. There also may not be a large enough population to justify contracted collection.

In some very rural areas, haulers, whether under contract or by subscription, may not want to service 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 counties such as Columbia, Lycoming, Montour, Snyder, and Union with sparse population, counties may also want to consider contracting specific routes, within an area of a county that is 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. If a county would pursue this method, they could develop waste hauling routes that divided their county into distinct areas for waste haulers to service. This scenario can often provide waste collection service for residents who were not previously obtaining it due to their location within the county. If the Counties within this five-County Regional Plan would decide that contracted collection through a County contract is something worth pursuing, the Counties may be able to coordinate collection with private haulers in multiple municipalities or within multiple Counties, thus potentially further decreasing the cost of refuse collection for residents, and increasing the efficiency and safety of collection for the waste haulers.

Recycling

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 drop-off/transfer collection. The 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, but requires a more complex processing system and greater effort at the recycling facility to process the mixed recyclables. There are currently no single-stream recycling facilities in the Region, so use of this method would either require establishment of a single-stream facility or would imply increased hauling costs to transport the material out of the Region. In late 2012 some haulers in the region began to collect single-stream recycling. This material is currently being transported out of the Region. LCRMS is currently considering moving to single-stream within the next year.

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 2 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, 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.

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, the ability to recycle additional types of materials, 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 market revenues, higher capital processing costs, decreased quality control at the curb, increased product contamination, increased transportation costs, 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, or longer haul distances for out-of-county processing.

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.

In many areas of the Region, the only recyclables collection service that is offered is through the recyclables drop-off site option. There are currently 72 recyclables drop-off sites scattered throughout the Region, as shown on Exhibit 2. In contrast, only 26

municipalities in the Region currently offer some form of curbside recyclables collection program. This service differs depending on the municipality. In some municipalities the curbside collection of recyclables is done by the municipality and the residents pay a given amount to the municipality for this service. In other municipalities, recyclables collection is offered through the waste haulers, and the cost for the program is included in the resident's subscription cost with the haulers. The municipalities with mandated and non-mandated curbside recyclables collection are identified in Tables B.2 through B.6 in Appendix B, and are shown on Exhibit 3.

Transportation and Disposal

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 the five-County Region 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. The topic of establishing a possible county vehicle registration or licensing, at least for waste vehicles under 17,000 pounds GVW, was raised by certain haulers and debated in public meetings by the Solid Waste Haulers Stakeholder Group during this planning process; in the end, there was no interest from this group in promoting additional county registration or licensing of these small-payload waste haulers.

Municipal Solid Waste (MSW)

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. There are three (3) ways that waste can be transported to a disposal facility. Residents or businesses can transport their waste directly to a disposal facility; waste haulers can collect waste at curbside and transport it to a disposal facility; or municipalities can collect waste at curbside and transport it to a disposal facility. A "disposal" facility in this context can be a regional transfer station, a landfill, or another type of permitted processing or disposal facility. All municipal waste generated within the five-County Region must be transported to a County designated disposal facility, with larger haulers duly licensed by the State as required by Act 90.

Currently, all municipalities within the five-County Region, with the exception of Lewisburg Borough, rely on either direct hauling by the generator or private subscription services for transportation of MSW from the curbside to a disposal facility. Lewisburg Borough hauls its waste to disposal sites using municipal trucks and curbside collection of MSW. Within the geographic boundaries of the five-County Region, there is one MSW landfill and two permitted transfer stations. MSW from residents within the Region can be transported to any one of these disposal facilities. The location of these facilities is presented on Exhibit 2.

Estimating costs associated with transportation of MSW from the collection point to the ultimate disposal location is a complex calculation, based on numerous variables, including: type of collection vehicle, type of waste being collected, ability to compact the waste prior to hauling, hauling speeds, crew size, turnaround time at the disposal site, fuel cost, and the distribution of collection points along the route, in addition to other factors. However, assuming that other variables remain the same for an individual hauler, the critical factor (other than tip fee) in assessing the economics of selecting a disposal facility is the distance traveled from collection to disposal.

Thirteen (13) disposal facilities responded to the Solicitation of Interest (SOI), and all have been recommended for inclusion in this Regional Solid Waste Management Plan. The following table shows the estimated travel distances from the approximate geographic population centers of each County in the Region to each of the disposal facilities. Since there were 13 SOI respondents and five (5) Counties in the Region, this resulted in a total of 65 transportation routes for evaluation.

Estimated costs associated with transportation to the disposal facilities were based on an average cost per mile for typical solid waste vehicles, based on local anecdotal hauling cost experience, and on an average truck hauling speed (including stops and turnaround time) of 35-40 mph. Actual hauling costs will vary based on the type of vehicle used, loading, geographic distribution of the population within the county, actual routes used and speeds traveled, whether there are additional stops along the route, and many other factors. However, the results presented in Table 5.3-1 represent a good starting point for use in comparing the relative waste hauling costs from each population center to each disposal facility.

Table 5.3-1
Estimated Transportation Costs from Population Centers to Disposal Facilities

Disposal Facility	Columbia County		Lycoming County		Montour County		Snyder County		Union County	
	Round Trip (Miles)	Est. Cost	Round Trip (Miles)	Est. Cost	Round Trip (Miles)	Est. Cost	Round Trip (Miles)	Est. Cost	Round Trip (Miles)	Est. Cost
IWS - Western Berks Community LF	162	$324	232	$464	158	$316	182	$364	200	$400
IWS - Mostoller LF	366	$732	328	$656	350	$700	300	$600	304	$608
IWS - Cumberland County LF	204	$408	214	$428	182	$364	148	$296	164	$328
IWS - Sandy Run LF	266	$532	266	$532	246	$492	194	$388	210	$420
Keystone Sanitary LF (DeNaples)	126	$252	180	$360	144	$288	189	$378	198	$396
CES LF	80	$160	136	$272	76	$152	100	$200	114	$228
Lycoming County Resource Management Services LF	70	$140	20	$40	43	$86	64	$128	40	$80
Clinton County SWA (Wayne Township) LF	124	$248	44	$88	96	$192	100	$200	74	$148
WM - Alliance LF	118	$236	177	$354	138	$276	182	$364	188	$376
WM - Grand Central Sanitary (GCS) LF	159	$318	248	$496	186	$372	230	$460	238	$476
WM - Mountain View Reclamation LF	282	$564	294	$588	262	$524	218	$436	244	$488
WM - Shade LF	356	$712	296	$592	328	$656	280	$560	274	$548
Tunnel Hill Reclamation LF, Ohio	764	$1,528	704	$1,408	736	$1,472	712	$1,424	692	$1,384

Note 1: All Mileage shown is a round trip estimation from each county's estimated geographic population center to each disposal site, using Google Maps.

Note 2: All transportation cost estimates are based on an average truck hauling cost of $2 per mile, for comparison purposes. "Est. Costs" reflect hauling cost per garbage truck per round trip, including labor, fuel and equipment. Costs do not include disposal costs or fees.

See Sections 5.23 for a listing of facilities that have been designated for inclusion in the Plan for the next 10 years. Detailed discussions of the designated facilities are included in Appendix D, and the location of the facilities is shown on Exhibit 7.

Lycoming County is currently considering an upgrade or relocation of the Lycoming County transfer station located in Williamsport, to improve the efficiency of the operation. The current facility cannot handle the peak volumes of waste and recyclables arriving on-site. Additionally, during peak volume conditions, haulers may wait in line to tip their load for up to 40 minutes. The queue line of haulers that forms from these delays is interfering with traffic on nearby 3rd Street. There may also be some safety concerns with the current configuration of the facility, though efforts to mitigate this situation have been taken. Due to the current situation at the facility, and the interest in using the transfer station property to satisfy growing land needs of Penn College, Lycoming County is currently considering alternate locations.

Recycling

As with MSW, recyclables can be transported in three ways to a disposal facility: directly by residents and businesses, by waste haulers, or by municipalities. A disposal facility in this context includes a drop-off site, a transfer station, or 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 that can be used for 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 the five-County Region are identified in Exhibit 3.

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. Exhibit 2 shows the location of the recyclables drop-off sites throughout the five-County Region.

Each permitted landfill and transfer station in Pennsylvania is also required by Act 101 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 is one permitted landfill and two permitted transfer stations within the five-County Region. These facilities act as drop-off locations within a larger 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.

A MRF can also accept recyclables from residents, businesses, institutions or haulers. A MRF can be classified as "clean" or "dirty". A "clean" MRF accepts recyclable materials that have been segregated from MSW by residents prior to delivery or placed separately at the curb for pickup. Recyclables are usually sorted, baled, shredded, crushed, or otherwise processed for shipment to the best available market. "Dirty" MRFs accept a mixed solid waste stream and separate out designated recyclable materials through a combination of manual and mechanical sorting. The sorted recyclable materials are further processed for shipment to the best available market, while the remaining residual waste is sent to a disposal facility, such as a transfer station or landfill. There are currently seven "clean" MRFs located within the five-County Region.

The materials accepted at the MRFs located in or near the five-County Region are listed in Table 5.3-1, on the following page. These MRFs, as well as other surrounding MRFs, are identified on Exhibit 2.

Table 5.3-2
Materials Accepted by Local MRF Facilities

J.A.W.S.	cardboard, newspaper, office paper, magazines, 3 colors of glass, aluminum and tin cans, chipboard and plastics 1&2
Lycoming County MRF	aluminum and tin cans, aluminum foil, cardboard, catalogs, magazines, newspaper, office paper, phone books, 3 colors of glass, plastics 1-7 (bottles only)
Bloomsburg MRF	3 colors of glass, aluminum and tin cans, newspaper, magazines, catalogs, books, office paper, paper bags, cardboard, chipboard and plastics 1&2.
Clinton County MRF	plastics 1&2, 3 colors of glass, aluminum and tin cans, newspaper, office paper, magazines, and cardboard
Penn Recycling MRF	aluminum cans, cardboard, office paper and computer paper
Staiman Recycling MRF	newspaper, magazines, office paper, cardboard, aluminum cans
Coal Township Recycling Center/MRF	plastics 1&2, 3 colors of glass, aluminum and tin cans, newspaper, office paper, and cardboard
Jeff's Auto Body and Recycling Center/MRF	mixed paper, newspaper, plastics 1&2, aluminum and tin cans, 3 colors of glass and cardboard
Northumberland MRF	3 colors of glass, aluminum and tin cans, newspaper, magazines, cardboard and plastics 1&2.

5.4 Service Shed and Economic Marketplace Analysis

The concept of a Service Shed analysis is housed in the idea that, in the management and handling of municipal waste and recyclables from within the five-County Region, there are geographical areas within the five-County Region that have common needs and common logical, economical management and disposal solutions. For waste disposal, this may be the hauling of wastes from within a service shed to a common disposal site. The disposal site could be a transfer station, a landfill, etc. For recyclables, this could mean coordinated collection and hauling of the materials to a common Materials Recovery Facility (MRF) for processing. By determining logical service sheds within the five-County Region, the local needs and deficiencies, as well as the most logical and economical waste and recyclables management solutions may be identified.

As part of this five-County Regional Study, five unique Stakeholder Groups were established to provide input and feedback on the plan and its ideas. One of these groups is the Solid Waste Haulers Stakeholder Group. Since this group represents the professional waste and recyclables collection and hauling industry in the region, it was

decided to solicit their expertise and input in identifying hypothetical service shed boundaries in the five-County Region.

At the second Solid Waste Haulers Stakeholder Group meeting on August 25, 2010, the waste haulers were asked to participate in a workshop where they broke into several groups, were given a map of the region that displayed major transfer stations and landfills, and were asked to mark on the map which disposal site they felt waste most logically should flow. They took into consideration road networks, natural barriers (mountains, rivers, etc.), hauling distances, urban congestion, population centers, and other factors that they felt affected where waste should be logically taken. These service shed maps were created using the assumption that equally competitive tip fees exist at all sites – no tip fee advantage was assumed at any site. In this way, the analysis could be done purely on relevant waste transportation factors.

In general, the feedback from the work groups on hypothetical service shed boundaries, discounting for tipping fee differences (i.e. marketplace pricing influences) suggested the following:

- All groups generally agreed that most waste generated in Lycoming County west of a north-south corridor that lies somewhere between Route 287 and Route 15, and generally north of an east-west corridor that is somewhere between Routes I-80 and I-180 (these two routes are separated by a large mountain, as well as the West Branch of the Susquehanna River), encompassing Northwestern Lycoming County, would go to the Clinton County Landfill;
- Waste from the remaining portions of Lycoming County would go to the Lycoming County Landfill (part to the Lycoming Transfer Station in Williamsport, and most directly to the landfill);
- One workgroup map depicted all of Columbia and Montour Counties' waste going to the Lycoming County Landfill, while another map depicted all of Columbia and Montour's waste going to the Lycoming County Transfer Station in Williamsport. A third workgroup map depicted all of Columbia and most of Montour waste going to the Lycoming County landfill, with a part of Montour going to the Lycoming County Transfer Station and another part of Montour going to the Commonwealth Environmental Systems (CES) landfill;
- All groups agreed that some or all Union and Snyder County waste would go to the Lycoming County landfill. One workgroup map depicted western Union County and western Snyder County going to the nearby Mifflin County Solid Waste Authority Transfer Station.

After completing the exercise, all marked-up versions of the map were posted on the wall, and a Consultant Team representative prepared a composite service shed boundary map that best summarized the common responses from the work groups. This composite map was reviewed during the evaluation of service needs of the five-County Region. The map was used to conduct a review of areas of the region that may currently be underserved regarding waste and recycling service options.

The Economic Marketplace – Disposal Facilities and Costs

The concept of an "economic marketplace" is the combination of public and private haulers, processors and disposal sites that serve the five-County Region with waste management and recycling services, and the system of costs incurred and fees charged for services provided throughout the five-County Region. Solid waste and recycling fees charged to residents and businesses within the region include the costs of collection, hauling and processing/recycling/disposal. Current costs charged are important to this system, since waste transportation decisions are largely driven by hauling and disposal economics, as well as the suitability and range of services provided. This discussion focuses in some detail on the current marketplace that serves the five-County Region.

An economic marketplace analysis was conducted to obtain the tipping fees for MSW from the disposal facilities in and around the five-County Region. Information was gathered from transfer and disposal facilities, through phone calls to the sites, as well as through information submitted in recent municipal disposal capacity quotes to other counties in their solid waste planning process.

Based on this survey, the reported gate rate tipping fees were found to be quite consistent for MSW landfills in the five-County Region, ranging from a low of $45 per ton at the Bradford County Landfill to a high of $49 per ton at the Wayne Township (Clinton County) Landfill. The current tipping fee at the Lycoming County RMS Landfill, where the majority of municipal waste from the five-County Region is currently disposed, is $48 per ton.

There were three landfills which would not release their current tipping fees. However, each of these facilities submitted disposal capacity bids to a Northeastern Pennsylvania (NEPA) County as part of another county solid waste plan update in 2010. The estimated 2011 tipping fees submitted as part of these bids were used as the tipping fees at these facilities for this five-County Regional economic marketplace analysis. These facilities are as follows: the 2011 tipping fee at Commonwealth Environmental Systems (CES) was listed at $67.50 per ton and the tipping fee at Pine Grove Landfill was listed at $75 per ton. In a phone call to the White Pines Landfill, it was stated that this facility is a residual waste-only landfill. However, in the NEPA 2010 bid document, the White Pines Landfill submitted a 2011 municipal waste tipping fee quote of $49 per ton. It is assumed that the White Pines Landfill is in the process of submitting, or has future plans to submit, a permit modification for the disposal of MSW at the facility; therefore, this tipping fee quote by White Pines Landfill is included in this economic marketplace analysis. The tipping fees bid by CES and Pine Grove Landfill (obtained from the NEPA 2010 bid quotation) are significantly higher than the tipping fees reported at the remaining landfill facilities in the five-County Region.

The reported tipping fees at the transfer stations in the five-County Region had a much larger price range. This surveyed range varied from a low of $52.80 per ton at the Lycoming County Transfer Station in Williamsport to a high of $81 per ton at the Sunbury Transfer Station. The MSW tipping fee information from transfer stations and landfills in the area are located in Table 3.4-1, below. Additionally, C&D tipping fee information from transfer stations and landfills in the area are located in Table 3.4-2, below.

Table 5.4-1
Reported MSW Tipping Fee for Local Facilities

FACILITY	REPORTED GATE RATE (PER TON)***	NOTES
TRANSFER STATIONS		
Heaps Transfer Station	No Response	Phone call messages were not returned for cost information
Lycoming County Transfer Station	$52.80**	
Sunbury Transfer Station	$81.00**	
Waste Management, Inc. Transfer Station	No Response	Phone call messages were not returned for cost information
Mifflin County Solid Waste Authority Transfer Station	$64.90**	
Tioga County Transfer Station	$58.00**	
Tiadaghton Area Transfer Station	$65.00**	
PA Waste Transfer, LLC	N/A	Permit has been submitted to DEP for approval
LANDFILLS		
Bradford County Landfill	$45.00**	
Lycoming County Landfill	$48.05**	
Wayne Township Landfill	$49.00**	
Commonwealth Environmental Systems (CES) Landfill	$67.50*	
Pine Grove Landfill	$75.00*	
White Pines Landfill	$49.00*	Only accepts residual waste

* Costs were obtained from a County in Northeastern Pennsylvania as part of a disposal capacity solicitation in 2010. Because these facilities were non-responsive to our study information requests, these costs were used as the anticipated gate rates for the year 2011.
** Rates obtained through phone call to facilities on December 13, 2010.
*** Facilities may offer discounts off reported gate rates.

Table 5.4-2
Reported C&D Tipping Fee for Local Facilities

FACILITY	REPORTED GATE RATE (PER TON)***	NOTES
TRANSFER STATIONS		
Heaps Transfer Station	No Response	Phone call messages were not returned for cost information
Lycoming County Transfer Station	$52.80**	
Sunbury Transfer Station	$81.00**	
Waste Management, Inc. Transfer Station	No Response	Phone call messages were not returned for cost information
Mifflin County Solid Waste Authority Transfer Station	$64.90**	
Tioga County Transfer Station	$58.00**	
Tiadaghton Area Transfer Station	$65.00**	
PA Waste Transfer, LLC	N/A	Permit has been submitted to DEP for approval
LANDFILLS		
Bradford County Landfill	$45.00**	
Lycoming County Landfill	$48.05**	
Wayne Township Landfill	$49.00**	
Commonwealth Environmental Systems (CES) Landfill	$67.50*	
Pine Grove Landfill	$75.00*	
Phoenix Resources C&D Landfill, Inc.	No Response	Phone calls were made to this facility; no costs were released
Tioga County C&D Landfill	$32.75**	

* Costs were obtained from a County in Northeastern Pennsylvania as part of a disposal capacity solicitation in 2010. Because these facilities were non-responsive to our study information requests, these costs were used as the anticipated gate rates for the year 2011.

** Rates obtained through phone call to facilities on December 13, 2010.

*** Facilities may offer discounts off reported gate rates.

The tipping fees included in this section and Exhibit 5 do not account for any discounts given to haulers at the landfills or transfer stations. Typically, these facilities offer discounts off of the reported tipping fee for haulers that deliver large volumes of waste to the site. Regardless, this economic marketplace analysis still offers a good relative comparison of the markets and price competition (undiscounted) for MSW disposal in the region.

Based on the tipping fee ranges obtained from the MSW landfills, there is no significant disposal cost advantage to using one MSW landfill by haulers in the five-County Region over another, since the tipping fees at these facilities are reasonably consistent. Due to these similar fees, the waste hauling costs become a vital factor in the economics of selecting a landfill for waste disposal by haulers in the five-County Region.

The tipping fees at Heaps Transfer Station and the Waste Management Transfer Station could not be obtained, but may represent two other economical solutions for the disposal of southern Columbia County's waste. But based on the estimated tipping fee at the Pine Grove Landfill, it would not appear to be economical to transport waste south from any of the five Counties to the Pine Grove Landfill. The CES landfill is closer to southern Columbia County (than Pine Grove), and its reported tipping fees are a bit less than Pine Grove, but there is insufficient information available at this time from other transfer stations in the region to determine the most economical hauling + disposal solution for southern Columbia County.

Based on the locations of the MSW landfills, as shown on Exhibit 5, as well as their reported tipping fees, it is justifiable that most of the five-County Region's waste has been historically disposed at the Lycoming County and Clinton County Landfills. Additionally, the Lycoming County Transfer Station is another economical choice for haulers to dispose of waste, with a tipping fee much lower than other transfer stations in the area.

The Heaps Transfer Station is geographically situated to economically transfer waste from Montour and Columbia Counties to various disposal sites, including the Lycoming County Landfill. Heaps also transfers recyclable materials to the LCRMS.

Discounting tipping fees, the marketplace analysis suggests that it may be more economical for waste generated in central and western Snyder County to be transported to the Mifflin County Solid Waste Authority (MCSWA) Transfer Station, for consolidation and ultimate disposal. Wastes generated in western and central Snyder County are closer to the MCSWA Transfer Station than the Lycoming County Landfill. Wastes generated in western Union County are equidistant to the MCSWA Transfer Station and the Lycoming Landfill. The remaining waste from Snyder and Union counties, generated in central and eastern Union County and in eastern Snyder County, can probably more economically be shipped to the Lycoming County Landfill.

However, the published gate rates at the MCSWA Transfer Station are significantly higher than those at the Lycoming County Landfill. MCSWA's published rates are $65 per ton for PADEP licensed haulers, $73.50 per ton for non-PADEP licensed commercial loads; $84 per ton for the general public (cash customer or small hauler loads); and a minimum $15 fee for cash customers bringing up to 375 pounds. In addition, a fuel surcharge, which varies bimonthly, is added to cover costs associated with transfer hauling to the landfill. Lycoming Landfill's rates are $48 per ton for commercial haulers; $67.30 for individual residents; and a minimum $15 fee for small loads.

On the other hand, large volume PADEP licensed haulers who use the MCSWA Transfer Station can obtain significantly discounted tipping fees (off the stated gate rates) if they are willing to enter into a long-term contract. Therefore, a large volume hauler with a tip fee discount at Mifflin may be able to provide competitive or cheaper waste collection and disposal services to central and western Snyder County, and in western Union County, than haulers using the Lycoming County Landfill. Without the benefit of large-volume tip fee discounts at the MCSWA Transfer Station, the Mifflin Transfer Station is probably not a cost-competitive alternative to use in lieu of the Lycoming County Landfill by this southwestern portion of the five-County Regional area.

All portions of Snyder and Union Counties have significantly shorter road distances to the Lycoming County Landfill than to the Clinton County Landfill, due to natural (rivers, mountains) and manmade (road network) restrictions.

Due to the significant east-west mountain ranges and the road network located in southern Lycoming County, most northwestern Lycoming County waste is currently hauled to and disposed of at the Lycoming County Transfer Station or at the Clinton County Landfill. Clinton County Landfill's tip fee ($49 per ton) is somewhat lower than the Lycoming Transfer Station tip fee ($52.80 per ton). However, the <$5 per ton tip fee differential to use the transfer station is quickly offset by the approximate 17 mile additional one-way road distance (and additional transportation cost) to use the Clinton County Landfill. Most of the remainder of the Lycoming County waste is currently hauled to and disposed of at either the Lycoming Transfer Station or the Lycoming County Landfill.

Exhibit 5 identifies the location of the landfills and transfer stations within the economic market place analysis as well as the tipping fees for MSW at these facilities.

5.5 Facilities Assessment

In February 2011, the Consultant Team reviewed, with county representatives, the waste transportation and disposal facilities, the recycling infrastructure in the five-County Region, along with the marketplace information and concluded the following:

- The landfills located closest to the center of this five-County Region offer some of the lowest tipping fees in the vicinity of this Region. Due to their proximity, they also provide a waste disposal location to which it is economical to haul waste. The favorable economics of using the Lycoming County Landfill and the Clinton County Landfill is documented by the fact that a very high percentage (over 90%) of MSW from the five-County Region is currently disposed at one of these two facilities, based on marketplace influences.
- The eastern portion of the region is served by multiple waste transfer stations in Columbia and Northumberland Counties. These transfer stations are capable of transferring waste to selected disposal sites from that part of the region.
- There are multiple material recovery facilities (MRFs) in the region that serve sub-geographic areas of the Region. These MRFs serve the recyclables processing and marketing needs of the entire Region, and should continue to do so in the future. All of these MRFs accept source-segregated recyclables of some sort. The Lycoming County MRF is considering an upgrade to receive and process dual-stream recyclables. In addition, as of mid-2012 some local haulers were offering single-stream collection with private subscriptions. With this pending upgrade, the five-County Region will be served by source-separated and dual stream MRFs, and possibly by single stream service outside the Region. These MRFs provide local outlets for haulers that collect recyclables from their customers, either in source-separated form or as a single- or dual-stream collection. As recycling in the Region grows, the reliance of haulers on these MRFs will continue. This Regional Plan recommends that the existing MRFs continue to be utilized, and should be maximized as additional recyclables are collected from the Region.
- There are currently more than 50 public-access recyclables drop-off sites in the Region. With limited exceptions, it is not believed that additional recyclables drop-off locations are needed at this time in the Region. The exceptions to this statement are in Lycoming (two additional sites recommended), Columbia County (two additional sites recommended), and Snyder County (one additional site and several recommended upgrades and/or relocations to existing drop-off sites). Exhibit 5 illustrates, in general, the proposed locations of new and upgraded drop-off sites. The general focus for most of the existing drop-off sites should be the acceptance of additional recyclable materials and the expansion of operating hours, as discussed elsewhere.

5.6 Processing/ Disposal Alternatives

There are numerous waste processing and disposal system alternatives that are currently available in the industry. In this interest of space, a long series of Alternatives have been included in Appendix I. This Appendix also discusses alternatives that have specific compatibility or that show particular promise within the current Columbia, Lycoming, Montour, Snyder, and Union Counties' waste management system that was described earlier in this chapter.

5.7 Compatibility of Processing/ Disposal Alternatives in the Region

The No-Action Alternative

In the no-action alternative, the five-County Region's waste management operations would function in the same manner as they do now. Residents would subscribe with haulers for waste and recyclables collection. Haulers would transport the MSW and recyclables to the facilities of their choice. Haulers would not expand their recycling services; they would have the ability to offer recyclables collection to residents or not, except in mandated municipalities where recyclables must be collected curbside. There would be no expansion of the five-County Region's current transfer, processing or disposal facilities and programs. The current drop-off locations would remain, with the same current level of collection. No expansion of MRF processing capabilities would occur. There would be no support for enhancements to recycling education and information dissemination to schools, businesses and residents in the five-County Region. No opportunities to secure funding to support existing and new recycling programs and value-added services would occur.

Although the current waste management system is sufficient for residents in the five-County Region TODAY, the no-action alternative WILL NOT meet the disposal needs of the five-County Region for the next ten years. Without landfill expansions at Lycoming and Clinton, haulers will need to travel to dispose of the region's wastes at out-of-county landfills and WTE facilities. Without MRF expansions, the region (and its private haulers) will find it much more difficult to shift from a source-segregated recyclables collection program to a dual stream collection program in most parts of the five-County Region.

In 2009, the total waste tonnage landfilled by the five-County Region was 266,153 tons (see Table 1.3-1). The Lycoming County Landfill had a permitted limit in 2009 of 1,600 ADV (average daily tons) per day. In 2009, the five-County Region was disposing of approximately 1,000 tons per day at the Lycoming County Landfill. At this rate of disposal, the Lycoming County Landfill was set to reach its useful life sometime in 2013. The projected total waste tonnage (including Residual Waste) that will need to be landfilled by the five-County Region in 2020 is approximately 319,400 tons (about 1,225 tons per day, 5½ days per week basis - including all 5 waste streams discussed in Section 1.3). Based on the anticipated waste volumes requiring disposal by the five-County Region in 2020 and the additional waste tonnages that are anticipated to be disposed of by Northumberland County at the Lycoming County Landfill, an expansion of the current disposal facility is necessary.

The total material recycled in the five-County Region in 2009 was 69,116 tons. At the current recycling rate per capita, the estimated recycled tonnage for the year 2020 is 71,007, or 272 tons per day (assuming 5 days per week). (See Table 3.1-3) However, if the Recycling rate increases to 35%, this total will increase to 73,883 tons (or 283 tons per day) by 2020. (See Table 3.1-4) Based on these volumes, and the current

processing capability of the local MRFs, expansions are necessary to sustain the anticipated five-County Regional demands.

The five-County Region has expressed a desire to expand the current recyclables collection program, as well as ensure that the maximum number of residents is being offered a location to drop-off recyclables. In order to satisfy the needs of the five-County Region, some changes need to be made to the current waste management system. The No-Action Alternative may seriously limit the prospects of expanding recycling services in the five-County Region, as requested by virtually all of the five Stakeholder Groups for this study.

Therefore, the No-Action Alternative does NOT meet the needs of this ten-year solid waste management planning mandate.

Landfill

The Lycoming County Landfill has recently received a permit from the Pennsylvania Department of Environmental Protection (PADEP) to develop two new lined landfill cells, Cell 11 and Cell 12 (horizontal expansion) within the existing permitted area of its site. These two cells will provide at least 10 years of additional site life for the landfill's service area (which is, essentially, the entire five-County Region). Construction activities are beginning on this project.

The Clinton County Solid Waste Authority (Authority) recently received approval for an expansion to its landfill. The existing closed disposal area would be expanded by 75 acres. The permit application proposed to remove the historic waste from the existing closed disposal area and place it in a lined disposal area. At final grade, the expansion would add approximately 14 million cubic yards of airspace. The Authority also proposed an increase to the average daily volume (ADV) and maximum daily volume (MDV) to 1,700 tons per day ADV and 2,000 tons per day for MDV. The (up to) 500 tons per day increase would come from the proposed addition of a rail line. The actual life of the expansion is anticipated to be 23 years based on an average intake of 1,700 tons per day, but the Authority was not proposing an increase in waste being transported by over-the-road vehicles. Construction should begin shortly on this project.

Together, the Lycoming County Landfill and the Clinton County Landfill (the two historically highest volume facilities in the region) can provide greater than 100 percent of the disposal needs of the five-county Region for the next ten years. In addition, eleven (11) additional facilities are included in this Plan with a total committed capacity from all 13 facilities of 1,245,900 tons (compared to the projected need of 252,600 tons).

Landfill Gas Recovery

The Lycoming County Landfill currently operates a landfill gas collection and control system (GCCS) to capture and destroy methane emissions generated by the decomposition of organic wastes within the landfill. This landfill gas (LFG) (50% methane/50% carbon dioxide) is currently either flared or beneficially utilized in a landfill gas to energy (LFGE) system via combustion in two CAT 3516 reciprocating engine generator sets (gen sets) or used in heating boilers onsite. The gen sets generate electricity and waste heat. The electricity is currently net metered and sold to the PPL grid. A portion of the waste heat from the engines is used to heat buildings on the landfill site. LFG is also used to operate boilers used to heat a building at the landfill. Based on future projected waste filling rates, and subsequent LFG generation, much more LFG than can be currently utilized will be generated at the landfill in the future. Lycoming County therefore negotiated a power purchase agreement with the Federal Bureau of Prison's Allenwood facility adjacent to the landfill.

The agreement specifies a level of electric generation that will be provided by the LFG fired gen sets at the landfill to the prison facility to offset current electric demand with alternative energy generation. A specific compensation schedule was also negotiated as part of the agreement. The electric generation capacity required by the prison is greater than the current capacity of the landfill's LFGE system and therefore the system needs to be expanded to meet the requirements of the power purchase agreement.

To address the LFGE expansion requirements, Lycoming County released a Request for Proposals (RFP) on November 12, 2010 for Landfill Gas Energy Production at the Lycoming County Landfill in Montgomery, PA. The purpose of the RFP was to identify a private LFGE developer who would design, build, finance and operate the LFGE system to supply electricity to the prison facility. RFP submissions were accepted by the County until December 27th, 2010 and were opened at a County Commissioner's meeting on December 28th. Lycoming County selected Pennsylvania Power and Light Renewable Energy (PPLRE) as the developer to update and expand the current LFGE system and potentially develop further uses for the expected excess LFG that will be generated at the landfill within the next 10 – 20 years.

Combustion (Waste-to-Energy)

The projected cost of a new waste-to-energy facility is one of the biggest deterrents to its consideration or potential development in this Region. Based on the waste tonnages currently generated by the five-County Region, it is assumed that a WTE facility sized nominally at 750 TPD +/- may be appropriate. In a recent (2007) analysis conducted by Barton & Loguidice for another client, the estimated capital costs to develop, permit and construct a 750 TPD WTE facility are in the magnitude of $150 to $200 million. In the other study, the costs of WTE development were found to be significantly higher than the costs of developing a new landfill. Clearly, unless there is some driving set of regional conditions that eliminates conventional (i.e. landfill) waste disposal

technology, WTE is not the most cost-effective option to consider, and is not worthy of further consideration here.

Refuse-Derived Fuel (RDF)

RDF project development requires a large energy user that is willing and able to burn the RDF fuel in its boiler. The PADEP restrictions and permitting requirements on burning RDF in a conventional boiler, requiring a permit as if it is a WTE facility, are severe restrictions on this technology, in addition to its high equipment and capital costs. This is not a feasible option for this five-County Region, unless a large industry with a specific RDF fuel need (i.e. looking to substitute RDF for coal in a boiler), is willing to make a large financial commitment to project development, and thus dictates a second look at this option.

Biogasification

Use of municipal solid waste as a biogas process feedstock has received some renewed interest recently, but no commercial-scale facilities are known to have been successfully developed in the United States using this technology. Therefore, this is considered to be in its developmental stages, and is not considered to be a proven technology at this time.

Composting/Co-Composting

A municipal waste composting project is moderately capital-intensive, with typical tipping fees being reported in the $75-100 per ton range based on the tonnage processed. The number of municipal waste composting facilities in the US has held constant at about 15-20 facilities over the past decade or more; some have closed, and a few others have opened. Few new mixed waste composting projects are currently being considered or developed. Glass contamination of the compost product and small plastics can significantly reduce the sales value of mixed-waste-produced compost. Instead, many, new composting facilities are designed to process source-segregated organics, which can provide for a much cleaner end-product.

Typically, the economic feasibility of MSW composting is highly dependent on the cost of other disposal alternatives (e.g. landfilling) that are available for a region and also upon the quality of the product and local markets of the compost end-product produced. Where landfilling is available at a relatively economical price, and where there are no other critical environmental issues ruling out continued landfilling, composting is not typically cost-competitive with landfills in most areas. However, segregated-organics composting as a component of a waste management system that includes landfilling may be found to meet increased waste diversion and recycling goals, extend landfill life, and result in a system that is still reasonably economical. Larger facilities (several hundred tons per day or more) can help improve compost system economics.

Emerging Waste Conversion Technologies

While some emerging technologies show real promise, such as plasma arc gasification, the fact remains that this is, as titled, an emerging technology. It also carries a high capital cost. As such, it is not believed to be appropriate for a public entity to invest large sums of money in a developing technology. Therefore, it is not recommended that this technology be implemented in the five-County Region by any public entity. The status of development and commercial use of currently termed "emerging" technologies can again be assessed in the future, with the next plan update, if necessary.

5.8 Waste and Recycling Recommendations

The following waste and recycling management system is recommended for the five-County Study Region. The reasons for recommending implementation of this selected system of waste and recyclables management are as follows:

- Meets Public Goals – This recommended system was selected on its technical, economical, environmental and long-term merits. It meets the requirements to provide for 10 years of disposal capacity and to propose a system to attain an ultimate goal of increasing the amount of recycling available to residents.
- Cost-Effectiveness – Haulers can select from a list of designated disposal facilities. Haulers will have the option of selecting the designated processing/disposal facility that offers the best opportunity to meet their individual needs to deliver MSW collected from the five-County Region.
- System Flexibility – The Counties have not committed specific amounts of waste to any of the disposal facilities designated in this five-County Regional Plan. Therefore, if a hauler, municipality or business can secure a more competitive tipping fee at a facility other than those designated, additional facilities can be added as opportunities arise. Having a number of facilities available results in competition that helps minimize costs.
- Adequate Disposal Capacity – The system has more than adequate capacity to manage all municipal waste and recyclables generated in the five Counties. There is no need to seek additional facilities or consider other management options unless a petition to add a site is received by the Counties.
- Logical Extension of Existing System – Each of the five Counties has a professional staff that currently engages in waste handling, recycling, yard waste composting, public education and financial management activities. However, these professional staffs are stretched on budgets and available time, and a regional approach to enhancing and expanding recycling and waste management opportunities will benefit all Counties in the Region, as efforts are coordinated and knowledge is pooled.

5.9 Collection of Refuse and Recycling

MSW Collection

Waste collection is a local municipal responsibility. The collection methods for municipal solid waste (MSW) that are practical for this region include municipal collection, contracted collection, subscription collection and drop-off/ transfer collection.

In the five-County Region, Lewisburg Borough is the only municipality currently utilizing municipal collection. Municipal collection can be beneficial because it regulates the amount of trucks on the roadways as well as the days and times that refuse is collected. Unfortunately, a municipal collection program is capital intensive and requires a significant amount of money for start up for the purchasing of vehicles and equipment.

Contracted collection (municipalities typically bid for refuse and/or recycling collection and disposal/recycling services with a single hauler) can be beneficial to municipalities. Contracted collection allows municipalities to request specific refuse and recycling collection services, which will benefit their residents. Contracted collection allows a hauler to become more efficient in its collection routes, and often results in savings to residents of 25-33% compared to similar services provided through a private subscription program. Often, bundled services (waste and recycling pickups, bulk item pickups, education, etc.) can be part of one municipal contract with resulting "bundled" cost savings. Contracted collection also reduces the number of refuse collection vehicles on the roadway and related environmental impacts of truck traffic.

Subscription collection (individual contracts between haulers and customers) is the dominant method currently in use in the five-County Region. With subscription collection, residents can choose their own waste hauler, which allows them to subscribe with the hauler who may offer the best rates or the collection service that is most compatible with the resident's needs. Subscription collection is also beneficial for small waste haulers because it allows this type of waste hauler to be able to remain competitive in the municipality and continue to offer waste collection services on a small scale. Based on PADEP clarifications, it may be difficult to comply with Act 101 recycling requirements by using a subscription collection system to collect recyclables in municipalities that are mandated to recycle under Act 101.

The Plan acknowledges that each of these collection systems appears to be feasible in portions of the five-County Region. Individual municipalities will retain the choice of what kind of waste and recycling system they wish to have in their community. As discussed in numerous Stakeholder group meetings, this Plan recommends that municipalities consider bidding for services, adding or bundling multiple services in a municipal bid, or possibly saving its residents money through municipality-wide bidding for common services in an open and competitive format. Multi-municipal bids may even be used to take advantage of economies of scale, or to help provide services where subscription haulers are reluctant to serve.

Contracted collection services can be modeled around the municipality's needs. Some examples of what these contracts may include (this is not a comprehensive list) are weekly or bi-weekly curbside refuse bag collection (unlimited or a specific quantity of bags); pay-as-you-throw refuse bag collection (can be the only collection service offered or paired with a curbside bag collection program that limits the quantity of bags); weekly, bi-weekly or monthly recyclables collection (variety of recyclables collected can be stated in the contract or negotiated between the municipality and the hauler); bulk item collection (frequency and items accepted can vary); and leaf and yard waste collection (frequency and items collected can vary). The bid can specify whether the hauler or the municipality will bill the customers for services and can even include collection of a local recycling services fee in the customer bill, which can be used to repay the municipality for managing the contract, providing education, etc.

The Plan acknowledges that many municipalities will continue to use the method of subscription refuse collection when it benefits their residents. The subscription collection method can allow small waste haulers to remain competitive as well as provide residents with the opportunity to select their own waste hauler based on costs and needs. The subscription collection method involves the least amount of responsibility by the municipality. Subscription collection may be beneficial for municipalities who are not mandated to recycle under Act 101, whose municipality contains a variety of waste haulers and whose municipality does not have the means necessary to monitor refuse collection. The Plan recommends municipalities who use subscription collection enter into discussions with their waste haulers to provide increased recycling opportunities for their residents. A sample ordinance is in included in Appendix E that requires haulers providing subscription collection to also collect recyclables curbside.

Recycling Collection

Similar to waste collection, recyclables collection is a local municipal responsibility. The collection methods for recycling are similar to the collection methods for residential waste. Recycling can be collected through a municipal collection, contracted collection, subscription collection or drop-off/transfer collection. The benefits of these collection methods are similar for recycling as for refuse collection. Based on stakeholder meetings, the counties and stakeholder groups would like to increase opportunities to recycle in the five-County Region. In most of the five-County Region's municipalities, where subscription collection is prevalent, residents and businesses may not be receiving (or may not even be offered as an option) recyclables collection. Municipalities are only required to collect recyclables when they are mandated to do so (by population and density) under Act 101. For this reason, the Plan encourages the municipalities with subscription collection services to work with their waste haulers to provide increased recycling opportunities for their residents.

A municipal bid contract is an option for municipalities that wish to use a private hauler to add a recycling program to their municipal services. The bid could be just for recyclables collection, or could be bundled with a waste collection bid contract. Recycling program costs can be included in the fees to residents and businesses.

In regard to curbside recycling collection, haulers can collect recyclables using three methods; source-separated, dual-stream and single-stream. Currently, the Lycoming County MRF, the Bloomsburg MRF and the JAWS MRF, which accept a large portion of the regions recyclables, only accept materials that are source-separated. The Lycoming County RMS is considering plans to convert to a dual-stream acceptance facility. There are reports that single-stream recycling opportunities, with shipping to out-of-county facilities, are available in portions of the five-County Region.

A pilot-program that studies the efficiencies of drop-off sites for recyclables versus curbside collection of recyclables may show that drop-offs provide the same recycling service as curbside or better. The Counties want to find the most efficient and cost effective collection program for recyclables through the pilot-program so as to give their residents the best recyclables collection service they can offer.

During the Planning process, there was considerable discussion regarding the possibility of recyclables collection by Subscription in mandated and non-mandated communities. The PADEP issued a memo discussing their concerns about this possibility, and that memo is included in Appendix I, since it is not currently being proposed within the Region but may within the 10-year planning period.

5.10 Transportation of Refuse and Recycling

Municipal Solid Waste (MSW)

There are several ways that waste can be transported to a disposal facility. Residents or businesses can transport their waste directly to a disposal facility; waste haulers can collect waste at curbside and transport it to a disposal facility; or municipalities can collect waste at curbside and transport it to a disposal facility. Waste can also be taken to a regional transfer station for consolidation and transportation to an ultimate disposal site.

Within the geographic boundaries of the five-County Region, there is 1 MSW landfill, 2 permitted transfer stations, and 1 pending transfer station that accept waste.

Lycoming County is currently considering an upgrade or relocation of the Lycoming County Transfer Station, located in Williamsport, to improve the efficiency of the operation. Due to the current situation at the facility, and the interest in using the transfer station property to satisfy growing land needs of Penn College, Lycoming County is considering alternate locations. Selecting a new site will also lessen impacts from current truck queuing on local roads during peak facility use.

Recycling

As with MSW, recyclables can be transported in several ways to a collection or processing facility: directly by residents and businesses, by waste haulers, or by municipalities. Facilities can include stand-alone drop-off sites, drop-offs at transfer stations and landfills, MRFs, or even directly to markets. Ultimately, the goal is for all segregated recyclables to be shipped to markets for reuse, or reused locally (such as inert materials that can be used for pipe bedding or aggregate).

In general, any improvements that can be made in the hauling of recyclables to collection and processing sites (by municipal haulers, private haulers, hauling of drop-off containers, etc.) are supported by this Plan. As recycling collection opportunities expand in the region, the hauling of these recyclables to multiple outlets by the collectors is probably the most efficient form of transport of collected recyclables.

5.11 Processing/Disposal of Refuse and Recycling

Waste Processing Alternatives

Because of the significant excess in available capacity within a relatively close proximity of the five-County Region, capital-intensive alternative methods for processing the five-County Region's municipal waste were not seriously considered. These alternative methods included:

- Construction of a new publicly-owned waste-to-energy facility (incinerator).
- Construction of a new publicly-owned refuse-derived fuel (RDF) facility.
- Construction of a new biogasification facility.
- Construction of a new publicly-owned composting facility.
- Construction of a waste conversion technology facility.

The alternative technologies of Biogasification, Pyrolysis, Gasification and Plasma Arc Gasification have a high risk factor. These technologies have limited operating experience at only small scales, previous failures and trouble becoming large scale operations. For these reasons, these are not recommended alternatives for this Region at this time.

The approved expansion of the Clinton County Landfill and the Lycoming County Landfill will provide enough capacity to take 100% of the waste from the five counties for more than the ten year planning period (if necessary); and the Solicitation of Interest resulted in even more landfill disposal capacity available to be placed under contract for this Region. Landfill disposal capacity is relatively inexpensive compared to most processing alternatives listed above. For this reason, the waste processing alternatives mentioned above are not considered feasible options for the Counties at this time (source separated household organics (SSO) composting can be further analyzed if waste diversion from the landfills is determined to be of value in the Region, since SSO diversions can yield anywhere from 10 to 30% waste reduction).

MSW Waste Disposal

The Counties are responsible for managing the safe disposal of their municipal waste from within the five-County Region. The system described in this Plan (see Chapter 6) helps ensure that municipal waste generated in Columbia, Lycoming, Montour, Snyder and Union Counties will be delivered to facilities that are legally permitted and contracted with the five Counties, consistent with Act 101 requirements.

As part of this five-County Regional Plan, a Solicitation of Interest (SOI) was issued to identify disposal facilities that wished to be included in the Plan as designated disposal sites. The SOI process, as well as the process for a facility to be added to the Plan at a later time, is summarized in Chapter 6. Under this Menu Plan, any and all pre-qualified facilities (through a review of submissions in response to the SOI) that enter long-term disposal contracts with the implementing entity for the Regional Plan are identified in the plan as designated facilities, and will be permitted to accept municipal waste from the five-County Region under this Plan. There is a procedure in the Plan to add new designated facilities to the Plan in the future, when it is to the benefit of the Counties, individual municipalities, haulers, or businesses and institutions in the Region.

The Lycoming County Landfill and the Clinton County Landfill have each recently received permit approvals for landfill expansions, and this Plan supports these expansion projects, as these two facilities serve the vast majority of current waste disposal needs of the five-County Region.

Having multiple facilities available promotes competition that will help to keep the system cost-effective. Having several facilities should also promote efficiency by giving haulers the option of using the closest facility. Maintaining hauler discretion to use the designated facility of its choice provides maximum flexibility to independent haulers. As noted above, the disposal system is more than sufficient to meet the disposal needs of the Region. The Plan recommends the five-County Region does not explore further waste processing/disposal options for this 10-year planning period.

The process used to solicit interested disposal facilities ensures that all facilities anywhere in the United States have an opportunity to be included. The process used to solicit disposal sites was fair, open, and competitive. Additional disposal sites can petition to be added to the Plan in the future.

With this in mind, use of publicly and privately owned landfills, supplemented by a commitment to increase recycling, was selected as the Municipal Waste Management Program.

Recyclables Processing

The Lycoming County Resource Management Services' MRF has a current capacity of 70-80 tons per day of material in the 60,000 sq. ft. facility (with an average of roughly 45 tons per day). New upgrades and an expansion of the facility will allow for faster

processing, with the addition of more floor space and new conveyors and sorting areas. In order to minimize costs, the recycling center operates using inmates from the County's prison system.

The LCRMS has considered the possibility of accepting dual-stream recyclables (minus glass, which would still be accepted at drop-offs). This would allow haulers to provide recycling to more residents and small businesses than are currently able to participate in the recycling program. This potential LCRMS upgrade would provide increased flexibility for area recyclables collectors to pick up materials, either source separated or as a dual-stream mix. This would give haulers additional collection options, and may lower their respective costs to enter the recyclables collection business. This may, in turn, expand the volumes of recyclables collected in the Region. This Plan supports the expansion of MRF processing capabilities in the Region into dual-stream.

LCRMS is also exploring the option of offering recycling to more out-of County municipalities in the Region if the arrangements are favorable, (i.e. more permanent drop-off sites, and full containers for transport). In addition, it is researching the option of offering more materials (such as chip board) for collection at the drop-off sites.

The JAWS Recycling MRF would like to expand collection to include electronics if resources are available. Additionally, the JAWS MRF is not operating at capacity, and is able to accept and process more material, provided it meets their quality standards. This Plan acknowledges and supports the existing source-separated and limited mixed materials MRFs that currently operate in the region. Support of, and growth of, the Region's current recycling industry in the Region is a goal of this Plan, whether it is source-separated, limited mix, or dual-stream.

It is recommended that drop-off sites that have been closed due to loss of funding throughout the region be re-established, and that new drop-off sites be developed where needed in the region. Snyder County recently received a grant in excess of $300,000, and the County Commissioners hope to use this funding to expand their drop-off facilities. The County is also considering the addition of permanent drop-off sites using the PADEP grant funds. Use of the grant funds in Snyder County which is consistent with and supportive of a regional recyclables collection and processing program is recommended. Since the LCRMS currently services the Snyder County drop-off sites, and since Lycoming County is investing in upgrading its MRF to add dual-stream capabilities, it is recommended that strong consideration be given to reallocating the PADEP grant funds to new permanent recyclables drop-off sites and improvements to existing drop-off sites in the County.

To support the expansion of current recycling programs in the region, the Solicitation of Interest document was expanded to seek both solid waste disposal capacity, and support for methods to sustain an enhanced Integrated Waste and Recyclables Management Program for the 5-County Region. Projected costs for the individual Integrated Waste and Recycling Program items were generated and supplied to the respondents, and methods to support those needs were discussed with those facilities willing to assist.

5.12 Electronics Recycling

Electronic equipment contains metals that, if not properly managed or contained, can become hazardous wastes. Some of the materials contained in electronics include:

- Cadmium - the largest source of cadmium in municipal waste is rechargeable nickel-cadmium (NiCad) batteries.
- Lead - old monitors and televisions contain a cathode ray tube (CRT) that contains leaded glass. CRTs are the largest source of lead in municipal waste.
- Mercury - some electronic equipment also contains recoverable quantities of mercury.

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 the Department of Environmental Protection and for enforcement; establishes the Electronic Materials Recycling Account in the General Fund; and prescribes penalties for noncompliance.

A covered device is a covered computer device and covered television device marketed and intended for use by a consumer. A further description of these items is as follows:

- Covered computer device - A desktop or notebook computer or computer monitor or peripheral, marketed and intended for use by a consumer.
- Covered television device - An electronic device that contains a tuner that locks on to a selected carrier frequency and is capable of receiving and displaying television or video programming via broadcast, cable or satellite, including, without limitation, any direct view or projection television with a viewable screen of four inches or larger whose display technology is based on cathode ray tube, plasma, liquid crystal, digital light processing, liquid crystal on silicon, silicon crystal reflective display, light emitting diode or similar technology marketed and intended for use by a consumer primarily for personal purposes.
- Peripheral- A keyboard, printer or any other device sold exclusively for external use with a computer that provides input into or output from the computer.

The following website contains information on PA DEP's guidelines for electronics recycling as well as links to information on EPA's electronic recycling guidelines.

http://www.portal.state.pa.us/portal/server.pt/communitv/househ0Id/14079/electronicsmanagement program/589592

5.13 Construction and Demolition Waste

Much of the construction and demolition (C&D) waste generated in Columbia, Lycoming, Montour, Snyder, and Union Counties is recycled, disposed of at permitted municipal or C&D waste landfills, or handled otherwise. According to Table A.1, approximately 17,500 tons of C&D waste originating from the five-County Region was disposed of at state-permitted disposal facilities in 2009. The Counties should consider investigating other options for the safe handling or disposal of small volumes of C&D waste such as:

1. Educating citizens about the availability of safe and legal opportunities to dispose of these materials;
    - Identifying recycling and reuse opportunities for select C&D materials;
    - Educating residents about the option to rent dumpsters or roll-off containers for collection and disposal of wastes created during remodeling projects;
    - Providing a drop-off site for these materials; and
    - Encouraging the enforcement of municipal waste ordinances as they apply to illegal dumping.

This Plan will provide for acceptance of C&D material at one or more of the designated disposal facilities in the Disposal Capacity Agreements.

5.14 Household Hazardous Waste

In 2004, Snyder County held the first Household Hazardous Waste (HHW) collection event in the Region. None of the other counties or municipalities in the Region currently offers HHW collection events for their residents, although there are special collection events in place in some counties for many hard-to-recycle items. Snyder County completed another HHW event in the fall of 2011. Lycoming, Snyder and Union County, along with the Town of Bloomsburg, advertise special collection events on their websites, and provide locations where residents can recycle items, such as electronics, oil, batteries, and other items.

Residents are also encouraged to check with large retail stores and chains such as Wal-Mart, Home Depot, Lowes, Radio Shack, Staples, Best Buy, and Weis Markets for recycling programs that may be available in local areas. Many items, such as used motor oil, may also be recycled at some Pep Boys, Jiffy Lube, and some local service stations. Residents are encouraged to call local county recycling coordinators or check with their local municipal or county websites for details. Market conditions dictate what items may be accepted, so residents should check new listings throughout the year.

The Counties have expressed a need for more HHW collection events within their counties, but unfortunately the funds to support these collection events are not available at this time. The Plan recommends the development of a program sustainability fee which can in turn be used to support HHW collection events within the five counties.

The Plan also recommends the counties partner to conduct HHW collections which will reach more county residents. These partnerships can be between counties, municipalities, and/or businesses. Additionally, the counties which currently offer special collection events may consider expansion of their current collection programs if the funding for this expansion becomes available through the program sustainability fee. The Plan recommends the counties which organize a HHW or special collection event advertise these events through local newspapers, county newsletters and county websites. Educating the public on these collection events, i.e. what is accepted, why it should be recycled, when the collection event is, who can participate in the event, etc., will ensure the maximum amount of participants at each collection event.

In addition to supporting HHW collection events through the use of the program sustainability fee funds, the Pennsylvania Department of Environmental Protection (PA DEP) has an Act 190 Grant titled Household Hazardous Waste Collection and Disposal Grant in which municipalities and counties that establish HHW collection programs may be reimbursed up to 50% of approved costs for the collection program. This grant cannot exceed $100,000. The Plan recommends all counties and/or municipalities which organize a HHW collection event apply for this grant.

5.15 Pharmaceutical Waste

The U.S. Drug Enforcement Administration (DEA) sponsored a collection program with local law enforcement agencies and police departments for expired pharmaceuticals in September of 2010 called the National Take Back Day. There were several locations in the Region participating in the program. Supplemental DEA collections were completed in 2011 and 2012, and additional programs will be completed in the future. These events will be advertised through the regional recycling coordinators and on the following website. http://www.deadiversion.usdoj.gov/drug_disposal/takeback/

The Plan recommends the recycling coordinators in each county continue to monitor the websites to ensure the counties take advantage of the National Take Back Day each year that it is offered. The Plan also lists multiple websites that residents can visit to find information on pharmacies that will take medication in need of disposal. These websites are listed in the household hazardous waste section in Chapter 8.

The Plan recommends the counties place information on their websites, in their newsletters and in the local newsprint pertaining to pharmaceuticals collection. The information can include businesses which will take certain pharmaceutical items and local collection events. Additionally, the Plan recommends the counties consider partnering for pharmaceuticals collections in the region. The partnering effort may increase the number of participants in the collection events, i.e. residents who may have missed one pharmaceuticals collection, can still participate in another collection that may be offered in the adjoining county. Collection sites should be established in each of the five counties for this one-day annual event.

5.16 Marcellus Shale

The Marcellus Shale deep drilling operations generate drill cuttings, wastewater treatment sludges, and other residuals that will have a growing impact on municipal waste landfills in the region. By contracting for guaranteed landfill disposal capacity in Disposal Capacity Agreements, the Region will assure that it retains sufficient capacity to meet its long-term needs. The Wayne Township Landfill, the Antrim Landfill, and the Northern Tier Regional landfills are three facilities within the Marcellus play that are currently accepting residuals.

5.17 Illegal Dumping

According to PA CleanWays there are some possible solutions to illegal dumping. These solutions include:

- Organize a Cleanup
  - Cleanups are an effective way to combat littering and illegal dumping. Cleanups help to build ownership, restore community pride, and send a message that dumping will no longer be tolerated.
- Organize a special collection event
  - Special one-day collection events are worthwhile. These special collection opportunities are very effective when routinely offered, such as each spring or fall as a community cleanup day, but are also successful when offered as community resources permit. These special collections commonly target hard-to-dispose of materials such as tires, appliances, scrap metal, computers, electronics, and household hazardous waste. Most of these items account for what is found in illegal dumps.
- Physical deterrents
  - The placing of guard rails or mounds of dirt at pull-off areas, as well as the planting of trees, can help provide a barrier that will limit accessibility to a site for future dumping.
- Site monitoring and maintenance
  - It is important to monitor a site after an area has been cleaned in order to watch for subsequent dumping or littering, to keep the site clean, and to report any incriminating evidence to the proper enforcement agency. Keeping the site clean makes it easier to spot new trash and discourages subsequent dumping, since trash attracts trash.
  - Enforcement, with site monitor support, effectively decreases the incidents of dumping and littering. When word gets out that dumping activity will not be tolerated and violators will be caught and prosecuted, dumping decreases.
- Community education
  - Intentional illegal dumping and littering are social problems that require a shift in attitudes and practices. Education is the key to changing values, habits, and attitudes. Education programs should be tailored to inform the community and can take many forms, such as, school/community presentations, press releases, radio and newspaper ads, and publications.

- Enforcement of existing laws
    - Any improper disposal of trash is illegal and violators can be prosecuted. Numerous Pennsylvania agencies enforce laws addressing improper disposal of trash. The Pennsylvania General Assembly creates and enacts our littering and dumping laws. County and municipal governments create and enact ordinances that are specific within their local boundaries.

Landfills should be asked, possibly through the Solicitation of Interest for long-term disposal capacity, to donate some discounted or free landfill capacity each year to the Region's open dumping cleanup efforts.

5.18 Open Burning

Open burning of wastes is an emotionally charged issue that elicits strong responses both in favor of and in opposition to the right to burn waste. Many reasons can be given to stop the open burning of waste, including the potential damage to health and the loss of recyclable materials. PADEP requires anti-burning ordinances, at least for recyclables, in mandated communities and in communities that are receiving Section 902 and 904 grant funding from PADEP for recycling programs. With that said, burn ban ordinances are a local issue that each municipality needs to determine whether or not to implement as a local ordinance. To aid the process, this Plan offers several versions of anti-burn ordinances from other communities that have instituted them. These sample ordinances are included in Appendix H. Additionally, this Appendix includes sample educational materials on open burning, which counties and municipalities can use to educate their residents about the harms and risks associated with this practice.

5.19 Expansion of County Recycling Programs

The information presented in this Plan demonstrates that there is still considerable room for improvement in recycling. Although all of these ideas may not work in each county, there needs to be a greater emphasis on cooperation, with an analysis of what can realistically be achieved. With decreased grant money to spend on programs, each county must decide what its achievable goals are, and take incremental steps toward realizing the desired end result.

Based on the stakeholder meetings, the Plan recommends the following options for expanding the recycling program.

- Expand Education Programs via Regional Web Site - Explore the option of a single, multi-county Recycling Website. There is a varying level of recycling education and outreach in the area. A website with consistent information across the five-County Region would be beneficial. This would not replace recycling information already publicized on various county or municipal websites, but it would be most useful for counties with smaller budgets or less staff, and to standardize information. The regional website should contain links to any existing websites for more specific local information. It would be especially useful if new materials are added, to publicize special collections,

and to explain dual-stream recycling, should this new collection method take effect. It should explain new Regional or state/federal programs such as electronics and pharmaceutical collections, and new state and federal mandates. It would highlight private sector recycling initiatives for items such as food waste, fluorescent bulbs, clothing, plastic bags, furniture, and other drop off items, difficult to recycle items, or new recycling initiatives.

- Expand Education Programs in Schools – This could include initiatives wherein local landfills are encouraged to provide tours to local school groups, direct outreach programs for Earth Day activities, Regional recycling contests, etc., with the focus on children between Elementary and High School age.
- Expand Education Programs for Business and Industry – As a significant source of MSW generation, local Business and Industry facilities could benefit directly through enhanced education. This includes not only the provision of educational information regarding proper waste management handling and disposal, but also the initiation of a "business-to-business" communication opportunity so that "waste" generators could find potential demand for those materials.
- Single/Dual-Stream Recycling - These two options should be implemented where feasible, with the cooperation of the local private haulers. There are many successful recycling programs in the region, most accepting source-separated materials, and those should continue in their current form. Where processing facilities make this feasible, single and/or dual-stream recycling should be encouraged as an option in rural areas or in areas where the current curbside collection is limited to a few items. Education must be consistent to maintain high quality of materials.
- Expand Drop-off Hours - It is generally less expensive to expand the hours of existing drop-off collection sites rather than to add new sites. Counties and municipalities should explore the option of increased hours. They should also explore the idea of instituting a fee at drop-off collection points for those municipal sites which will not currently accept outside customers. Again, this option might be less costly than opening new drop-off sites, although additional drop-off sites for underserved areas are also recommended.
- Contact farmers concerning their interest in food waste composting, or the acceptance of additional leaves and yard waste (see Appendix I for definitions of acceptable yard waste). With a large number of colleges, institutions, and large grocery chains in the region, an emphasis should be made to expand food waste composting programs.
- Increase educational services to commercial accounts, large and small businesses, and schools and institutions.
- Contact large businesses such as Weis Markets, Wegmans, WalMart, Lowe's, Home Depot and others concerning their interest in sponsoring recycling events, or in special collections.
- Provide funding for special collections, although funding sources for this effort would need to be identified.
- Provide education for recycling in the five-County Regional schools
- Provide education to residents regarding the health hazards that are caused by open burning
- Educate the population regarding how to discard household hazardous wastes by listing resources for disposal of these wastes.
- Continue with pharmaceutical waste collections as well as hard-to-dispose items

- Investigate expanding the types of materials collected curbside or at a local drop-off site.
- Select material commodities that are more cost-effective to collect.

The following recommendations are targeted at specific County programs:

Columbia County

- Provide additional funding for recycling coordinator's salary, and for outreach and materials for schools and community groups.
- Provide funding for special collections.
- Explore possibility of partnering with Town of Bloomsburg for special collections and drop-off events.
- Determine how to best reestablish recycling in those programs that have been reduced or eliminated by loss of the administrative fee.

Montour County

- Provide additional funding for recycling coordinator's salary and for educational outreach to schools and community groups. Funding sources for this effort would need to be identified.
- Provide funding for special collections.
- Explore the possibility of additional drop-off sites throughout the County.

Lycoming County

- Offer curbside dual-stream recycling if private haulers are not able to provide this service.
- Increase recycling of grass and leaves.
- Increase items accepted at drop-off points.

Snyder County

- Institute permanent drop-off sites, improve existing drop-off sites, and expand the hours of operation of existing drop-off sites.
- Provide additional funding for recycling coordinator's salary and for educational outreach to schools and community groups
- Reach out to schools to help with recycling education and programs.
- Continue the weekly column regarding issues and answers to recycling in the Snyder
- County Times
- Look for additional opportunities and funding to collect non-traditional recyclables.
- Explore the expansion of municipal yard waste collection sites.

Union County

- Expand the number of items collected at drop-offs to include chip board, unwanted mail and office paper which are currently available at some drop-offs, and plans to do so with the cooperation of the LCRMS. Expand special collections as markets increase for hard-to-recycle items.
- Explore the expansion of yard waste composting at additional drop-off sites.

5.20 Promotion of Recycling within the Municipality

For commercial recycling, currently proposed legislation, if enacted, may require local governments to take a more proactive approach to this effort. Local efforts will include enhanced education of residents and businesses, and possible increases in drop-off sites, along with a reevaluation of the types of recyclable materials to be included in the programs. However, some of the local markets (led by Wegmans and Weis Markets) are also becoming more proactive in recycling, with the potential to have very positive recycling results, and a subsequent reduction in commercial waste disposal.

As noted above, the majority of the municipalities in the five-County Region utilize drop-off sites for recycling, especially in the more rural areas. This system has been quite successful and results in relatively clean recyclables, although the volume of material would probably increase if curbside recycling was instituted in some locations.

The Lycoming County Resource Management Service (LCRMS) is currently considering expanding their MRF facility to handle dual-stream recyclables, which would enable some of the local haulers to participate in a modified curbside recycling program as an extension of the existing private subscription program for municipal waste. This is seen as a very positive step toward increased recycling in the five-County Region, if the system proves to be cost-effective to both the LCRMS and the haulers.

With regard to increasing residential recycling, local governments, as well as private hauling companies, may consider the implementation of Pay-As-You-Throw (PAYT) programs. These programs charge residents for waste removal services based on the quantity of material discarded, thus encouraging residents to recycle more. Some programs have a set rate per container, while others use a combination of a fixed fee plus a variable fee based on service. This type of program could be implemented by municipalities that are considering a switch to a single contract for municipal waste collection, although it appears unlikely that this will be done in large numbers across the Region given the preference for private subscription collections. However, implementation of this system by the private haulers, combined with the dual stream recycling program discussed above, has the potential to be very effective.

Currently over 200 municipalities in Pennsylvania have instituted these types of programs. The benefits of PAYT programs include:

- Fairness — each household pays based on its use of solid waste services
- Increased Recycling — residents have a financial incentive to recycle
- Waste Reduction — consumers become more aware that they can purchase recyclable packaging, avoid excessive packaging and consider alternatives to disposable products.

5.21 Recycling Revenues and Fees

From the County perspective, revenue associated with recycling is dependent on how recycling is conducted, and by whom. For instance, within the Region:

- Columbia County has a vital recycling program run by the Town of Bloomsburg, and 2 private companies (Team Green Recycling and JAWS), but the County was forced to discontinue 13 municipal recycling programs when they experienced revenue shortfalls from the loss of the landfill administrative fee. Revenues in Bloomsburg are reinvested in solid waste management issues for the Town, but the County receives no revenue from recycling.
- Lycoming County has a complex solid waste management program led by the LCRMS, which includes a recycling MRF and a waste disposal landfill. The LCRMS provides recycling services throughout the County, but also services drop-off sites in Union and Snyder Counties. Revenues associated with recycling are combined with revenues generated by the landfill for use in helping offset recycling program operational costs and in supporting expanded general solid waste management services.
- Montour County relies primarily on a private solid waste company (JAWS) to address recycling needs throughout the County, although the County receives no revenue associated with these recycled materials.
- Snyder County relies primarily on the LCRMS for recycling drop-off collections, although some communities contract with private recycling companies. The County receives no revenue associated with these recycled materials. Due to a lack of revenue and funding, Snyder County was forced to close recycling programs in the western region, discontinued some special collections and educational programs, and cut back on staff time.
- Union County has several curbside collection programs, as well as numerous drop-off locations. All of the drop-off locations are serviced by the LCRMS, and the County receives no revenue from recycling.
- A local hauling company has recently introduced an optional single-stream recycling collection program as part of its subscription contract offering. This new opportunity may increase recycling in some portions of the Region, although the revenue associated with this program will be retained by the private hauler.

The value of recycled materials is difficult to estimate, given that: the commodity price changes continuously, some recyclable materials have little or no value, and that (as discussed above) the actual revenue is collected by private, municipal or county entities, depending on location. However, in order to show the magnitude of recycling value in the Region, the individual recycling commodity tonnages for the five-County Region were obtained for 2011, and using average prices per commodity type, a total value was computed. Based on these values, the total recycling tonnage for 2011 was estimated at roughly 11,819 tons of material. The average commodity price for all recycling streams was approximately $100/ton, resulting in an estimated 2011 recycling value of $1.18 million. (See Table B.17 in Appendix B.)

As noted above, this revenue was distributed across multiple private and public entities, and the costs associated with the collection and processing of the recycled materials is not readily

available. However, this revenue contributed to the sustainability of the recycling programs in the Region.

The estimated avoided cost savings of not landfilling 11,819 tons of recyclables from the Region in 2011 is estimated to be approximately $615,000, based on an average tipping fee of approximately $52 at the Lycoming County RMS Landfill, where most waste from the Region is disposed. These disposal cost savings most often accrue to the haulers that collect and deliver their wastes to landfills, and if passed down to their customers, to individual homeowners and businesses. The avoided cost savings accruing to counties or their recycling programs are minimal if any, due to the fact that the counties do not generally collect or dispose of municipal waste in the Region.

Each of the five (5) counties in the Region could use additional revenue to cover operating costs, and to increase programs. Support from outside sources with the stabilization, enhancement and expansion of the current recycling programs in the Region would assist counties in many ways including:

- Increased special collections
- Increased hours and materials accepted at drop-off locations
- The possibility of additional, permanent drop-off sites
- Funding for Regional education outreach programs such as websites and brochures
- Provision of funding for municipal programs which were reduced or eliminated as a result of past revenue shortfalls, such as the elimination of the administrative fee.

Within the Solicitation of Interest (SOI) for Municipal Waste Processing/ Disposal Capacity, a provision was included requesting that Respondents include consideration for support for the Region's Integrated Waste and Recyclables Management Program enhancements. It was noted in the SOI that support of the Program was an optional component of the waste services contract ultimately executed by a successful Respondent; and failure to provide such requested program support in the ultimate waste services contract was not a sole basis for excluding a facility from eligibility to become a Designated Facility in the 5-County Regional Plan.

Of the facilities that responded to the September 2011 SOI submission, all respondents offered to participate in the Program, although the specific level of participation is yet to be determined as part of the Agreement with the Region. A summary of the responses is included in Appendix D.

Future sustainability of the various programs established in each county will be a function of multiple funding sources, including: revenues from recycling; voluntary fees collected from the SOI respondents and others; municipal and county contributions to the programs as part of the annual budget; and available local, state and federal grants.

In the event that these sources of funding are not sufficient to maintain the current level of solid waste management services (including recycling and special waste collection programs, as well as education and outreach programs), some of the current Regional activities may have to be suspended or reduced in scope. There are no current plans to eliminate services

within the Region, but it is understood that a significant change to the current programs could result in the need for a substantial revision to the Regional Solid Waste Management Plan.

5.22 Securing Waste Disposal Capacity for the Region for the next Ten Years

With its newly PADEP-permitted disposal capacity, the Lycoming County Landfill would technically be able to provide up to 100 percent of the needed MSW disposal capacity for the entire Region. Together, based on the capacity commitments discussed elsewhere herein, the Lycoming County Landfill and the Clinton County Landfill (the two historically highest volume facilities in the region) can provide greater than 100 percent of the disposal needs of the five-county Region for the next ten years.

To expand on this capacity assurance, a Solicitation of Interest (SOI) was issued in September of 2011, to pre-qualify interested disposal sites that meet minimum submission criteria, and to tentatively identify qualified facilities from the SOI process as designated facilities in the Plan. Upon receipt of the SOI responses in November, and evaluation of the submittals in December, a list of pre-qualified facilities were generated and recommended to the Regional Steering Committee. A memorandum from Terry Keene dated February 13, 2012 details the SOI process, responses and conclusions. See Appendix D for copies of the SOI, a listing of respondents, and a summary report of responses and recommendations. A designated facility, once a contract is executed, would be permitted to receive municipal wastes generated from the Region over the next ten years.

The submissions in response to the SOI contain contract maximum tipping fees that the disposal facility is allowed to charge for disposal of various wastes in the region over the next ten years. Haulers are free to negotiate tipping fees under these ceiling rates at their discretion on a case-by-case basis.

Once the Regional Plan is adopted by the five participating Counties, submitted to PADEP and approved, the Region then will have one year in which to execute disposal agreements with the pre-qualified disposal sites, although the current intent is to have disposal agreements in place by January 1, 2013. Proposed Disposal Capacity Agreement language has been prepared and was issued with the SOI. It is expected that one regional contract will be executed with each selected disposal site on behalf of the five-County Region. Negotiations with individual landfill companies will be initiated by the entity identified to implement the Regional Plan, to assure that adequate permitted disposal capacity is available for the Region's municipal waste disposal over the next ten years.

The initial term of agreement for the designated disposal facilities will be five years. The Regional Solid Waste Planning Committee will have the option to renew any or all disposal agreements for an additional term of five years.

5.23 Designated Waste Disposal Sites

Municipal waste generated within the Region may be disposed of at the following 13 pre-qualified designated disposal facilities, subject to proper execution of Waste Disposal Capacity Agreements with the pre-qualified disposal sites:

Disposal Facilities:

- Four Interstate Waste Services sites (Western Berks, Mostoller, Cumberland County and Sandy Run Landfills),
- Lycoming County Resource Management Services Landfill,
- Wayne Twp/Clinton County Landfill,
- Four Waste Management sites (Alliance, Grand Central Sanitary, Mountain View Reclamation and Shade Landfills),
- Two DeNaples facilities (Keystone Sanitary and Commonwealth Environmental Systems Landfills),
- Tunnel Hill Reclamation Landfill in Ohio.

5.24 Designated Regional Transfer Stations

It is acknowledged that transfer stations, both within and outside of the five-County Region, currently accept and transfer waste to disposal sites. As part of the Solicitation of Interest (SOI), any transfer station proposing to accept and transfer municipal waste from the 5-County Region was asked to enter an agreement with the 5-County Region, committing to:

1) deliver waste from the Region only to Designated Facilities listed in the 5-County Regional Plan, and further, agreeing to
2) accurately track and report (to the disposal site that waste is delivered to, and to the 5-County Region) the quantities and types of municipal waste accepted and transferred from the 5-County Region, by county of origin from which the transfer station receives the waste.

Based on the responses to the SOI, municipal waste generated within the Region may be transferred through the following Transfer Station facilities, each of which has submitted the requested documentation regarding their willingness to cooperate with the above listed items:

Transfer Stations:

- Waste Management's Coal Twp Transfer Facility
- Millville Solid Waste Transfer Station (Heaps)
- P.A. Waste Transfer, L.L.C. (also located in Coal Township)
- Lycoming County's Williamsport Transfer Station
- Mifflin County Solid Waste Authority Transfer Station (subject to confirmation and other details)

A draft form of Transfer Station Agreement is included with the SOI in Appendix D.

5.25 Integrated Waste and Recycling Program Sustainability Needs

As part of the Solicitation of Interest (SOI) for municipal waste disposal capacity, a series of Integrated Waste and Recycling Program Sustainability Needs were developed. These "sustainability needs" were based on discussions with the County Recycling Coordinators, information and recommendations collected from the Stakeholder Groups and Regional Steering Committee, and from an assessment of the current issues and concerns with the Region. The "sustainability needs" are defined (description and estimated annual cost) in Exhibit 1 of the SOI (see Appendix D), and specific recycling recommendations are further defined in Section 5.19 of the Plan.

This Regional Plan development process helped identify a number of recycling drop-off site deficiencies or upgrade needs in the Region. These proposed drop-off and transfer station enhancements and/ or new facilities, a part of the "sustainability needs" of the Region listed in the SOI, are presented graphically in Exhibit 6 of this Regional Plan.

A summary of these "sustainability needs" is shown in Table 5.25-1:

Table 5.25-1
Integrated Waste and Recycling Program
Sustainability Needs

1. Targeted Program Needs	
a. Support Services	$60,000
b. Targeting Commercial Sector	$0
c. Enhance Existing Curbside	$5,000
d. Enhance Existing Drop-Offs	$25,000
e. Support New Drop-offs	$50,000
f. Expand HHW Events	$120,000
g. Expand Special Collection Events	$48,000
h. Support Education and Waste Minim	$48,000
i. Support Bidding/Data Collection Options	$10,000
j. Support Illegal Dump Cleanups	$45,000
k. Standardization and Sustainability	$12,000
l. Increase Organics Collection/composting	$60,500
2. Additional Program Needs	
a. Reimbursement based on tonnage	$61,000
b. Per capita County distribution	$20,300
c. Discretionary Sustainability Support	$61,000

5.26 Addition of Landfills and Other Facilities to the Plan

It is possible that over the 10-year planning period, generators or collectors of municipal waste in the Region may wish to utilize a landfill that is not currently approved for acceptance of that waste. In addition, it is recommended that the Region annually review the list of Designated Disposal Facilities to determine whether the needs of the Region are being met, and that adequate disposal capacity is available for the remaining life of the Plan. At the point where this Plan was being implemented, the specific entity that will be assessing future facilities had not yet been determined, but it is recommended that the Regional Steering Committee (in whatever form that is recreated) be assigned this duty. In order to facilitate the addition of a landfill or other disposal site to the Plan, the following procedure has been established as part of this plan revision. This same form could be used in the event that a waste-to-energy facility was proposed in the Region.

If a PADEP-licensed hauler, or a municipality or a business desires to use a facility for disposing of municipal waste other than those currently included in this Plan, the following procedure is to be used:

1. A PADEP-licensed hauler, a municipality or a business must petition the Regional Plan's implementing entity using the one page form (see *Petition Form to Add a Landfill to Approved Plan* in Appendix E), to propose that a specific facility be added to the Plan.
2. Within 10 working days of receipt of the petition form, the Implementing Entity will forward a Solicitation of Interest (SOI) package to the facility being requested for inclusion in the Plan.
3. The SOI will require the same information as was required of those facilities that responded to the September 2011 SOI in order to assure fairness in the process.
3. Upon receipt of the completed SOI from the facility in question, the implementing entity will review and respond to the information submitted within 30 working days.
4. If the request for inclusion in the Plan is denied, the implementing entity will notify by letter the facility and the requesting hauler, municipality or business of the reason(s) for that denial.
5. If information in the completed SOI is approved as being complete and accurate, the implementing entity will initiate negotiations with the disposal facility. In the event that the negotiated terms are acceptable to both the implementing entity and the disposal facility, the implementing entity will issue a letter to the facility and to the requesting hauler, municipality or business that the facility is formally designated in the Plan for disposal of municipal waste generated in the Region.
6. At the same time, the implementing entity will notify by letter all Regional municipalities and PADEP that the disposal facility has been added to the Plan.
7. If required by PADEP, the Regional Plan will be updated to reflect inclusion of this new designated facility. All costs associated with notification of the Counties and municipalities involved, as well as to update the Regional Plan will be reimbursed by the disposal facility requesting to be added to the Plan.

5.27 Implementation Schedule

The above-referenced section of Act 101 requires that the Region submit to PADEP, within one year after PADEP approval of the Plan or Plan revision, copies of executed ordinances, contracts or other requirements to implement its approved Plan, that will be used to insure sufficient available capacity to properly dispose or process municipal waste that is expected to be generated within the County for the next 10 years.

Activities included in this category are:

1. Preparation and Implementation of a County Solid Waste Management Ordinance.
2. Execution of final contracts to assure adequate processing/ disposal capacity for the five-County Region.
3. Continuance of Regional Steering Committee discussions and plans to investigate support for the proposed Integrated Waste and Recyclables Management Program in the Region
4. Assistance to Mandated communities with Implementation
5. Development and dissemination of public education materials dealing with waste minimization, HHW and infectious wastes generated in the home.

Scheduled dates for completion of the aforementioned actions are:

1. County Solid Waste Ordinance
   a. 3/30/2012 – Draft Ordinance submitted to DEP
   b. 4/02/2012– Final version of Ordinance submitted to SWAC/Municipalities 8/06/2012 – Ordinance Adopted by County Commissioners

2. Disposal Capacity Agreements with Processing/ Disposal Facilities
   a. 9/15/2011 – Advertised Release of Solicitation of Interest for Processing/ Disposal Capacity Agreements
   b. 11/18/2011– Receipt of Responses to SOI
   c. 2/22/2012 – Presentation of final Consultant comments/ recommendations on Submittals to Regional Steering Committee
   d. 8/06/2012 – Formal County approval to enter into Disposal Capacity Agreements
   e. 9/01/2012 – Distribution of draft contracts to tentatively Designated Facilities
   f. 1/01/2013 – PADEP Approval of Regional Plan
   g. 1/31/2013 – Return of signed contracts to the County
   h. 3/31/2013 – Obtain County signatures and submit contracts to PADEP

   (Note that the PADEP allows a maximum of 1 year for final implementation of the Plan after final "Approval")

3. Assist Mandated communities
   a. 1/01/2014 – Enforcement of their mandated recycling ordinances
   b. 1/01/2014 – Educating residents and the commercial, municipal and institutional establishments
   c. 1/01/2014 – Cooperative efforts to compost leaf waste and bring collections up to Act 101 standards

4. Public Education Materials
   a. 1/01/2014 – Update the County Solid Waste & Recycling Department web pages (individually, or collectively with hyperlinks from all five (5) counties to one website), as needed.
   b. 1/01/2014 - Develop other various forms of public awareness/outreach including brochures and flyers to be distributed to residential and commercial populations

CHAPTER 6 – LOCATION (per 25 Pa. Code. § 272.228)

6.1 Recycling Facilities

There are 3 primary recycling facilities in the 5-county Region that accept the majority of materials. In addition, there are several smaller facilities which accept miscellaneous specialty commodities. The following discusses the three larger facilities:

Bloomsburg Recycling, Columbia County - The Town of Bloomsburg operates one of the oldest recycling programs in the Commonwealth. Its record of recycling success places it among the leaders in Pennsylvania, as well as in the nation. Bloomsburg's first curbside collection, which began in 1977, became mandatory in 1983, five years before the passage of Act 101. The recycling center opened at its current location in 1982. The Town provides municipal curbside recycling collection for a fee to all residents twice each month, collecting the following items: clear, brown and green glass bottles and jars; steel and aluminum cans; #1 and #2 plastic bottles and jars; and newspaper. All items must be source-separated and placed in open containers or paper bags. Various sections of the towns are collected on different days each month and taken to the Bloomsburg Recycling Center for processing.

The Recycling Center, located at 901 Patterson Drive, accepts the materials listed above, source separated, on Monday through Friday, along with the 2nd and 4th Saturdays each month. It also accept corrugated cardboard, magazines and catalogs, office paper, phone books, hard cover and paperback books, and computers/peripherals. In order to assist businesses, the recycling center accepts office paper for confidential shredding on a fee for service basis. Bloomsburg provides a wide variety of recycling education including presentations, magnets, calendars, and brochures. It enforces recycling requirements for businesses, residents, and multi-family units. The recycling center's drop-off is open to the public, regardless of municipality of residence.

The Bloomsburg facility also offers special collections throughout the year. Christmas trees are collected in January, through curbside collections or by drop-off at the compost site. Municipal crews collect yard waste curbside in April and October, with curbside leaf collection set for October/November. Crews also collect magazines curbside twice a year in March and August. Residents can drop off yard waste at the compost site from April through November. Compost is available for no cost to the residents of Bloomsburg and Scott Township; others are charged a small fee for this material.

Lycoming County Resource Management Services - The Lycoming County Materials Recovery Facility (MRF), owned and operated by Lycoming County Resource Management Services (LCRMS), is located near the Lycoming County Landfill in Brady Township, 9 miles south of Williamsport on Route 15. Dedicated in 2003, the MRF has a capacity of 45 tons-per-day of material in the 60,000 sq. ft. facility. New upgrades and an expansion of the facility allow for faster processing, with the addition

of more floor space and new conveyors and sorting areas. In order to minimize costs, the recycling center operates using inmates from the County's prison system.

The MRF has a capacity of 70-80 tons of material per single 8 hour shift, with an average (over the last year) of roughly 45 tons per day. New upgrades and an expansion of the facility allow for faster processing, with the addition of more floor space and new conveyors and sorting areas. In order to minimize costs, the recycling center operates using pre-release inmates from the County's prison system. This steady supply of reliable, low wage workers allows the facility to operate in a cost effective manner. At a cost of thirty cents per hour, the inmates allow the county to accept incoming recyclable materials, regardless of market conditions and fluctuations.

The LCRMS provides bi-weekly curbside collection to 13 municipalities including Williamsport, South Williamsport, Duboistown Borough, Loyalsock, Old Lycoming, Lycoming Township, Muncy Borough, Montoursville Borough, Picture Rocks Borough, Hughesville Borough, Montgomery Borough, and Jersey Shore Borough/Porter Township. Curbside collection includes green, brown and clear glass bottles and jars, and steel and aluminum cans, which are collected source-separated.

It also operates 28 drop off locations in the County, many of which accept additional materials beyond those listed above, including #1 and #2 plastic bottles, newspapers, magazines, chipboard and corrugated cardboard. Customers are asked to check with the municipality or the Lycoming County Recycling Center for hours and materials collected at the various drop-off sites. They may also visit the Lycoming County Recycling website (see Section 4.2) for more information. Lycoming County residents can use any of the 28 drop-off centers at no cost, including a drop-off at the LCRMS Recycling Center.

Lycoming County operates a wood waste/mulch grinding facility at its landfill site. It only accepts clean wood for processing, with the ground wood chips available to wholesale mulch/landscaping operators and for boiler fuel. Lycoming County has two wood waste grinders, one of which is available to local communities, both in and outside of Lycoming County, for municipalities that need this service. Currently, Old Lycoming, the City of Williamsport, Loyalsock, Montoursville Borough, South Williamsport, and Montgomery Borough operate a leaf and yard waste collection site, with Lycoming County grinding the incoming material.

LCRMS is exploring the feasibility of offering single-stream recycling within the next year. This will allow local haulers to provide recycling collection to more residents and small businesses, especially in rural areas, than are now able to participate in the recycling program. It is exploring the option of offering recycling to more out-of-County municipalities in the Region if the arrangements are favorable (i.e. more permanent sites), and full containers for transport. In addition, it is researching the option of offering more types of material for collection at the drop-off sites.

The LCRMS provides periodic informational newspaper ads and pamphlets indicating the types of material collected at the recycling facility, as well as information regarding upcoming special collection events. (See items B.10 and B.11 in Appendix B).

JAWS Recycling, Railroad Avenue, Danville, processes the majority of recyclables collected in Montour County's residences and businesses, and also processes materials from surrounding counties. The Center accepts a wide variety of items, including 3 colors of glass, #1 and #2 plastic bottles, aluminum and steel cans, newsprint and magazines, corrugated cardboard and chipboard, and various grades of office paper. They would like to expand collection to include electronics if resources are available.

JAWS also accepts materials at its recycling center site drop-off, on Thursdays, Fridays and Saturdays. Mahoning Township, in Montour County, gets credit for the tonnage on Thursdays and Fridays, while Danville Borough, Montour County, gets the credit from Saturday drop-off, although residents from other municipalities may bring material on those days. There are no mandated municipalities in Montour County although Danville Borough and Mahoning Township both have populations exceeding 4,000, and offer their residents curbside recycling. JAWS collects recyclables curbside once each month from these townships through a municipal contract. (Trash collection is supplied by subscription with individual haulers.)

JAWS processes material from a wide variety of locations, including Berwick Borough, in Columbia County, where the company also collects curbside recyclables through a municipal contract, and hauls material from the municipal drop-off. The recycling center processes recyclables from the Geisinger Medical Center, one of the Commonwealth's largest medical facilities, as well as from Valley Township, Montour County, which has its drop-off on the first Friday of every month at the Valley Township Fire Company. It also collects and processes material from Anthony Township whose drop-off is the third Wednesday each month at the township's municipal building. JAWS purchases various grades of plastics from other recyclers and bales the material at this location. It also collects some hard-back books, and bale plastic bags. It collects and bales material from many commercial establishments throughout the north-central region.

JAWS moved into its first building in 1989, and acquired the second building, located nearby, just ten years later. It accepts only source separated materials, although commercial accounts should contact them for guidelines. The JAWS Center is not at capacity and is able to accept and process more material, provided it meets their quality standards.

6.2 Solid Waste Disposal Facilities

Detailed discussions of the disposal facilities that have been used in the past 10 years are included in Section 5.1, and these facilities are geographically located on Exhibits 1 and 5.

The facilities that have been designated for inclusion in the Plan for the next 10 years are included in Sections 5.23 (disposal facilities) and 5.24 (transfer stations). Detailed discussions of the designated facilities are included in Appendix D, and the location of the facilities is shown on Exhibit 7.

CHAPTER 7 – IMPLEMENTING ENTITY IDENTIFICATION (per 25 Pa. Code. § 272.229)

Implementing responsibilities include those activities delineated in previous Plans, those which have been undertaken since those Plans were approved, and those which should be undertaken in the future.

7.1 Five County Regional Steering Committee

Each County within the five-County Region has designated representatives (forming the Regional Steering Committee) to be charged with managing and ensuring that solid waste and recyclable materials are handled in an environmentally safe, reliable and efficient manner. Within the five-County Region, a combination of the Public and Private sector provides collection/hauling, recycling, landfilling and transfer services to residents, and businesses, through municipal contract, or through private residential, industrial or commercial subscription. The private sector is primarily responsible for the collection, processing, and disposal of infectious and chemotherapeutic waste.

It is the five-County Region's responsibility to provide for adequate disposal capacity for the municipal solid waste generated within its borders, including septage, sewage sludge, and infectious and chemotherapeutic waste. The SOI process to secure disposal capacity and the related negotiations to finalize these Disposal Capacity Agreements (during the implementation period of this Regional Plan) will ensure that this state mandate is achieved.

Specific responsibilities of the five-County Regional Steering Committee will include:

- Continuance of Regional Steering Committee discussions and plans to investigate support for the proposed Integrated Waste and Recyclables Management Program in the Region
- Oversight of the Regional Municipal Waste Management Plan (and potential Plan revisions)
- Review/ approval of Consultant recommendations on SOI Submittal reviews
- Maintenance of landfill agreements for disposal capacity, on behalf of the five counties
- Approval or denial of additional processing and disposal facilities that petition to be added to the Regional Plan
- Approval or denial of requests of contracted disposal facilities to use back-up sites
- Coordination with the PA Recycling Markets Center (RMC) to encourage development of increased use of current recyclables and expansion of new recycling-related businesses
- Assistance to municipalities with promoting the purchase of materials with recycled content
- Assistance to municipalities with promoting 'green' shopping habits and waste minimization
- Assistance to local governments and the community at large on matters of proper solid waste management
- Assistance to municipalities in participating with PADEP in the development and implementation of a construction materials recycling program
- Assistance to municipalities in addressing the need to develop a more comprehensive electronics recycling program in the Region

In addition, there were five (5) Regional stakeholder committees (citizens, recyclers, haulers, business and industry, and municipal), each with a designated representative to the five-County Regional Steering Committee during the Regional Plan development process. It is recommended that the full five-County Regional Steering Committee, including the designated Stakeholder Group representatives, serve in a continuing role as the designated implementing entity for the appropriate components of this Regional Plan.

It is recommended that a Regional web site be developed as a clearing house for the collection and presentation of specific Integrated Waste and Recycling Program information. This website could establish links to the 132 individual municipalities within the five-County Region, as well as to private haulers, recycling venues and waste disposal facilities that are incorporated as part of this Plan. This website could be implemented by the Regional Steering Committee, or as a private site established with the cooperation of the Committee.

7.2 Local Governments

Individual municipalities within the five-County Region will have a variety of responsibilities, depending on whether they are designated under Act 101 as a Mandated Municipality, including the following:

- Implement mandates specified in Act 101 and the Regional Plan
- Stipulate in their bid specifications for collection services that materials designated by the municipality for inclusion in the municipal recycling program not be collected and disposed with the municipal waste
- Stipulate in their bid specifications for collection services that solid waste materials collected will only be taken to processing/disposal facilities that have current Disposal Capacity Agreements with the Counties in the five-County Regional Solid Waste Plan.
- Enforce local mandates, ordinances and bid specifications to assure compliance with the intent of the Regional Plan
- Prepare and submit reports to their respective County as required by this Regional Plan, their County and Act 101
- Develop and distribute recycling and waste management educational materials
- Promote the purchase of materials with recycled content
- Promote ‘green’ shopping habits and waste minimization
- Foster the improvement of recycling opportunities for commercial, institutional, and multi-family facilities

A copy of a Model Municipal Solid Waste Ordinance is included in Appendix E, which: provides definitions of solid waste items, identifies prohibited activities, discusses standards for storage/collection/transportation of solid waste, and establishes authorization for the municipality to fund the waste collection program.

According to PA Act 101 and Act 140, open burning of refuse and yard waste is permitted in non-mandated communities, but does not include demolition waste, insulation, shingles, treated wood, paint, painted or stained objects or furniture, tires, mattresses, box springs, metal, insulating coating on wire, television sets and appliances, automobiles, automotive parts, batteries, PVC products, waste oil and other petroleum products. **However**, the burning of solid waste is illegal under Act 97, the

Solid Waste Management Act. Section 601(3) of the Solid Waste Management Act, 35 P.S. § 6018.610(3), provides that it shall be unlawful for any person or municipality to burn solid wastes without a permit from the Department. The burning of recyclables is unlawful under Section 1501 of Act 101. From a practical standpoint, the PADEP has typically relied on local municipalities to enforce these regulations, resulting in the need for local ordinances to define "allowable" practices within each municipality.

In areas of relatively high population density, no-burning ordinances have not only resulted in cleaner air, but have also resulted in greater recycling rates of paper products. In the Region, several municipalities have adopted burning ordinances, including Berwick, Danville, Lewisburg, Selinsgrove and Williamsport. Examples of four (4) different types of burning ordinances have been included in Appendix E as model language. These include:

- A limited burning ordinance (Exeter Twp, Berks County)
- A No Burning of Recyclable Materials Ordinance (Brady Twp, Lycoming County)
- A Complete No Burning Ordinance (South Williamsport, Lycoming County)
- A PADEP Model Air Pollution Control Ordinance

These four (4) ordinances were recommended for use as models by the PADEP based on the previously reviewed and approved language.

PADEP requires anti-burning ordinances, at least for recyclables, in mandated communities and in communities that receive Sections 902 and 904 grant funding from PADEP for recycling activities and programs. The specific section of Act 101 which discusses burning of recyclables is located at the following website:

http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/Coordinators/References/leaf.htm

It is recommended that municipalities with recycling programs, whether mandated or not, consider adoption of an ordinance to control the burning of recyclable materials.

Municipalities may contract for waste and/or recycling collection services (as used in Lewisburg for waste collection) as an alternative to the private subscription method currently in use throughout the Region, as discussed in detail in Section 5.3.

7.3 Private Haulers

Private haulers are a critical component of the regional waste collection system, and some haulers are also currently involved with recycling, or would like the opportunity to become more directly involved in municipal recycling efforts.

Since most of the recyclables processing facilities in the Region require source-separated materials, private haulers who would like to participate in collection and hauling of recyclables for the first time may be required to purchase new equipment or modify current trucks to properly handle the materials without contamination or re-mixing of separated commodities. The provision of newly-upgraded dual-stream recyclables-processing capabilities at the Lycoming County MRF may facilitate the

collection of recyclables by private haulers without the need to purchase additional expensive equipment. The future availability of single-stream recyclables-processing facilities outside of the Region may provide an additional alternative for private haulers, although this is currently not a readily-available option.

A more detailed discussion of collection practices for municipal waste and recyclables is included in Section 5.9. A Model Ordinance for contracted solid waste management collection services (in lieu of collection by private subscription) is included in Appendix E.5.

7.4 Businesses, Industry, Schools and Private Citizens

As the primary generators of municipal solid waste and recyclables, businesses, industries, schools and private citizens have a responsibility to participate in the general goals of reducing the total volume of solid waste created, ensuring the proper disposal of generated waste products, and increasing the recycling of appropriate commodities.

In order to establish a partnership between these groups (who generate the MSW) and the County and Municipal government agencies (who plan for the proper processing and disposal of the generated MSW), it is critical that the five-County Regional Steering Committee have the means to publicize the Regional Solid Waste Management Plan, and to provide sufficient educational materials to clarify the issues and recommended solutions.

A more extensive discussion of regional municipal waste management planning issues is included in Sections 3.1 and 4.1, and the recommended solutions are discussed in more detail in Chapter 5.

CHAPTER 8 – PUBLIC FUNCTION (per 25 Pa. Code. § 272.230)

The PADEP Solid Waste Regulations require that the Counties should assess whether it is in the public interest for municipal waste processing or disposal to be a public function, or if waste management should be handled primarily by the private sector.

As defined in Chapters 4 and 5, the five-County Region has a combination of Public and Private facilities/operators to manage waste processing and disposal. The process has developed into a rather complex Public/Private cooperative effort, and it was determined that the current system should be encouraged, with efficiencies added where possible.

The following is a description of the current Public programs.

8.1 County Landfills

As discussed in Chapters 1.0 and 3.0, there is one County-operated landfill located within the five-County Region. Between 2001 and 2009, this facility, located in Lycoming County, has accepted 84.5% of the Regional waste disposed. In addition, the Wayne Township Landfill (located in Clinton County, just west of the Lycoming County border) has accepted 12.9% of the Regional waste generated during that same period. As such, 97.4% of disposed Regional municipal waste has been accounted for between the two local Public landfills. The remaining municipal waste disposal has been distributed among 33 Private landfills located throughout the Commonwealth, none of which has averaged more than 0.6% of the total Regional waste generation during this 9-year period. (See a breakdown of these landfills in Appendix A, along with maps showing the location of the Local and State-wide landfills which have accepted more than 500 tons of disposed municipal waste.)

8.2 County Sponsored Recycling Programs

As a complement to municipal recycling programs, the five Counties have sponsored a series of activities aimed at collecting and recycling a variety of materials (organics for composting, periodic household hazardous waste collection, etc.). There are also Recycling Drop-off centers located in each county which are supported by the LCRMS or JAWS. These facilities are supplemented by several Private recycling facilities and transfer stations. Details of the specific programs are located in Section 4.3.

8.3 Leaf and Yard Waste (and possible future Food Waste) Composting

All mandated municipalities in the five-County Region fulfill Act 101 requirements by collecting leaves and yard waste, operating compost sites, or hiring outside contractors to grind material. However, there is still room for some growth and improvement in the Region in both organics collection and composting. This can be accomplished through; the expansion of collection schedules and items accepted in some mandated municipalities, an increase in the number of composting programs, the acceptance of more types of material, and for increased hours at existing composting sites.

There are 32 composting/wood waste grinding sites in the region: 9 in Columbia County, 10 in Lycoming, 2 in Montour, 5 in Snyder and 6 in Union. This list includes 9 private sites, and 23 municipal operations. In addition, some of the colleges and universities in the region have sites for the collection and processing of yard waste from their campus acreage. The private sites are open to the public and accept various types of organic waste including yard waste, wood, hay, manure and saw dust. (See Exhibit 4 for location of facilities.)

The Town of Bloomsburg operates the largest municipally owned site, accepting yard waste from its residents and businesses through both curbside collection and drop-off. The site also accepts material from some surrounding municipalities.

Lycoming County Resource Management operates a site for the grinding of wood waste and yard debris, and transports its tub grinder throughout the region to process material. Wood chips are left on site for distribution to the public in the participating municipality. All material is given to the public after processing. In addition, the Clinton County Recycling Center provides grinding services for a fee.

There is also the potential for local farms in close proximity to residential areas to accept more items for composting, such as newspaper and yard waste.

An experimental food waste composting facility was established by the Briar Patch Organic Farm in 2009. This operation has been temporarily discontinued due to a lack of continuous feed stock, but will be reinitiated when those details have been resolved. Other composting facilities in the five-County Region may expand to food waste if this operation is successful.

Possible expansion/enhancement of the existing leaf and yard waste (and possibly food waste) composting activities is an area that is recommended for consideration by the five-County Regional Steering Committee. Expansion could be encouraged through a combination of public education and the provision of various collection methods to increase diversion rates.

8.4 Marketing

Each of the 5 Counties in the Region mails announcements and educational information to its municipalities on a variety of topics, and posts relevant information on its website. In turn, it is the responsibility of the municipalities to provide education to their residents and businesses on these issues. Several of the counties in the Region have websites which include information on composting, household hazardous waste collections, recycling facts, buying recycled products, municipal recycling programs, services available for businesses, mailing lists, and press releases.

Lycoming County Resource Management Services:
http://www.lyco.org/dotnetnuke/Home/ResourceManagementServices/tabid/362/Default.aspx

Lycoming Residual / Special Handling Waste:
http://www.lyco.org/dotnetnuke/Home/ResourceManagementServices/ResidualSpecialHandlingWaste/tabid/608/Default.aspx

Lycoming County Resource Management Recycling:
http://www.lyco.org/dotnetnuke/Home/ResourceManagementServices/Recycling/tabid/372/Default.aspx

Snyder County Recycling Newsletter:
http://www.snydercounty.org/Pages/Recycling.aspx

Union County Recycling Information:
http://www.unioncountypa.org/residents/government/human/recycling/default.asp

Town of Bloomsburg Recycling Information:
http://www.bloomsburgpa.org/recycle.htm

In addition, residents should check with local retail stores to determine what items they will accept for recycling. Many retailers accept items for recycling such as plastic bags, oil and antifreeze, electronics, rechargeable batteries, printer ink cartridges, and fluorescent bulbs. Many scrap yards located in the five-County Region accept metals items of all types; some scrap yards and service stations accept lead acid batteries and used motor oil.

A vast majority of the materials collected both at curbside and drop-off are marketed through 3 regional recycling centers: Lycoming County, Bloomsburg and JAWS. A small amount of commercial recyclables from Lycoming County are collected and marketed through the Clinton County Recycling Center, since they are closer to the source of the material.

8.5 Household Hazardous Wastes

Snyder County held a Household Hazardous Waste (HHW) event in the fall of 2011, the Region's second (following the event held in Snyder County in 2004). None of the other counties or municipalities in the five-County Region offer routine HHW collection events for their residents, although there are special collections in place in some counties for many hard-to-recycle items. Lycoming, Snyder and Union County, along with the Town of Bloomsburg, advertise special events on their websites, and provide locations where residents can recycle items, such as electronics, oil, batteries, and other HHW items.

Residents should also check with large retail stores and chains such as WalMart, Home Depot, Lowe's, Staples, Best Buy, Radio Shack and Weis Markets for recycling programs that may be available in local areas. Many items, such as used motor oil, may also be recycled at some quick oil change businesses (i.e., Pep Boys, Jiffy Lube), and some local service stations. Large grocery stores, such as Weis Markets and Wegmans,

accept plastic bags for recycling. Call the local county recycling coordinators or check with websites for details. Market conditions dictate what items may be accepted, so residents should check new listings throughout the year.

In September of 2010, the U.S. EPA sponsored a collection program with local law enforcement agencies and police departments for expired pharmaceuticals. There were several locations in the five-County Region that participated in the program. The EPA expects to conduct similar programs in the future, and will advertise through the five-County Regional recycling coordinators and on the USEPA website. Visit http://www.disposemymeds.org/ to find a community pharmacy near you that will take back unused medicines. Hosted by the National Association of Community Pharmacies, www.disposemymeds.org is an online resource to help individuals find medication disposal programs at a local independent community pharmacy (individuals enter their zip code in the Pharmacy Locater to find the nearest participating pharmacy). Another site of interest is http://www.smarxtdisposal.net/index.html. This site gives instructions for proper disposal of medicines when a take-back program is not available.

8.6 New PADEP Initiatives

PADEP has recently created a Recycling Markets Center (RMC) – Organized as a non-profit 501c(3) corporation, the Pennsylvania Recycling Markets Center is a leader in developing and expanding recycling markets in Pennsylvania. In a competitive global marketplace, the RMC is the keystone clearinghouse of environmental, economic development, and manufacturing resources for end use support of recycled commodities and products. The RMC is headquartered at Penn State Harrisburg with satellite offices near Pittsburgh. The Mission of the RMC is to expand and develop more secure and robust markets for recovered (recycled) materials by helping to overcome market barriers and inefficiencies.

- RMC recently partnered with Weis Markets of Sunbury PA, to develop new markets for the recyclable materials generated by the 164 stores, distribution center and manufacturing facilities. Weis Markets is the first food retailer to partner with the RMC. In 2009 Weis Markets recycled 45.8 million pounds of cardboard and 1.6 million pounds of plastic bags. In 2010, Weis began a new recycling program for its waxed cardboard boxes and partnered with Envirolog to compress this waste into environmentally friendly fireplace logs, which are currently sold in Weis Markets stores.
- In 2009, RMC also announced that it had been instrumental in the launching of a new enterprise, Kuusakoski Philadelphia, LLC. At full production, the new 10 million dollar, state-of-the-art electronics recycling facility will create approximately 30 skilled, technical jobs while domestically processing a minimum of 15,000 tons of recycled consumer electronics annually.
- It was also instrumental in streamlining the coordination of necessary activities for PC Parts, Inc (PC Surplus Recycling) to acquire an electronics recycling General Permit from the PADEP. In rapidly assessing the needs of a Central Pennsylvania based business that refurbishes and re-manufactures computer and printer parts, the RMC successfully streamlined coordination of necessary activities for PC Parts, Inc., (PC Surplus Recycling) to acquire an electronics recycling General Permit.

PADEP is also considering a program intended to address the lack of recycling of materials currently being discarded from building construction sites. A series of meetings will be held with contractors to discuss the means by which many of the materials now being discarded can be put into a recycling stream.

CHAPTER 9 – COPIES OF ORDINANCES AND RESOLUTIONS (per 25 Pa. Code. § 272.231)

9.2 County Ordinances

A copy of the model County Ordinance is contained in Appendix E. This ordinance is considered a model in that each County will have the opportunity to modify the text to make it specific to their operations, as long as the final version maintains the intent of the *Regional Solid Waste Management Plan for Columbia, Lycoming, Montour, Snyder & Union Counties.*

9.3 Implementing Documents

The institutional framework for implementing the Regional Solid Waste Management Plan is formed by the Regional Solid Waste Plan Multi-County Planning Agreement among Columbia, Montour, Snyder, Union Counties and Lycoming Counties (Appendix G), and the individual Multi-County Planning Agreement Ordinances established by each County (attached as an Exhibit to the Agreement).

Other implementing documents include the County Resolutions to adopt the Regional Solid Waste Management Plan, and the PADEP approval of the Plan (Appendix G).

In addition, the Disposal Site Capacity Agreements are included in Appendix E.

CHAPTER 10 – ORDERLY EXTENSION (per 25 Pa. Code. § 272.232)

This Regional Solid Waste Management Plan was completed in a manner that abides by the requirements of the PADEP Solid Waste Regulations and the intent of Act 101, while also maintaining consistency with the specific needs of the Region. As a result of coordination with local, county and State agencies, the Plan is also consistent with existing State, Regional, and local plans affecting the development, se and protection of air, waste, land or other natural resources, including municipal waste management plans approved by the Department. The Plan also takes into consideration local and Regional planning, zoning, population estimates, engineering and economics. Where local and county ordinances appeared to be lacking with respect to municipal solid waste issues, recommendations and examples have been provided for consideration by the appropriate agencies.

10.1 Disposal Capacity Agreement Contracts

The disposal capacity agreements will be executed between the designated disposal facilities and the implementing entity for this Regional Plan. A copy of the model contract form is contained in Appendix E. This contract is slightly different than the model that had been used in previous Plans, since it accounts for current legislation, as well as the application of an Integrated Waste and Recyclables Management Program (IWRMP).

As in the current contracts, temporary alternate sites will be permitted if emergency or other situations beyond the Operators control necessitate the temporary suspension of the handling of solid waste at the disposal facility and the Operator wishes to temporarily use another disposal site(s) owned by the Operator but not specifically designated in the Plan.

The contracts will be in accordance with the Ordinances and Implementing Documents adopted by each of the 5 Counties, as described in Chapter 9.

10.2 Implementation of the Solid Waste Management Plan

The method and sequencing for implementation of the Solid Waste Management Plan is defined in other sections throughout this Plan. The Implementing Documents are as discussed in Section 9.2, with the Implementing Entities defined in Chapter 7, and the schedule as discussed in Section 5.27.

CHAPTER 11 – METHODS OF DISPOSAL OTHER THAN BY CONTRACTS

This five-County Regional Solid Waste Management Plan is intended to address the collection and disposal of municipal solid waste (MSW) generated within Columbia, Lycoming, Montour, Snyder and Union Counties.

As discussed in Section 1.3, MSW consists of waste generated by residences, businesses, institutions, government facilities, offices, cafeterias, shopping areas, and similar facilities. Construction and Demolition (C&D) waste includes "all solid waste resulting from the construction or demolition of buildings and other structures, including but not limited to, wood, plaster, metals, asphaltic substances, bricks, blocks and un-segregated concrete." It does not include waste from land clearing (trees, brush, stumps, and vegetative matter) and uncontaminated soil, rock, stone, gravel, bricks and blocks. ICW represents Infectious/Chemotherapeutic Waste, primarily from hospitals and clinics. Residual, Sewage Sludge and Ash waste material tonnages are typically reported by industries or treatment plants within the Region, and Asbestos tonnages are a special category generally associated with C&D waste.

This Regional Solid Waste Plan deals primarily with the "municipal" portion of the waste stream.

The Disposal Capacity Agreement Contracts discussed in Section 9.1 are intended to assure that disposal capacity is available for MSW generated within the Region. These contracts are intended to address the material discussed above, and will not include the following:

- Hazardous Waste (portions of which may be discussed in the Plan with respect to Special HHW collections, but will not be disposed at the Plan Designated facilities)
- Large-scale C&D waste collection intended for disposal at designated C&D Landfills
- Residual Waste material that is deposited at Captive Industrial Landfills (landfills owned by the generator of the waste and used solely for the disposal of that waste)

These items will be addressed separately by the generator of the waste material, and are not part of the responsibility of the five Counties.

CHAPTER 12 – NON-INTERFERENCE (per 25 Pa. Code. § 272.233)

The five-County Region (the Region, herein) composed of Columbia, Lycoming, Montour, Snyder and Union Counties, has developed a Solid Waste Management Plan that will not interfere with the design, construction, operation, financing or contractual obligations of any municipal waste processing or disposal facility. Nearly all of the waste generated within the Region is collected by local haulers, and distributed to existing disposal facilities that are part of the current Plan. The Region (or the individual Counties) has not, and does not intend to interfere with any part of the construction or operation of these facilities.

CHAPTER 13 – PUBLIC PARTICIPATION (per 25 Pa. Code. § 272.222)

13.1 General

Public participation elements associated with this Plan revision include:

- Notification to PADEP regarding Plan revision undertaking
- Activities of the Regional Plan Steering Committee
- Activities of the Regional Solid Waste Advisory Committee (RSWAC) composed of the five Stakeholder Groups
- Notifications to local governments

Formal notification of the five-County Region's intent to prepare a revision to the previously-approved Plans was given to PADEP April 20, 2009, and the PADEP responded that the Plan Revision would be considered Substantial in a letter dated May 14, 2009. An application for a planning grant was submitted to PADEP on June 30, 2009. (See Appendix F for copies of both letters to the PADEP.) The following paragraphs give specific details associated with other public participation activities which were undertaken from inception of the planning process through completion of that process and submittal of the Plan to PADEP.

13.2 Regional Plan Steering Committee (272.202)

The development of the Regional Plan was coordinated by a Steering Committee with planning and/or waste staff representation from each of the five participating Counties. Other Steering Committee participants included representatives from each of the RSWAC stakeholder groups; the stakeholder group consultant(s) as needed; the Lycoming County landfill operator; and the PADEP plan coordinator. A list of the Steering Committee Members is included in Appendix F.

A total of 8 Steering Committee Meetings were held, beginning on May 13, 2010, and continuing through the development of the Final Draft Plan. The Steering Committee members were primarily responsible for the identification of the Plan direction, with guidance from the Consulting Team.

As a first step in the development of the Plan, an Intergovernmental Agreement was developed by Lycoming County, and signed by each of the other 4 Counties. See Appendix G for a copy of the Intergovernmental Agreement.

13.3 Regional Solid Waste Advisory Committee (RSWAC) (272.202)

Representatives from each of the five Counties in the Region contacted potential RSWAC members, notifying them of their appointment to the RSWAC by the County Commissioners. Due to the size of the group, the RSWAC was broken into 5 subcommittees, representing the principal stakeholders, composed of the following: Municipal Stakeholders, Business & Industry Stakeholders (including colleges), Solid Waste Industry Stakeholders (including

waste haulers and landfill representatives), Recycling Stakeholders, and Citizens Stakeholders. A list of the RSWAC Members, by Stakeholder Group, is included in Appendix F.

Separate meetings were held for each Stakeholder Committee, with the first RSWAC meeting for the Plan development held on June 29, 2010. All 5 meetings for each round were held during the same week, and meetings were held throughout the Plan development process. Prior to the first round of meetings, a list of the RSWAC members, a description of the charge of the RSWAC, background information and the agenda for the first meeting were provided to the Committee Members. Additional meetings of the RSWA committees were held during the weeks of August 23, 2010 and February 7, 2011. An additional meeting of the Solid Waste Industry Stakeholders Group was held on October 6, 2010, to discuss possible recycling options in under-served portions of the Region

As discussed in Section 3.2, communication of the Plan development process was critical, and specific communication of RSWAC issues was handled in several different ways. Each of the members of the RSWAC were included on pre-meeting emails, which included the date and time of proposed meetings, as well as attachments including pertinent information for the meeting discussions. In addition, each of the meetings was announced on the Plan Website (see Section 3.2) and the meeting notes and attendees list were included on the website when available. At the start of the project, each municipality and County was notified of the website location by letter, and each was encouraged to post these letters for the general public. In addition, the website address was identified in each of the newspaper advertisements issued throughout the life of the project. In this way, both the Committee members and the general public were kept aware of the status of the Plan development.

Copies of the RSWAC meeting attendees and notes are contained in Appendix F.

13.4 Notice to Municipalities (272.203 and 272.241)

Upon initiation of the project, a series of Public Kickoff Meetings were held in each of the five Counties, between June 22, 2010 and June 24, 2010. Copies of the Public Meeting attendees lists are included in Appendix F.

Notification to municipalities of the intent to undertake this Plan revision was completed by each of the 5 Counties individually via a letter sent to each municipality (See Appendix F).

The current Update is considered a Substantial Modification to the previously approved County Plans. Copies of the Draft Plan Update were distributed to each Municipality for comment on September 24, 2012, and a copy of the Final Plan will be submitted to each Municipality upon approval by the PADEP and the County Commissioners.

13.5 Website

Since the Plan covers a five-County Region, it was understood that communication among the various Stakeholder Groups, the Steering Committee and interested citizens would be critical. To accomplish the most effective means of communication, an internet website was established to provide a location for the documentation developed at the meetings. Throughout the Plan development, this website was maintained at the following location.

http://www.lrkimball.com/five-county-regional-waste-plan.aspx

Eventually, a version of this website will be hosted on the Lycoming County web site, and links will be provided from each of the five County web pages. The website was used to summarize the status of the project, and to identify upcoming meeting dates and times. In addition, the website listed the Project Goals, a timeline history of project, members of each of the committees, and Plan development Team contacts. Draft chapters of the Plan were also included during the progression.