

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

DECEMBER, 2010

INTRODUCTION

Act 101: 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: § 272.251 of the Commonwealth of Pennsylvania’s Municipal Waste Regulations requires that counties submit a revised Plan to the DEP 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

Project Goals: As per the requirements of Act 101 and the Municipal Waste Regulations, this revision will incorporate the following elements:

1. use of current data to prepare estimates of future waste and recyclables generation
2. issuance of a request for disposal capacity at landfill sites approved to accept municipal waste generated in the five-county region
3. development of contracts for disposal capacity through December 31, 2020

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

1. review of current municipal recycling activities in each County
2. methods for enhancement of recycling opportunities
3. alternative approaches to waste reduction and household hazardous waste (HHW) programs

CHAPTER 1 DESCRIPTION OF WASTE (Section 272.223) ESTIMATED FUTURE CAPACITY (Section 272.225)

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 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 (DEP), County 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.

1.1 Background

Background (a history of the regional approach to solid waste management, including a summary of the plans prepared by each of the five counties)

Pennsylvania’s Act 101, the “Municipal Waste Planning, Recycling and Waste Reduction Act” mandated that Pennsylvania’s counties find a final home for all MSW generated within their boundaries. Each of the five counties represented in the Regional Solid Waste Management Plan prepared a Municipal Waste Management Plan, and the information developed in these plans is summarized below:

Table 1.1
Summary of Previous County Solid Waste Plan Update

County	Columbia December-	Lycoming October-	Montour	Snyder December-	Union December
Published Date	00	01	April-01	99	-98
Municipalities	33	52	11	21	14
Land Mass (square miles)	484	1,216	131	332	317
2000 Population	66,838	118,293	18,249	39,777	39,103
2010 projected Population	70,504	not listed	18,514	42873	43,000
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	7614	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

**Table 1.3-1
Waste Material 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

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.

The following table shows the total tonnages of material, generated within the Region, and landfilled over the past 9 year period, as obtained from a different DEP 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.

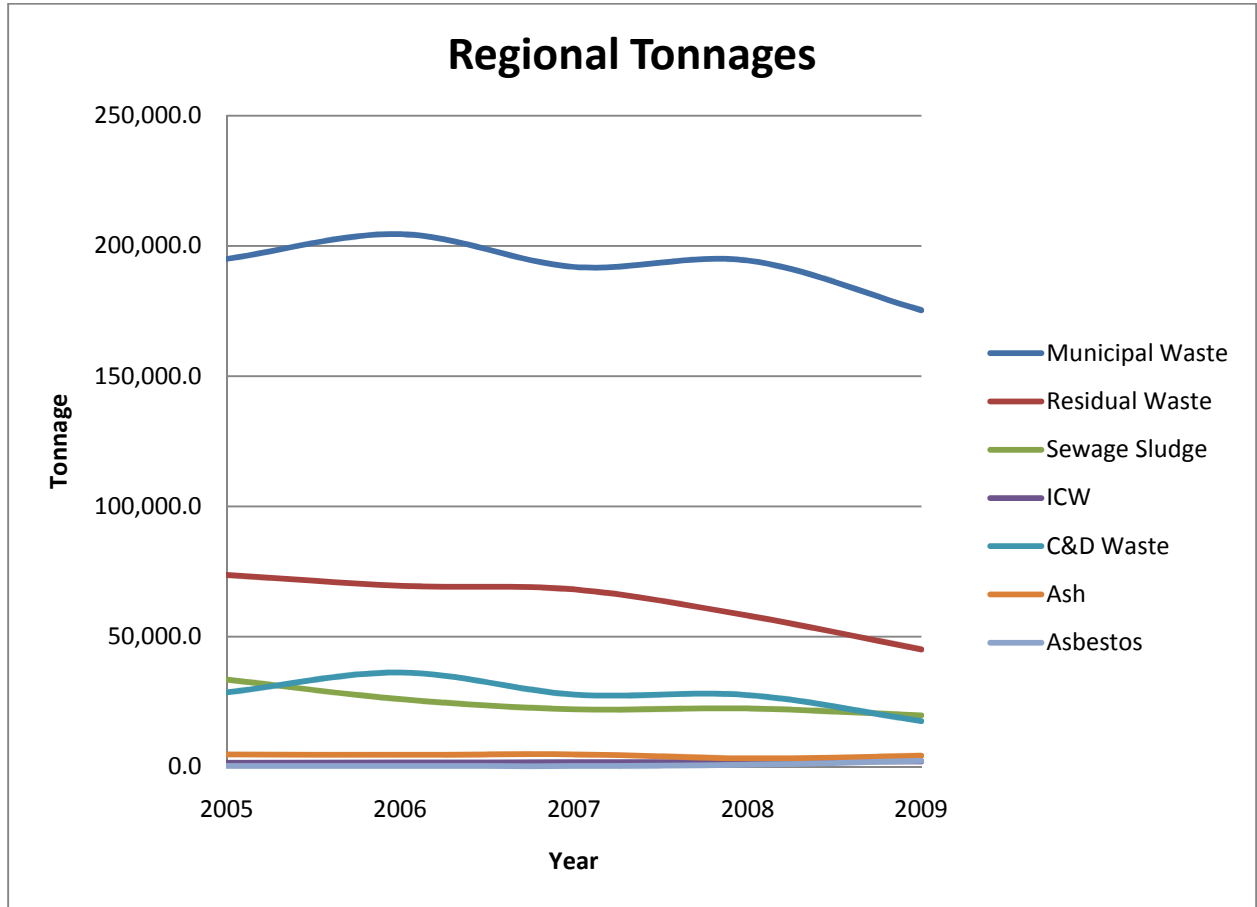
**Table 1.3-2
Tons of Waste Material Landfilled within the Region**

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 5.2.

As shown on the following chart, the tonnage of material disposed 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 waste landfilled is within 15% of the maximum for the 5-year period, indicating the trend is not dramatic.



1.4 Required Tonnage Capacity

Required Tonnage Capacity (estimated from historic records and the population predictions)

The following table is based on the 2000 and 2010 population predictions for the Region, as discussed in Section 1.2. For each year, a Regional Population was estimated, and compared to the Total and MSW landfilled waste values from Section 1.3, to create a Waste Generation Rate.

**Table 1.4-1
Regional Per Capita Landfilled Waste**

	Regional Population	Landfilled Total Tonnage	Total Waste Tons/capita	Landfilled MSW Tonnage	MSW Waste Tons/capita
2005	285,376	337,393	1.18	194,989	0.68
2006	286,131	342,665	1.20	204,452	0.71
2007	286,886	316,575	1.10	191,923	0.67
2008	287,641	308,320	1.07	194,370	0.68

2009	288,396	266,153	0.92	175,317	0.61
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Note that these Total and MSW tonnages do not include recycled materials, so the actual MSW generation rate is higher than shown above. These rates represent only the landfilled material.

As discussed in Section 1.3, the total tonnage of landfilled material (and thus the landfill rate per capita) has been declining for the past 5 years. Although this is a desirable trend, a decision was made to use the average per capita rates for the past 5 year period for prediction of landfill tonnages in the future.

Table 1.4-2 estimates the amount of landfill disposal tonnage capacity needed by the Region between 2010 and 2030. Projected Tonnage capacity required is based on population projections in Section 1.2 and average landfill disposal rates of 1.10 tons/person total waste, and 0.67 tons/person of MSW.

**Table 1.4-2
Regional Per Capita Landfilled Waste**

	Regional Population	Total Waste Tons/capita	Total Waste Tons/capita	MSW Waste Tons/capita	Landfilled MSW Tonnage
2010	289,151	1.10	316,800	0.67	193,756
2020	298,697	1.10	327,259	0.67	200,153
2030	307,504	1.10	336,908	0.67	206,055

1.5 Other Waste Streams

Other Waste Streams (obtained from a Septage Hauler/Sewage Plant Survey and other sources)

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

Follow up phone calls were also made to determine correct addresses, and to gain responses. Calls were also made to knowledgeable parties in order to cross check information. The information contained after each table shows a comparison of survey information with DEP landfill reports.

The tonnages shown in Table 1.3-1 for all waste streams have been reported by the PA Department of Environmental Protection from 2005 – 2009 under the Regional waste destination reports. Survey responses were checked against these reported tonnages.

Biosolids/Sewage Sludge - Results from the plants which returned surveys **show...**

Table 1.5-1
Biosolids / Sewage Sludge

<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
33,513	25,988	22,087	22,426	19,762

Table 1.5-2
Infectious / Chemotherapeutic Waste

2005	2006	2007	2008	2009
1517	1676	1737	1969	2059