

**MIFFLIN COUNTY
MUNICIPAL WASTE MANAGEMENT PLAN
EXECUTIVE SUMMARY**

This municipal waste management plan was prepared in accordance with the requirements of Act 101 of 1988, the Municipal Waste Planning, Recycling, and Waste Reduction Act. Act 101 delegates to counties the power and duty to prepare and implement plans for the processing and disposal of municipal waste generated in the county. The responsibility and authority for the collection and transportation of municipal waste and of source-separated recyclables is delegated to local municipalities. To implement the plans, the Act accords to counties the authority to adopt ordinances and regulations and enter into contracts for management of waste within the county in accordance with the county municipal waste management plan. The Act specifically allows counties to delegate their power and duty for municipal waste planning and implementation to another body, such as a municipal authority.

Act 101 calls for Pennsylvania counties to develop comprehensive, integrated waste management plans. A solid waste plan should propose the optimal complementary use of a variety of management technologies, including waste reduction, recycling, waste processing, landfilling and waste-to-energy. The Act specifically requires that the Plan provide for the maximum feasible development and implementation of recycling programs.

In order to provide for public participation in the planning efforts related to this Plan update, the Mifflin County Commissioners appointed the Solid Waste Advisory Committee (SWAC) in 2000 based on input from the Mifflin County Solid Waste Authority (MCSWA) and the Mifflin County Planning and Development Department. The SWAC assisted the MCSWA in preparing the Municipal Waste Management Plan for the County by providing input from the citizenry, waste management organizations, selected interest groups, and municipal officials within Mifflin County. This 2002 Mifflin County Municipal Waste Management Plan (Plan) builds upon and updates information contained in the 1991 Mifflin County Municipal Waste Management Plan. The evaluations, findings, and recommendations contained in the Plan are outlined in the Chapter summaries below.

Chapter 1: Description of Waste

The population of Mifflin County for year 2000 was estimated to be 46,486 (U.S. Census) and is projected to grow moderately over the next 10 to 20 years. According to reports submitted by PADEP-permitted processing and disposal facilities, Mifflin County residents and establishments disposed of 33,861 tons of municipal solid waste (MSW), including construction and demolition (C&D) waste, in year 2000. The Mifflin County Year 2000 Act 101 Annual Report estimates that 11,650 tons of material was recycled in the County. This quantity of recycled materials (recycling and yard waste composting) represents approximately 26% of the gross quantity of municipal waste, including C/D waste and recyclables, generated in Mifflin County in 2000. The 26% waste diversion rate is projected to grow slowly over the planning period, to 35% by 2010, and then to stabilize at 35% through 2020.

Using year 2000 gross waste quantity estimates and the year 2000 county population, the gross municipal waste generation rate in Mifflin County has been calculated at 0.979 tons per capita per year. This generation rate excludes sewage sludge (i.e., biosolids) and other special handling waste. Using this per capita waste generation rate, together with the population projections and the projected recycling/waste diversion rates over the next 20 years, both gross (before recycling and composting) and net (after these activities) discards can be estimated. These gross and net discard estimates are shown in Table ES-1.

TABLE ES - 1
MIFFLIN COUNTY
YEAR 2000 AND PROJECTED GROSS AND NET DISCARDS OF MSW
(2000, 2010, 2020)

Year	Population	Gross Discards (tons)	Diversion Rate	Net Discards (tons)	Waste Diverted to Recycling (tons)
2000	46,486	45,511	26%	33,861	11,650
2010	49,448	48,411	35%	31,467	16,944
2020	52,516	51,412	35%	33,418	17,994

Source: Table 1-5 of 2002 Mifflin County Municipal Waste Management Plan.

This Plan also estimates the quantity of biosolids and septage that will be generated and processed by municipal and non-municipal wastewater treatment plants in the County. Septage quantities were estimated based on population projections, housing units and number of persons per household, percentage of on-lot septage systems in the County and a septage generation rate of 91.6 gallons per capita per year. Year 2010 and 2020 biosolids and septage generation projections are provided in Table ES-2.

Smaller quantities of special handling waste are also managed within Mifflin County. Infectious and Chemotherapeutic waste constitutes a very small portion of the municipal waste generated in Mifflin County. The principal generator of infectious and chemotherapeutic waste is Lewistown Hospital. Lewistown Hospital and other County-related medical facilities generate the overwhelming majority of infectious and chemotherapeutic waste in the County. Household hazardous waste (HHW) constitutes a small fraction of the municipal waste stream (less than 0.5 percent according to the PADEP). PADEP requires that HHW is addressed in County solid waste plans. Currently, Mifflin County does not implement a household hazardous waste collection program.

**TABLE ES – 2
MIFFLIN COUNTY
BIOSOLIDS AND SEPTAGE GENERATION QUANTITIES (2000-2020)**

Biosolids Generation	2000	2010	2020
Wet tons per year (dewatered portion)	1,248	1,646	1,748
Gallons per year (liquid portion)	1,306,700	1,721,000	1,827,700
Septage Generation	2000	2010	2020
Gallons per year	1,565,800	1,666,000	1,769,400

Source: Table 1-8 of 2002 Mifflin County Municipal Waste Management Plan.

The management of waste tires, leaf and yard waste is done through the County’s existing recycling programs. Proper disposal of waste tires is a particular planning concern for Mifflin County because of the large number of existing illegal dumpsites that continue to attract illegal dumping of tires and other waste. In 2000, 260 tons of waste tires were received at the MCSWA’s Barner Landfill. Mifflin County collects leaf and yard waste through curbside collection and drop-off recycling sites. Combined, Lewistown Borough and Derry Township curbside programs collected 137 tons of leaf and yard waste in year 2000, based on Act 101 recycling reports. In addition, several other Mifflin County municipalities reportedly collect leaves (Burnham and McVeytown boroughs, Union and Brown townships), but the tonnages collected are unavailable. An additional 350 tons of leaf and yard waste was collected at the Barner Landfill and Lewistown drop-off sites. In total, 487 tons of leaf and yard waste was documented as collected in Mifflin County in 2000.

Although not regulated under Act 101, residual waste, defined as non-hazardous industrial waste, is both generated and disposed within the County. According to year 2000 PADEP County Waste Destination Report, 10,928 tons of residual waste generated within Mifflin County was disposed of at six disposal facilities (Barner Landfill, Lancaster County Resource Recovery Facility, Bradford County Landfill, Superior Greentree Landfill, Lycoming County Landfill, and the Lancaster County Landfill).

Chapter 2: Existing Waste Management System

Waste collection and hauling is primarily handled by five private hauling firms operating in 15 municipalities of the County and by municipal collection within the Borough of Lewistown. Within 14 of 16 municipalities, residents are responsible for arranging waste collection services with a private hauler subscription service. The Borough of Juniata Terrace contracts with a hauler (municipal bid contract) to provide collection to their residents. The Borough of Lewistown provides collection of waste as well as curbside recycling using municipal crews.

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Most of the municipalities in the County have solid waste management ordinances governing municipal collection. Information on collection practices were obtained from a survey of municipalities related to waste management practices. This survey was performed in 2001 as part of the Plan update.

According to 2000 PADEP County Waste Destination Reports, MSW (including C&D waste) from Mifflin County was disposed at the following disposal facilities:

- Mifflin County Barner Landfill (20,465 tons - MSW and C&D)
- Laurel Highlands Landfill (98 tons – C/D only)
- Sandy Run Landfill (13,298 tons MSW and C&D)

In addition, 1,398 tons of biosolids generated in Mifflin County were disposed at the Barner Landfill. Other special handling waste and residual waste generated in Mifflin County was primarily disposed at the Barner Landfill; however, smaller quantities of these wastes were disposed at nine other disposal facilities located throughout the state.

The Barner Landfill is owned and operated by the MCSWA and is the only municipal waste landfill in the County. Currently, there are no transfer facilities within the County that accept municipal waste generated in Mifflin County for processing and transfer hauling to the Barner Landfill. The MCSWA currently holds a permit for a proposed transfer station to be located on the Barner Landfill site.

There are six municipal and three non-municipal wastewater treatment plants (WWTPs) operating in Mifflin County. Approximately 74% of the biosolids generated by these treatment plants is dewatered and landfilled. The remainder of the biosolids, in liquid form, is land-applied on agricultural sites under either a site-specific permit or a general permit by PADEP. Chapter 2 of the Plan provides a more detailed description of sludge disposal practices in the County.

Remote, rural and isolated regions like portions of Mifflin County are prone to illegal dumping. Over 80 dumpsites were mapped and documented in a dump study conducted by Don Baker of the Mifflin County Conservation District in 2000. A Residential Survey distributed to approximately 2,000 Mifflin County residents indicated that over 90% of respondents considered illegal dumping to be a problem in the County. This survey was performed in 2001 as part of the Plan update.

Some contributing factors to the widespread illegal dumping problem may be:

- Disposal and/or recycling options are unavailable, inconvenient, limited and/or unknown to residents.
- Disposal options are unaffordable for residents, or the perception exists that disposal costs are too high.
- Residents illegally dump out of habit.

Chapter 3: Disposal Capacity Needs

The primary municipal waste disposal facility for Mifflin County waste is the Barner Landfill. Based on the remaining disposal capacity and projected waste receipts, the landfill will reach permitted capacity in mid-2004. Expansion of the Barner Landfill, or the permitting and construction of a new disposal facility within Mifflin County, was determined to be infeasible, based on technical and economic considerations. The MCSWA is currently pursuing a permit modification that may extend the life of the facility by a minimum of one year beyond the current life, without increasing the permitted footprint. Therefore, in order to ensure additional municipal waste processing and disposal capacity for the County and its municipalities for the next 10 years, there is a need to reserve disposal capacity from other processing and disposal facilities located within the region.

Estimates of the total volume of Mifflin County municipal waste (excluding sewage sludge and after recycling) that will require disposal for the next 10 years is included in Chapter 3 of this plan. Table ES-3 presents the estimated tonnages of municipal waste requiring disposal (before and after recycling) for the 10-year planning period.

**TABLE ES-3
MIFFLIN COUNTY
VOLUMES OF MSW REQUIRING DISPOSAL IN MIFFLIN COUNTY
(2002-2011)**

Year	Waste Requiring Disposal (before recycling) (tons)	Waste Requiring Disposal (net discards after recycling) (tons)
2002	46,075	33,635
2003	46,360	33,379
2004	46,646	33,119
2005 - 2011	334,712	224,661
Total Tons	473,793	324,794

Source: Table 1-5 of 2002 Mifflin County Municipal Waste Management Plan.

As stipulated in Act 101, Mifflin County must provide sufficient disposal capacity for its waste. The MCSWA issued a Solicitation of Interest (SOI) on November 1, 2001 from qualified municipal waste disposal facilities to provide disposal capacity for Mifflin County's municipal waste for the 10-year planning period as required by PADEP. Seven proposals were received from various facilities offering landfill disposal services. These proposals were evaluated and all were determined to meet the minimum required qualifying criteria, as outlined in the SOI. The MCSWA intends to proceed with contract negotiations and execution on Municipal Waste Disposal Capacity agreements with each facility, following adoption of the Plan by the County and subsequent PADEP approval. Additional disposal facilities may be added to the Plan,

provided they complete the Application Package available from the Mifflin County Solid Waste Authority, and meet certain minimum qualifications. Additional information pertaining to the SOI and waste disposal system selection process is contained in Chapter 5 of this plan.

Chapter 4: Recycling Strategy

In Act 101 (incorporated as 25 Pa. Code Chapter 272), the State adopted an unprecedented level of support for the use of recycling as a waste management tool. Among other provisions, Act 101, mandates curbside recycling in communities with a population over 10,000 and in communities over 5,000 with a density of 300 persons per square mile. Chapter 4 of the Plan examines the County's existing recycling programs, recycling program options, and the County's recycling strategy and recycling initiatives.

Lewistown Borough is the only municipality mandated to recycle by Act 101 requirements within Mifflin County. The remaining 15 municipalities, based on total population and population densities, are not required to establish recycling programs under Act 101.

It is estimated that current recycling collection programs may divert as much as 26 percent or more of the County's waste stream from landfills. Realistically, Mifflin County may reach the statewide recycling goal of 35% in 2010. Critical elements associated with achieving this goal include improved documentation of recycling activities and the implementation of some additional recycling initiatives, as described in detail in Chapter 4 of the Plan.

The curbside collection of recyclables (including the municipal collection of yard waste) will remain the responsibility of Lewistown Borough, as required under Act 101. Currently, the Borough accepts aluminum cans (food and beverage cans), tin cans (food and beverage cans), glass (clear and brown), plastic (natural HDPE and PET) and newspaper. These materials, plus yard waste, are also accepted at the Borough's recycling drop-off site. The Borough plans to open its municipal drop-off site for recyclables and yard waste to County residents in the near future.

With only one municipality having curbside recycling collection, public and private drop-off centers are an important consideration in the County's recycling strategy. With the County's low population density, drop-off centers are potentially the lowest cost, feasible alternative to implementing curbside collection programs. There are a number of private recyclers in Mifflin County that accept drop-off materials: the larger ones include Pheasant Valley Recycling and Joe Krentzman and Sons, Inc. Below are brief descriptions of the four public drop-off recycling programs that are operating in the County.

Borough of Lewistown: Municipal Yard

The Borough of Lewistown accepts recyclables drop-off by Borough residents at their municipal yard, which demonstrates a drop-off program may also compliment an ongoing curbside collection program.

Barner Landfill Drop-off

Materials collected at the Barner Landfill include: aluminum cans, scrap aluminum and metal, tin cans, tin and bi-metallic cans, glass (clear only), car batteries, and small and large appliances (white goods), mixed paper, magazines and catalogs, corrugated cardboard, tires and yard waste

Armagh Township Drop-off

The Armagh Township drop-off site located at the Township's municipal building accepts newspaper. This drop off site is managed by the MCSWA.

Union Township Drop-off

The Union Township drop-off site located at the Township's municipal building accepts newspaper, tin cans, and aluminum cans. This drop off site is managed by the MCSWA.

The County continues to encourage and assist in the development of municipal and other drop-off programs for recyclables throughout the County. Special attention will be given to education for existing programs and the development of programs in areas with limited recycling opportunities.

The MCSWA plans to continue to operate its recyclable material drop-off program following closure of the Barner Landfill and transition to a waste transfer operation. All recycling activities undertaken by MCSWA will continue to be performed in full compliance with applicable regulations.

As municipalities indicate a clear need and interest, the County could assist the municipality to implement new or augment existing drop-off recycling opportunities. The details of the drop-off programs will depend on variables such as municipal interest, existing programs, economics, and the type of services that are available and their comparative costs.

The guiding objectives used in developing the County's recycling plan are to attain the maximum economically feasible recovery of material through recycling and yard waste processing and composting, and to do so with the full support of the local municipalities.

The following is a list of specific County recycling program goals:

- Encourage, maintain, and potentially develop curbside collection.
- Provide, maintain, and expand drop-off collection services to be available to all County residents.
- Develop recycling collection events.
- Continue existing yard waste efforts and expand in yard waste collection where possible.
- Improve the effectiveness of the existing recycling programs through a comprehensive public information and education program that will be communicated to and coordinated with local municipalities.
- Work with existing haulers to encourage recycling.

- Develop a system to better document and report to the County the recycling that is occurring in the residential, commercial, and institutional sectors.
- Use recycling efforts and educational efforts related to recycling as a means to deter illegal dumping activities through identifying recycling as an alternative to dumping.
- Identify funding sources to be used to help implement County recycling goals.

A detailed discussion of recycling program alternatives and implementation strategies are included in Chapters 4 and 7 of the Plan.

Chapter 5: Selection of Waste Management System

The County must ensure that the recommended system provides the required capacity needed to properly process/dispose of all municipal waste generated within its boundaries over the next 10 years. Chapter 5 examines collection, transportation, and processing/disposal alternatives, particularly for municipal waste and sewage sludge. Other fractions of the waste stream are also addressed where appropriate.

Collection

Act 101 divides the responsibilities for municipal waste management between counties and local municipalities. Counties have the power and duty to designate the processing and/or disposal site(s) for waste generated in the County. Municipalities have the power and duty to regulate the collection of waste generated within their boundaries.

A municipality's three principal options for municipal solid waste collection are:

- *Private, Non-Contract Collection* – Individual residents and businesses subscribe with a private hauler for waste collection services. The municipality has no control over the disposal site used for waste disposal under a non-contract system. In Mifflin County, 14 of the 16 municipalities use private non-contract, or subscription, waste collection services.
- *Private, Municipal-Contract Collection* – Municipal bidding of waste collection services gives the municipality contractual control of where the successful bidder will dispose of collected wastes. This can be an important factor in securing a waste stream for delivery to a specific disposal site. Only Juniata Terrace Borough currently bids for waste collection service for its residents. Additional municipalities in Mifflin County may want to consider bidding for waste collection services. This might include multi-municipal or COG-sponsored bidding for waste collection services.
- *Municipal Collection* – When feasible, municipalities may go a step further than contracting, to exercise greater control of municipal waste collection, by owning trucks and using crews to conduct household (and possibly also commercial) refuse collection. Only Lewistown Borough provides municipal waste collection services (along with curbside recycling services) to its residents and businesses.

Transportation

There are two basic options available for transporting municipal solid wastes to disposal sites:

- *Direct haul system* – In a direct haul system, municipal waste is conveyed by collection vehicles from the collection route directly to the final disposal site. As the haul distance increases, operating costs increase and the efficiency of the direct haul system decreases.
- *Transfer haul system* – In a transfer station or transfer haul system, the collection vehicles convey the wastes from the collection routes to a transfer station facility that then transport the wastes to a disposal site.

Most municipal wastes are currently delivered to the Barner Landfill, located in the central portion of the County near Lewistown. Where short hauling distances are involved, as is the current case for the County, transfer haul is usually not cost-effective or warranted. However, in 2004, the Barner Landfill is expected to close. After this time, Mifflin County wastes may have to be hauled between 60 and 110 miles (one way) to out-of-county disposal sites. This Plan evaluated the projected direct haul versus transfer haul costs to various out-of-county disposal sites.

A computer spreadsheet model was used to estimate the direct-haul transportation costs to five actual out-of-county disposal sites, specific distances ranging from 61 to 107 miles from Lewistown. The estimated direct haul transportation costs to use these sites range from \$61 to \$88 per ton of waste hauled. The cost to construct and operate a transfer station (estimated capital cost of \$650,000 and annual operating costs of \$420,000), including the cost to transfer-haul wastes to the five sites, is estimated between \$26 and \$32 per ton of waste transferred.

The Mifflin County Solid Waste Authority should seriously consider pursuing the transfer station project at the Barner Landfill site for which the MCSWA has obtained a PADEP permit to construct. Prior to making financial or contractual commitments to this project, the MCSWA should first:

- Secure minimum waste delivery commitments to the transfer station project, either through contracts with waste haulers, or from municipalities that bid for waste collection services or collect their own wastes, or both, and;
- Solicit and secure firm disposal prices from waste disposal sites in the region, assuming a certain guaranteed quantity of waste deliveries to that site from the transfer station.

MSW Processing and Disposal

The 1991 Plan concluded with a recommendation to continue using the Authority's Barner Landfill to provide for the County's waste disposal (the 1991 Plan can be referenced for detailed processing and disposal technology descriptions and analyses). However, two factors

have created challenges to the continued long-term viability of the existing disposal site. First, a 1996 engineering study conducted for the MCSWA confirmed that long-term expansion options for the Barner Landfill were severely limited due to numerous site constraints. Second, the U.S. Supreme Court Carbone case (limiting use of waste flow control through legislation) has increased the difficulty in securing a steady delivery of wastes, which is critical in supporting the financial needs for expanding landfill operations. Consequently, the Carbone case decision has made it increasingly more difficult for a public entity to develop and finance a new, capital-intensive solid waste processing/disposal project.

Since the Barner Landfill is projected to be filled and closed by mid-2004, a new long-term source of disposal capacity must be found. As of January 2002, the Barner Landfill had only about 85,000 tons of disposal capacity remaining, as compared to a projected 10-year disposal need of approximately 325,000 tons in Mifflin County.

The MCSWA is currently pursuing a permit modification that may extend the life of the Barner Landfill by a minimum of one year beyond the current life, without increasing the permitted footprint. The maximization of capacity and associated life of the Barner Landfill is preferable as a short-term waste management option. This additional capacity will allow the MCSWA to continue to provide a cost-effective disposal option within the County, secure sufficient funds for closure and post closure care activities, and allow a smooth transition to a waste transfer operation for future disposal at an out-of-County facility. However, this will not provide the required disposal capacity for the ten-year planning period.

A Solicitation of Interest (SOI) was released in November 2001 to prospective vendors to negotiate an agreement for providing disposal capacity for municipal solid waste (MSW), including construction/demolition (C/D) waste and sewage sludge, and residual waste generated in Mifflin County. Responses to the SOI were received until December 3, 2001.

Seven facilities submitted responses to Proposal Option 1 (disposal only); one proposer also responded to Option 2 (hauling plus disposal), but the County has decided not to pursue Option 2 at this time. From the SOI, the Authority received proposals from the following facility representatives:

- Superior Greentree Landfill, LLC
635 Toby Road
Kersey, PA 15846
(Elk County)

- Phoenix Resources, Inc.
RR #1, Box 12A
Wellsboro, PA 16901
(Tioga County)
C/D Waste Only

- Southern Alleghenies Landfill, Inc.
843 Miller Picking Road
Davidsville, PA 15928
(Somerset County)

- Pine Grove Landfill, Inc.
193 Schultz Road
Pine Grove, PA 17963
(Schuylkill County)

- Shade Landfill, Inc.
1176 #1 Road
Cairnbrook, PA 15924
(Somerset County)

- Laurel Highlands Landfill
260 Laurel Ridge Road
Vintondale, PA 15909
(Cambria County)

- Mountain View Reclamation
9446 Letzburg Road
Greencastle, PA 17225
(Franklin County)

In September 2002, an additional facility petitioned the County to be added to the plan as a designated disposal facility, in accordance with the *Procedure to Add Facilities to the Plan as Designated Facilities*, Section 5.7.5.3. This facility is listed as follows:

- Wayne Township Landfill
Clinton County Solid Waste Authority
P.O. Box 209, 264 Landfill Lane
McElhattan, PA 17748
(Clinton County)

All eight facilities appear to be qualified, with one of the facilities qualified only for C/D waste disposal. As Table ES-4 shows, the total capacity that will be available to Mifflin County through these agreements and through the remaining capacity at the Barner Landfill is 1,950,000 tons (over five times the projected capacity required through 2011 for Mifflin County).

TABLE ES-4
MIFFLIN COUNTY DESIGNATED DISPOSAL SITES
WASTE DISPOSAL CAPACITY AVAILABLE TO MIFFLIN COUNTY

DISPOSAL SITE	Avail. Cap. Per Day, Tons	Avail. Cap. Per Year, Tons	Estimated Final Closure Date	Total Avail. Cap. Over 10-Year Planning Period, Tons
Barner LF, Mifflin Co. ⁽¹⁾⁽³⁾	390	38,000 +	3/2004	85,000 ⁽¹⁾
Superior Greentree LF, Elk Co. ⁽²⁾⁽³⁾⁽⁴⁾	All	(50,000 Used)	2012	387,500 ⁽²⁾
Southern Alleghenies LF, Somerset Co. ⁽²⁾⁽³⁾⁽⁴⁾	150	40,000	9/2005	60,000 ⁽²⁾
Shade LF, Somerset Co. ⁽²⁾⁽³⁾	150	40,000	2012	320,000 ⁽²⁾
Pine Grove LF, Schuylkill Co. ⁽²⁾⁽³⁾⁽⁴⁾	300	93,000	5/2005	111,600 ⁽²⁾
Mountain View Reclamation LF, Franklin Co. ⁽²⁾⁽³⁾	300	93,000	9/2008	418,500 ⁽²⁾
Laurel Highlands LF, Cambria Co. ⁽²⁾⁽³⁾⁽⁴⁾	150	40,000	2029	320,000 ⁽²⁾
Wayne Township LF, Clinton Co. ⁽²⁾⁽³⁾⁽⁴⁾	90	28,000	2016	224,000 ⁽²⁾
Sub-Total				1,926,600
Phoenix Resources LF, Tioga Co. ⁽²⁾⁽⁵⁾	250	23,400	6/2004	23,400 ⁽²⁾
Total				1,950,000
⁽¹⁾ January 2002 through closure (projected 3/2004) ⁽²⁾ Starting 3/2004, through end of planning period, 2011 ⁽³⁾ Accepts municipal waste, C/D waste, sewage sludge and residual waste ⁽⁴⁾ Also accepts asbestos ⁽⁵⁾ Only accepts C/D waste				

Once draft waste disposal agreements are executed, Mifflin County will have secured more than enough waste disposal capacity for the next 10 years. Through this SOI and planning process, the 2002 Plan meets the requirement for providing for a fair, open and competitive market for the management and disposal of municipal waste generated in the County and meets the requirements for securing waste disposal capacity for the 10-year planning period.

Biosolids

The Plan Update identified and analyzed the following biosolids disposal alternatives:

- *Land application* – There are several limitations to the use of land application for sludge disposal. Increasingly stringent regulation by PADEP has been restricting the availability of sites as well as the maximum allowable annual and lifetime loadings of sludge on sites. PADEP has been considering going to a phosphorus-based nutrient management system for biosolids application (like many of our neighboring states). Should this occur (and this is expected within the next 3-5 years), land availability for land application may be more limited, and allowable application rates for sludge may be lower than under the current nitrogen-based nutrient management system.
- *Landfilling* – Requires that the sludge be dewatered to a minimum solids content of 20 percent. Barner Landfill accepts dewatered sludge cake for disposal from three of the larger treatment plants in the County: Lewistown and Burnham Boroughs, and Granville Township.
- *Composting* – Composting is a technologically proven method of biosolids handling. However, it is usually more costly than land application or landfilling, and therefore is difficult to implement, unless a large quantity of biosolids is processed daily. Mifflin County may not produce enough biosolids to make composting an economically feasible option.
- *Vermicomposting* – Vermicomposting is a unique variation of composting, where worms are used to help decompose and stabilize biosolids. Wastewater treatment plant operators have demonstrated a strong interest in further investigating the feasibility of implementing a vermicomposting option with Granville Township.

Granville Township has received a \$100,000 Growing Greener grant from PADEP to help develop a small scale vermicomposting project. The township is currently seeking additional sources of funding for the project, and is dealing with PADEP permitting issues related to this relatively new technology. If a regional vermicomposting project were developed (serving the treatment plants currently using the Barner Landfill), and if the project could secure a \$430,000 PennVest grant combined with a two percent PennVest loan to offset some construction costs, it is projected that this facility would cost approximately \$50 per ton to the facility users (nearly identical to the current Barner Landfill tip fees).

Approximately 74% of the biosolids generated by County treatment plants is currently dewatered and landfilled. The remaining treatment plant biosolids, in liquid form, and all the County's septage (also liquid) are either land-applied or are delivered to a wastewater treatment plant for processing. All seven of the respondents to the Solicitation of Interest indicated a willingness to accept dewatered sludge at their disposal sites. The SOI responses quoted ceiling tipping fees for dewatered sludge disposal ranging from \$38 to \$77 per ton.

The three plants that currently landfill dewatered sludge cake at the Barner Landfill will see their preferred disposal method disappear when the landfill closes in 2004. Drop-off containers and a shared service/hook truck, appears to be a practical and cost-effective way to defray the longer haul cost to out-of-county disposal sites. Further, Lewistown Borough indicated that it is planning to retrofit one of its existing garbage trucks to service rolloff containers, and this could defray this cost further. By locating a rolloff at each participating treatment plant, service can be geared to each treatment plant's own schedule and individual disposal needs.

Most County treatment plants that produce biosolids in liquid form land apply that material, and intend to continue to do so for at least the next 5-10 years. Even if Pennsylvania adopts a phosphorus-based nutrient management system as is predicted, the Mifflin County Conservation District believes that sufficient land will still be available in the County to handle Mifflin County's continued and safe application of biosolids.

Other

The County should consider implementing a system of hauler licensing, administrative fee assessment, and other measures determined necessary to provide for the waste management needs of Mifflin County over the next 10 years. With the State's adoption of Act 90 (Waste Transportation Safety Program) in June 2002, implementation of new municipal or residual waste transportation licensing programs is prohibited on a county or municipal level. The County will support the state's program under Act 90; however, the County/MCSWA will evaluate whether a County hauler licensing program is preferable, should future regulations or legal challenges change the interpretation of this new Act. Chapter 5 contains further discussion of these possible Plan implementation tools.

Chapter 6: Location of Facilities and Programs

The Barner Landfill, currently operated by the MCSWA, is Mifflin County's only waste disposal facility. After the anticipated closure of the Barner landfill in 2004, disposal capacity agreements will be negotiated with each of the eight qualifying disposal facilities that responded to the SOI, or petitioned to be included in the Plan. The contract terms under each disposal option satisfy Act 101 requirements.

Chapter 7: Implementation

Chapter 7 discusses the various considerations associated with implementing this Plan, including implementing agency, implementation documents, method of funding the system, implementation schedule and public participation in the development of this Plan.

It is anticipated that the responsibility for implementing the Plan will be delegated to the MCSWA with this Plan Update (see Appendices G and H for the County's Resolution and Delegation of responsibility to the MCSWA). The implementing agency for the Plan should, at a minimum, either initiate or continue to do the following:

- Provide for adequate disposal capacity for the 10-year planning period for County generated municipal solid waste.

- Execute Municipal Waste Disposal Capacity Agreements with qualified facilities for municipal waste disposal services, and provide the administration of these agreements.
- Provide for qualified disposal facilities to be added to the Plan in the future.
- Continue to promote recycling activities, including the monitoring, documenting, and reporting of recycling activities to track County progress in meeting Pennsylvania's 35 percent recycling goal.
- Maintain and improve, as necessary, the County's existing municipal waste collection and disposal services. These services should be initiated to meet changing County needs and to provide a safe, reliable, effective and efficient solid waste management system.

Chapter 7 of this Plan identified the following planning initiatives to be considered and implemented (as feasible) by the designated Plan implementing agency:

- Establishment of a County administrative fee.
- Support the State's Waste Transportation Safety Program, as authorized under Act 90, to improve waste transportation safety within the County. Consider the establishment of a hauler licensing program for waste haulers, if such a program is not prohibited in the future.
- Expansion of recycling opportunities.
- Evaluation of the feasibility of developing a recycling program that could include additional drop-off sites, and/or Countywide "Green Box" trash collection and recyclables collection system.
- Evaluate the feasibility of developing a household hazardous waste program.
- Improvement of the public education for recycling and solid waste programs.
- Reduction of open/illegal dumping.
- Consideration of instituting a county-wide mandatory garbage collection ordinance.
- Support for schools and identification of funding sources for educational programs.
- Increased support of sludge and septage management activities. This may include continued evaluation for a regional sewage sludge processing and disposal facility/mechanism.
- Procurement and ownership of future waste management facilities (e.g. transfer station).
- Maximize the capacity and associated life of the Barner Landfill.
- Consider the use of the existing Council of Governments (COG) to assist with the implementation of the selected planning initiatives.
- Review of the County Plan annually to determine if planned programs for implementation have been addressed.

Funding of existing County Solid Waste Management programs (such as recycling) is primarily from revenues generated by the MCSWA at the Barner Landfill. Alternative sources of funding will be required for continuing these programs, as well as any additional waste management

initiatives, following the closure of the Barner Landfill in 2004. Funding sources could include any combination of a County administrative fee, revenues generated through a County-sponsored waste transfer station operation, and/or State Act 101 grant funding. Program funding should include the cost of administering the overall system.

Closure and post closure care for the Barner landfill will be afforded through funds that have been generated through Barner Landfill tip fees and reserved for this purpose.

Sludge generators pay for the disposal of their sludge as required by agreement between the contractor and disposal site owner.

If it is decided by the County/MCSWA entity to construct and operate a centrally located transfer station, the capital costs for the facility could be provided through a revenue bond or a form of short-term financing. Repayment and operation costs for the facility would be paid for through tip fees.

The institutional framework for implementing the County Plan is formed by the existing County Waste Management Ordinances and the Delegation Agreement between the County and MCSWA.

Table ES-5 shows the major waste management system functions and schedule for implementing the major tasks identified and proposed by this in this Plan.

**TABLE ES-5
MIFFLIN COUNTY
MUNICIPAL WASTE MANAGEMENT SYSTEM
FUNCTIONS AND IMPLEMENTATION SCHEDULE**

TASK OR FUNCTION	DATES
Waste Management System	
Plan Approval - PADEP	By end of 4th Quarter 2002
Execute Waste Disposal Facility Contract Agreements for Identified SOI and Application Package (Qualified) Respondents	By end of 1st Quarter 2003
Barner Landfill Post Closure Care	30 Year period expected to begin no sooner than mid-2004
Hauler Contracts	Continuing
Provide for Adequate Disposal Capacity	Continuing
Allow Qualified Facilities to be Added to the Plan	Continuing
Continued Monitoring, Documenting, and Reporting of Recycling Activities/performance	Continuing
Be the contracting party in the major waste disposal agreements	Continuing
Transfer Station (If Implemented)	
Decision Whether or Not to Proceed with County Transfer Station	By end of 3 rd Quarter 2002
Start Final Design and Permitting	By end of 4 th Quarter 2002
Secure Waste Commitments to Transfer Station	By end of 2 nd Quarter 2003
Funding Commitment for Costs Associated with the Transfer Facility	By end of 2 nd Quarter 2003
Bid Release	By end of 2 nd Quarter 2003
Construction Notice to Proceed	By end of 3 rd Quarter 2003
Start-up	Coincides with Barner closure – By end of 2 nd Quarter 2004

⁽¹⁾ Refer to Section 7.1 for additional County planning initiatives established as part of this Plan Update process.