

Recycling Program Improvements

City of Bradford
24 Kennedy Street
Bradford, PA 16701



SCS ENGINEERS

02217011.01 – Task 33 | October 6, 2020

11260 Roger Bacon Drive
Reston, VA 20190
703-471-6150

Table of Contents

Section	Page
1 Project Description	3
2 Summary of Work	3
3 Current Program	4
4 Findings.....	7
Recycling Ordinance	7
Recycling Operations	10
Rates	10
Collection Equipment	11
Markets	12
Yard Waste.....	12
Requirements	12
Program Modification.....	13
Recycling Education	14
Partnership with University of Pittsburgh at Bradford.....	15
Enforcement	16
5 Conclusion	16

Tables

Table 1.	Recycling Quantities Collected in Bradford	5
Table 2.	Proposed Modifications to Recycling Ordinance.....	7
Table 3.	Monthly Solid Waste Service Rates	10
Table 4.	Dumpster Rental Fees	11

Figures

Figure 1.	Recycling Operations in City of Bradford	6
-----------	--	---

Appendices

- Appendix A – Municipal Recycling Requirements from Act 101
- Appendix B – Example Recycling Ordinance
- Appendix C – McKean County Municipal Solid Waste Management Plan

1 PROJECT DESCRIPTION

For about the last 20 years, the City of Bradford (City) has operated a recycling program to serve resident’s recycling needs and to comply with state requirements for recycling. Over this time period, few aspects of the program have changed. Given there has been significant advancements in recycling collection technology and markets for materials, the City Council of Bradford is interested in understanding if the City’s recycling program is due for updates and/or changes.

The City requested recycling technical assistance to review the current recycling program and identify ways it can be improved to increase its effectiveness. For this project, recycling program policies/requirements, operations, and education were evaluated.

2 SUMMARY OF WORK

The following summarizes the tasks completed for this project.

Task 1 – Data Collection and Site Visit

For this task, SCS requested technical and operational information/data on the City’s recycling program. This information was received and reviewed prior to conducting a site visit and field observations. The site visit and field observations occurred over a one-day period in June 2020 and included the following:

- Meeting with City staff;
- Observing recycling and solid waste collection operations;
- Touring the City’s recycling facility;
- Visiting Metalico Bradford (City’s vendor for various commodities).

Task 2 – Identify Recycling Program Improvements

Based on visual observations of the City’s recycling program, data provided, equipment specifications, and a review of the City’s educational material, SCS identified opportunities to improve the City’s recycling program. Implementation of recommendations in this report are at the discretion of the City and its governing authorities.

Task 3 – Review Recycling Ordinance

SCS obtained the City’s current recycling ordinance and reviewed its content and provisions. SCS reviewed the ordinance with the following considerations in mind:

- Compliance with state recycling requirements;
- Specific focus areas/topics of interest to the City;
- Provisions in other local government recycling ordinances that may be beneficial to the City.

SCS provided recommendations on how the recycling ordinance can be updated and modified to be made more effective to encourage greater compliance.

Task 4 – Final Report

This report constitutes the fourth and final task for this project. It has been reviewed by both City of Bradford and Pennsylvania Department of Environmental Protection Staff (PADEP).

3 CURRENT PROGRAM

The City of Bradford is located in McKean County adjacent to the Allegheny National Forest in northwest Pennsylvania. The City is a Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101) mandated recycling community. **Appendix A** summarizes the municipal recycling requirements of Act 101. In compliance with Act 101, the City established the Waste Reduction and Recycling Ordinance (No. 3128) that requires all residents and occupants of commercial, institutional, and municipal establishments to recycle. With a population of about 8,200, the City provides solid waste services to 3,106 households and many businesses and industrial customers.

The City is the only authorized collector and hauler of waste and recyclable materials in Bradford. Households receive weekly curbside trash and recyclable materials collection. There is no limit to the amount of recyclable materials residents may place at the curb each week. However, residents are limited to four bags of trash per week. If additional garbage capacity is required, residents must pay \$1.50 per bag over four. Commercial and industrial properties in the City are provided with either a four, six, or eight cubic yard dumpster that is serviced at least once per week. Trash collected in the City is transported about 25 miles to the McKean Landfill in Mt. Jewett.



Trash placed curbside



Trash and recyclable materials placed curbside

Recyclable materials are collected commodity-separated according to a schedule that is developed and released each year. The type of recyclable materials collected rotates each week. Metal cans and glass containers are collected one week using a Kann truck with five compartments – one each for steel cans, aluminum cans, clear glass, and amber/green glass. The fifth compartment is used as an overflow for materials or the placement of paper/cardboard mixed with bottles and cans. Recyclable paper and cardboard are collected the following week using a box truck. The City uses their own staff and equipment to collect recyclable materials.

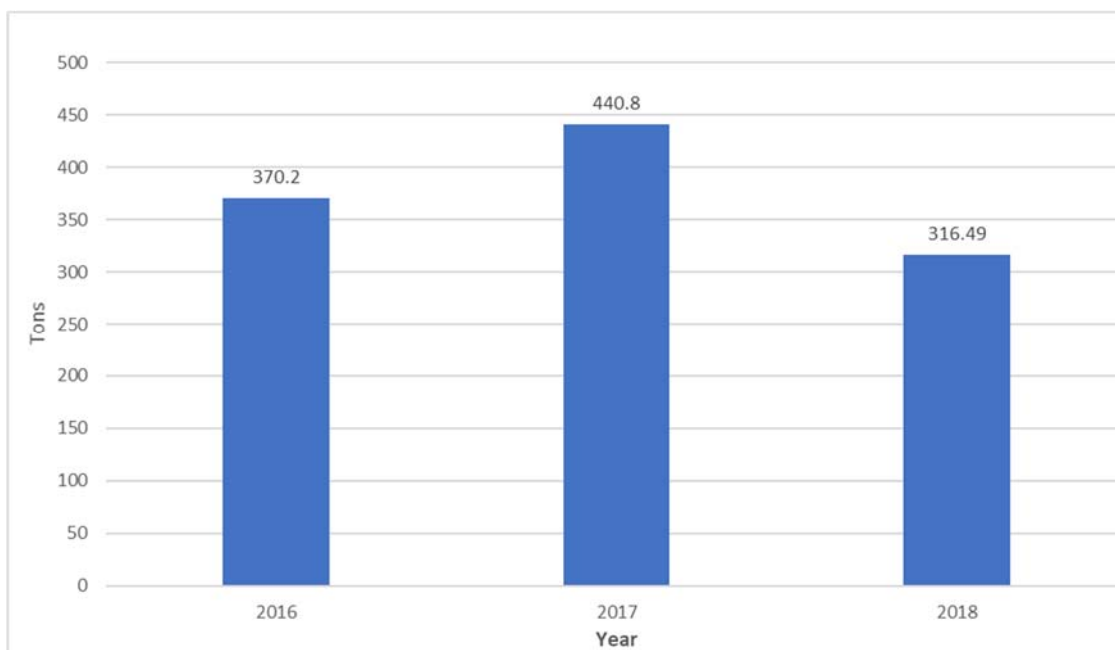
In addition to the curbside program, the City has established two recycling drop-off sites where residents can place recyclable materials 24 hours a day, seven days a week. These drop-off sites are located at:

- **Bradford Recycling Center** at 311 High Street for glass containers and metal cans;

- **Bradford Public Works Department** at 112 Holley Avenue for cardboard, paper products, and leaf waste.

Metal cans and glass containers are consolidated at the Bradford Recycling Center on High Street. Aluminum cans are smashed in a can crusher and placed in a 40-foot box trailer prior to being delivered to Metalico, a local recycler. Steel/bi-metals cans are stored in a roll-off container at the recycling center that are also delivered to Metalico. Glass containers are placed in roll-off containers at the recycling center that are retrieved by Metalico and transported to Recycle-All in Port Allegheny. Paper and cardboard is delivered directly to Metalico in Bradford which bales the material prior to being transported to market. In 2018, about 316 tons of recyclable materials were collected in Bradford. **Table 1** provides the annual tons of recyclable materials recovered for the last three years.

Table 1. Recycling Quantities Collected in Bradford



Despite the challenging market conditions for recycling, the City reports materials are being accepted at no charge; however, no rebate is received for the materials. The City places an emphasis on the positive economics recycling creates for the City. This includes the Section 904 performance grant money the City receives from PADEP as a result of the quantity of materials recycled and the reduced tipping fees the City has to pay for trash disposal.

Leaves and other yard waste materials are collected curbside from residents weekly from the first of October to the first Monday of December. Residents are required to contain materials in clear bags or securely bundle brush. Bagged leaves and bundled brush are collected by two crews that each operate a dump truck. Each crew includes two collection staff, including a driver and a collector, for a total of four staff. The City also operates their street sweeper to collect leaves that fall or blow into the street to prevent the material from entering the City’s stormwater system. Most of the yard waste collected is buried at a 200-acre site that is owned by the City of Bradford Sanitary Authority in Foster Township. The City provides leaves to residents that request them for use in gardens/landscaping. Yard waste is not processed into mulch or compost. Residents may transport yard waste to a drop-off site at the Bradford Public Works Department on Holley Avenue.

Figure 1 includes pictures of the City's solid waste management operations.

Figure 1. Recycling Operations in City of Bradford



Curbside collection of solid waste



Collection of bottles from a downtown bar



City's recycling center and material drop-off site



Collection of paper materials using the box truck



Recycling drop-off site at the Public Works Dept.



Yard waste drop-off site at the Public Works Dept.

4 FINDINGS

RECYCLING ORDINANCE

The City of Bradford established a mandatory recycling ordinance in 1990 that requires residents and commercial property owners and occupants to recycle. The recycling requirements in Bradford are included in Article II. Waste Reduction and Recycling of Chapter 184, of the City’s solid waste ordinance. The ordinance has not been updated or modified in many years. **Table 2** provides recommended updates to the current recycling ordinance. As with any proposed updates or changes to City ordinances, the City’s solicitor should review and approve modifications prior to approval by the City Council.

Table 2. Proposed Modifications to Recycling Ordinance

Reference	Current Requirement	Recommended Update
184-9. Purpose and Goals	Recycling program goals	Refine goals to bring them in line with current City programs and expectations for the management of recyclable materials; For example, goal three states “Utilize, wherever feasible, the capabilities of private enterprise in accomplishing the desired objectives of an effective, comprehensive solid waste management program.; a refined goal three may state the City will prioritize the most cost-effective way for managing recyclable materials that may include utilizing municipal resources and private enterprises
184-9. Purpose and Goals	Recycle at least 25% of MSW	Having a recycling goal is good, but it is not recommended it be codified in the recycling ordinance; particularly if the City does not measure or track progress toward achieving this goal

Reference	Current Requirement	Recommended Update
184-10. Definitions	Update definitions	<p>Suggest revising and expanding the list of definitions in the ordinance to conform to Act 101, examples include:</p> <ul style="list-style-type: none"> - Department – The Department of Environmental Protection, not environmental resources - Commodities – Include definitions of recyclable materials such as bi-metal cans, aluminum cans, glass containers, cardboard, etc. - Yard waste – Suggest revising the definition of yard waste to be consistent with PADEP’s definition of leaf waste <p>Suggest removal of definitions that are no long relevant or applicable, including:</p> <ul style="list-style-type: none"> - Degradable Plastic Beverage Carrier - Feasibility Study - Project Development
184-12. Designated Sites	Requirement for MSW to be disposed at the Looker Mountain Road facility	This provision pertains to MSW and not recyclable materials and it is suggested this requirement be moved to the disposal chapter of the ordinance and updated to say McKean County Landfill; also, suggest revising to state recyclable materials must be transported to designated Recycling Facility(s) as defined in the ordinance
184-13 (A). Source Separation, Collection	Requirement to separate and recycle eight material types	This is inconsistent with Act 101 municipal recycling requirements that specify at least three material types must be recycled; although requiring more material types be recycled is desirable, the City does not accept and recycle all items listed in the current ordinance
184-13 (B). Source Separation, Collection	Requirement for separation of leaf waste	Requirement needs to be updated to specify option of transporting leaf waste to drop-off site; additionally, “leaf waste” is not defined in the ordinance, but yard waste is and there are no requirements for “yard waste;” recommend ordinance be consistent with Act 101 and reference leaf waste

Reference	Current Requirement	Recommended Update
184-13 (B). Source Separation, Collection	Multi-family residential recycling requirements	Should be a separate section of the ordinance and the requirements for properties of 25 units or more should be reduced to four or more to conform to the requirements of Act 101
184-13 (C). Source Separation, Collection	Commercial, institutional, and municipal (CIM) recycling requirements	<p>Recycling requirements for CIM properties are consistent with Act 101; however, the payment of a fee to be exempt from this requirement may not be lawful by the state and the City should have its solicitor review</p> <p>Note that with the City being the sole provider of recycling collection services, the designated materials for recycling should be the same for both residential and CIM properties to facilitate a consistent recycling program across all parts of the City</p>
184-13 (D). Source Separation, Collection	Placement of recyclable materials in plastic containers	Suggest updating to require recyclable materials be placed in rigid containers and paper/cardboard to be tied in bundles
184-13(E). Source Separation, Collection	Designation of the City of Bradford as recycling collector	Update to specify that the City may opt to enter into a contract with a private company (must be defined) to provide recycling collection services
184-14. Public Notice	Requirements for education and outreach	Indicate education and outreach will occur two times per year at least six months apart; at least one educational notification must be in print form; specify that education materials will be provided to all persons in the City (residents, occupants of CIM establishments, etc.)
184-15. Recycling by Operator	Contracting for recycling services	Although this provision is allowed by Act 101, it may be unlikely to occur in Bradford or McKean County to achieve recycling compliance; consider deleting this provision

Reference	Current Requirement	Recommended Update
184-16. Drop-Off Centers	Establishment of drop-off centers	This provision is from Section 1502. Facilities operation and recycling in Act 101; if the City were to establish a landfill, resource recovery facility or transfer station, it would be required to implement a recycling drop-off site; however, it doesn't appear the City will embark on such capital-intense projects and so this provision may not be necessary; the ordinance should indicate that the City has established two drop-off locations for residents to bring their recyclable materials

Appendix B contains an example mandatory recycling ordinance that the City might consider using as a guide for a complete update of their current ordinance.

RECYCLING OPERATIONS

Rates

The City assesses a monthly solid waste fee to residents and owners of commercial properties for providing solid waste services. This fee should be reviewed and adjusted annually in order to assess its impact on recovering the costs of providing solid waste services. The fee does not cover the cost to provide recycling services to residents and businesses. **Table 3** summarizes the monthly service rates charged to residents and commercial properties.

Table 3. Monthly Solid Waste Service Rates

Property Type	Monthly Service Rate	Details
Residential	\$20	Per housing unit; additional fee of \$1.50 per bag over four bags
Commercial	\$20	1 weekly collection
Commercial	\$40	2 weekly collections
Commercial	\$60	3 weekly collections
Commercial	\$80	4 weekly collections
Commercial	\$100	5 weekly collections

In addition, commercial properties in the City that are provided dumpster services pay a monthly rental fee based on the size of the container(s) they utilize. **Table 4** lists the monthly rental fees by dumpster size.

Table 4. Dumpster Rental Fees

Size (Cubic Yard)	Monthly Rental Fee
4	\$20
6	\$27
8	\$34

SCS’s experience analyzing solid waste rates for local governments indicates the rates charged by the City, particularly for commercial properties, are low for the level of service being provided. For example, a business that has three weekly collections of solid waste in a six cubic yard container only pays \$87 per month or about \$7.25 per collection (assumes 12 collections per month). These rates do not even include recycling collection services provided to the business. SCS recommends that the City complete a revenue sufficiency analysis to better understand what fee should be charged to residents and business owners for the solid waste services provided, including for the collection and management of recyclable materials. The fee calculated can be benchmarked against the City’s existing solid waste program fee to understand what updates and changes may be necessary in the future to make the solid waste program more sustainable.

Collection Equipment

As discussed earlier in this report, the City uses a Kann truck with five compartments to collect metal cans and glass containers and a large box truck to collect paper materials and cardboard. The City has used these vehicles to collect recyclable materials for nearly two decades. SCS recommends that the City consider implementing a capital planning project that allows for the replacement of these collection vehicles on a routine schedule (likely every eight to ten years).

The Kann truck appears to meet the City’s collection needs for metal cans and glass containers. There is sufficient space in the truck to collect materials from residential and commercial properties on each route. In addition, the Kann truck works well for the City’s commodity-separated recycling program. Although most curb-sort recycling programs have ceased to exist, those that do typically use similar types of trucks.

Using a box truck to collect paper and cardboard is not standard practice for recycling collection operations. Collecting materials using a box truck slows collection operations as City staff must manually organize and stack cardboard and paper in the back of the truck to maximize the truck’s capacity. Collection staff must also jump in and out the back of the truck in order to organize these materials, increasing the risk for injury in an already dangerous occupation. Additionally, although the box truck is equipped with a hydraulic lift, SCS observed that City staff must climb in the back of the tipped box truck in order to force materials out the back and onto the conveyor belt for baling at the recycling facility.

SCS encourages the City to look into using other equipment/vehicles to collect paper and cardboard. Specifically, SCS recommends the City procure a rear-load packer truck to be used to collect cardboard and paper. A rear-load packer truck is designed to facilitate curbside collection of materials. A packer truck should increase the efficiency of collection operations by eliminating the need to organize and stack cardboard and paper in the back of a truck. The packing feature of the truck will help facilitate the use of the truck’s full capacity, potentially allowing the truck to stay on

route longer which will further increase efficiency. It also reduces safety concerns by removing the need to enter the truck on route and at the recycling facility.

The City should investigate amending their Section 902 recycling grant application to request funds for a rear-loader that could be used principally for the collection of paper and/or cardboard.

Markets

SCS encourages the City to monitor recycling markets and to track commodity pricing. Given current market conditions, it appears that the City is making good use of partners and end-users of recyclable materials to control costs. The utilization of local markets has allowed the City to keep transportation costs down while not incurring processing fees.

Like most markets, the demand for recyclable commodities is cyclical. It is anticipated that the markets will rebound. By tracking markets, the City can be positioned to share in some of the value of materials if and when prices escalate. Observations from SCS's field visit and in conversations with staff at Metalico indicate that the materials collected through the City's program are clean and have very little contamination. These are the kind of recyclable commodities that manufacturers and other end-users want, which can result in rebates back to the City. When commodity prices increase it will be increasingly important to understand the value of the material the City collects so that some revenue may be obtained. This knowledge will put the City in a better position to "shop" materials around to help offset program costs.

Yard Waste

Requirements

Act 101 requires mandated recycling communities to divert and compost leaf waste generated at residential, commercial, institutional, and municipal establishments within their jurisdiction. The requirements for leaf waste are included in Chapter 15, Section 1501 of Act 101 (**Appendix A**). Leaf waste includes leaves, shrubbery, tree trimmings, and similar materials, but excludes grass clippings. All materials defined as leaf waste must be collected at least monthly. To be in compliance with the leaf waste provisions of Act 101, the following requirements must be met:

- 1) Implement an ordinance that requires leaf waste to be separated from municipal waste for recycling at residential and commercial, municipal, and institutional establishments;
- 2) Establish a scheduled day, at least once per month, when leaf waste is collected curbside or from a similar location; OR
- 3) Establish a scheduled day, no less than two times per year and preferably in the spring and fall, when leaf waste is collected curbside or from a similar location from residential and commercial establishments, AND facilitate a drop-off location or other collection alternative approved by the Pennsylvania Department of Environmental Protection that allows persons to drop-off leaf waste for composting at least once per month. A leaf waste drop-off site can be in a neighboring municipality or at a private establishment provided there is an agreement in place to utilize the site, and residents and occupants of commercial establishments are informed of the drop-off location at least every six months.

Program Modification

The City's current yard waste management program does not align with the requirements in Act 101. SCS suggests the City modify the existing program to bring it in conformance with Act 101 as follows.

- **Implement Program for Composting and Mulching** – Currently, most yard waste and leaves collected through the City's drop-off site and collected curbside in the fall are buried on City property. The City also gives some leaves to residents who use them in their gardens. Although this material is diverted from landfill disposal, it is not composted and mulched as required by Act 101. It is recommended that the City modify their existing yard waste drop-off site so that residents place woody materials in one bunker and leaves, grass clippings, and other "soft" yard wastes in a separate bunker. The separation of these materials is essential in order to effectively manage them.

SCS understands that there are limited options for managing yard waste in Bradford and McKean County. The City will need to be creative to comply with Act 101 while also implementing a program that is cost-effective. According to the McKean County Municipal Solid Waste Management Plan (**Appendix C**), both Smethport Borough and Kane Borough have yard waste management sites. Although no details about these facilities were available in the plan or through additional research, it is recommended the City contact each of these jurisdictions to explore the potential of a coordinated yard waste management operation. SCS notes that neither of these two boroughs appear to be mandatory Act 101 recycling communities.

The City should encourage residents to reduce the amount of yard waste generated at their properties. Reducing yard waste generation is important to limit the amount of material the City is responsible for collecting and processing into mulch or compost. This reduces the burden on City staff and financial resources. The McKean County Municipal Solid Waste Management Plan (**Appendix C**) contains information and resources for promoting backyard composting and grasscycling.

Implementing a program whereby woody materials are ground into mulch a couple times a year will help the City manage those materials. The mulch produced from the grinding operation can be given to residents for use on private property, used in City landscaping projects, and/or used in a composting operation to process leaves and other "soft" yard wastes. The City would need to hire a contractor or rent equipment in order to grind the material, so the expenses for such a program could be minimal. The composting of leaves and other "soft" yard waste materials required by Act 101 (excluding grass clippings) need a more structured and rigid program for management. Composting facilities also have permitting requirements (see PADEP website at <https://www.dep.pa.gov/Business/Land/Waste/Recycling/Composting/Pages/Facility-Permitting-Requirements.aspx>) that must be followed. For this reason, it may be more feasible to transport leaves and other yard waste that can't be mulched to either Kane or Smethport boroughs if their composting facilities are permitted.

Expand Curbside Collection Program – Currently, the City collects leaves and other yard waste curbside from residents over a two-month period in the fall. The bagged and bundled yard waste is

collected using a dump truck. In addition, leaves are collected using the City's street sweeper. This program is popular among residents and provides an essential service to the community. PADEP's preference is that at least one collection occurs in the spring. It is recommended that the City expand their curbside yard waste collection program to include a spring collection event. The City can continue their fall yard waste curbside collection program. Expanding the City's yard waste management program to include mulching and grinding operations will require time, resources, and assistance. It is recommended that the City work closely with the PADEP Recycling Coordinator for the Northwest Region, Ms. Regina Schweinsberg, and the McKean County Recycling Coordinator, Ms. Maddie Stanisch. Contact information for each of these individuals is as follows:

PADEP Northwest Recycling Coordinator

Ms. Regina Schweinsberg
230 Chestnut Street
Meadville, PA 16335
rschweinsb@pa.gov

McKean County Recycling Coordinator

Ms. Maddie Stanisch
McKean County Conservation District
17137 Route 6
Smethport, PA 16749
mmstanisch@mckeancountypa.org

Recycling Education

Public education and outreach are central to the success of all recycling programs. It is also required by Act 101 to occur at least two times each calendar year (at six month intervals). SCS believes that expanding the City's education and outreach program will reinforce and encourage increased recycling in the City. Obtaining information on recycling in the City should be simple and straightforward.

SCS recommends that in addition to the Refuse and Recycling Schedule the City mails to all residents and business owners at the beginning of each calendar year, a separate notification about recycling be sent to each household and business owner. This can be done as a utility bill insert or post card to reduce costs. The message of this mailer would be to emphasize key recycling messages such as:

- Recycling is mandatory in the City;
- The following items must be recycled: cardboard, glass containers, metal cans, and leaf waste;
- Recyclable materials must be kept separate;
- Contact the City if you have questions or need a recycling container.

The purpose of this mailer would be to provide recycling information in a concise and visually attractive manner that catches people's attention. Although the recycling schedule currently sent out has important information on recycling, key recycling messages can be overlooked as the schedule includes information on the City's trash collection program.

In this age of continual information and knowledge sharing, residents and business owners expect to quickly and easily access information on recycling in the City. Having a sustained public education and outreach program is also an important component of compliance with Act 101. Expanding the media the City uses to communicate with residents and business owners about recycling is necessary to communicate recycling messages with as many City residents as possible. Additional opportunities for providing recycling information may be through:

- Annual mailings
- Newspaper advertisements
- Social media
- Newsletters
- Brochures
- Fact sheets
- Posters
- Stickers/labels for containers
- Community events/fairs
- Videos

Increasing the amount of recycling information on the City’s website is another good way to communicate with residents about recycling. SCS applauds the City for emphasizing the economic benefits of recycling on their website, including that recycling reduces disposal costs and increases funding through recycling performance grants. The City’s website can be used as a more complete resource for information on recycling with the following information included:

- **Accepted Materials** – Definitions/descriptions of accepted recyclable materials along with pictures of materials;
- **Preparation Guidelines** – Instructions for how residents and business owners should prepare recyclable materials for collection (i.e. bundle paper/cardboard, rinse containers, etc.);
- **Drop-Off Sites** – Address and location of the drop off recycling sites in the City;
- **Yard Waste** – Include information on how yard waste is collected and managed, including the fall leaf collection schedule.

Partnership with University of Pittsburgh at Bradford

The City operates and provides solid waste services with limited staffing. Significant efforts to improve recycling, such as expanding public education and outreach, requires dedicated staff that the City may not be in a position to provide and/or fund. A potential opportunity for the City to increase staff resources at minimal or no cost may be through partnering with the University of Pittsburgh at Bradford (University) to set up an internship. Having the support of an intern to promote recycling in the City would allow the City to have dedicated staff to focus on recycling and give a student(s) practical work experience. A partnership with the University to establish an internship program makes sense for the following reasons:

- **Local Resource** – The college’s main campus is located just outside the City of Bradford in Bradford Township; the University and students should have a vested interest in preserving resources in the Bradford community;
- **Environmentally-Minded Students** – The University has an undergraduate program in environmental studies with students that are passionate about the environment. Some may even have a particular interest in promoting and encouraging recycling.

- **Communication Program** – The University has an undergraduate program in communications where students are learning about communication methods and strategies that could be useful for increasing the City’s public education and outreach to residents.
- **Capabilities** – Public education is key to promoting and encouraging recycling among residents and business owners in Bradford. Students are creative and proficient at using social media. These skill sets would benefit the City in promoting recycling.
- **Longevity** – Improving and expanding recycling in the City is a long-term initiative and will not happen overnight. An internship program has the potential to be long term as new students need internships and the City continually needs dedicated help to encourage recycling.
- **Staff Shortage** – As noted above, the City operates their solid waste program with limited staff. Existing staff are focused on collection of trash and recyclable materials and do not have the time to work on other aspects of the program. Tapping into students can fill the staffing void needed to promote and expand recycling.
- **Reduced Costs** – The City is not in a financial position to invest significant financial resources to promote and facilitate recycling. Utilizing students provides an opportunity to recruit individuals to support recycling at minimal cost. The City may provide a small stipend, but the real-world experience should suffice to make it a valuable opportunity for most students.

The City can express interest in setting up an internship program with the University by completing the online-based Employer Internship Information Form at <https://www.upb.pitt.edu/academics/internships>.

Enforcement

Enforcement is an important and necessary part of compliance with recycling requirements. Priority should be given to educating the public about recycling requirements. However, when education and outreach do not work and do not result in compliance with requirements, the City should employ enforcement measures to achieve desired results. A city code enforcement officer should follow-up and visit residents and businesses that have not responded to the City requests to comply with recycling requirements. The City may even need to cite and fine businesses as provided in the recycling ordinance as a last resort to force compliance with the law. These enforcement activities are not desired, but can be used successfully when other actions to obtain compliance fail.

5 CONCLUSION

Overall, the City’s recycling program provides important services to residents. The City’s curb-sort program has existed in its current state for about two decades despite significant advances in recycling collection and processing technologies. Despite this fact, the City collects and produces a clean, uncontaminated stream of recyclable materials that are desired by recycling processors. Given current market conditions and the pressure to produce clean materials, it is not recommended that the City transition away from the existing curb-sort program at this time. However, it is recommended that the City give some close attention and evaluation to the following updates and upgrades:

- **Recycling Ordinance** – The City’s recycling ordinance is old and outdated. It is recommended that the current ordinance be updated to reflect the current recycling program.

- **Collection Equipment** – As noted above, utilizing a box truck for the collection of paper/cardboard is not standard industry practice for curbside recycling. It is recommended that the City use their spare rear-load collection vehicle to collect paper and cardboard to increase safety and efficiency of collection operations. The City should request an amendment to their submitted PADEP Section 902 grant application for the purchase of a rear-load collection vehicle to be used for the collection of paper and cardboard.
- **Yard Waste** – The City needs to modify their yard waste management program so that materials collected through the drop-off site and curbside collection are mulched and composted. This will require investment of both financial and staff resources, but is necessary for compliance with Act 101 and to effectively manage yard waste.
- **Public Education and Outreach** – Education and outreach are central to the success of the City's recycling program. The City should consider expanding their education and outreach activities to reach more residents, including the expanded use of social media. To assist with this ongoing activity, the City should explore establishing an internship with the University of Pittsburgh at Bradford whereby an intern can develop and expand the City's social media presence.

Implementing these recommendations should facilitate a more effective recycling and waste diversion program that will further result in reduced tipping fee charges and increased funding from recycling performance grants.

Appendix A
Municipal Recycling Requirements of Act 101

Summary of Act 101 Mandatory Municipal Recycling Requirements

Overview

Chapter 15, Section 1501 of the Pennsylvania Municipal Waste Planning Recycling and Waste Reduction Act (Act 101), outlines the requirements for large municipalities to recycle. Municipalities, other than counties, with a population of 10,000 or more people or with a population of more than 5,000 but less than 10,000 people, and a population density of more than 300 people per square mile, are mandated to recycle.

Recycling Ordinance

An Act 101 mandated local government must adopt an ordinance that requires recycling. The ordinance shall require the following:

- 1) Recycling at single-family homes and apartments; commercial, municipal, and institutional establishments; and at community activities.
- 2) A scheduled day, at least once per month, when separated recyclable materials are to be placed at the curb or similar location for collection.
- 3) A collection system, including trucks and related equipment, to pick-up separated recyclable materials from the curb or similar location at least once per month from homes and businesses in the municipality. The municipality shall explain how the system will operate, the dates of collection, the responsibilities of persons within the municipality and incentives and penalties.
- 4) Provisions to ensure compliance with the ordinance, including incentives and penalties.
- 5) Provisions for the recycling of collected materials.

Residential Recycling

Residents must separate for recycling at least three materials deemed appropriate by the municipality from municipal waste generated at their homes, apartments, or other residential establishments. Separated materials must be stored at the property until collection. The three materials must be selected from the following:

- Clear glass;
- Colored glass;
- Aluminum;
- Steel and bimetallic cans;
- High-grade office paper;
- Newsprint;
- Corrugated paper;
- Plastics.

Leaf waste must also be separated from municipal waste generated at residential properties and stored for collection, unless residents have already provided for the composting of the materials (i.e. backyard composting).

Owners or landlords of multi-family rental properties with four or more units must establish a recycling collection system at each property. The collection system must include suitable containers for collecting and sorting materials, easily accessible locations for the containers and written instructions to the occupants concerning the use and availability of the collection system. Owners or landlords that comply with these requirements shall not be liable for noncompliance by occupants of their buildings.

Commercial, Municipal, and Institutional Recycling

Occupants of commercial, municipal, and institutional establishments are required separate and store for recycling of the following materials at a minimum:

- High-grade office paper
- Aluminum;
- Corrugated paper;
- Leaf waste.

Occupants of commercial, municipal, and institutional establishments may be exempt from the requirements of this law if those persons have otherwise provided for the recycling of materials they are required to recycle. To be eligible for an exemption, the commercial, municipal, or institutional generator must provide written documentation to the municipality annually.

Community Activity Recycling

Organizers of community events must provide for the separation, storage, and collection of high-grade office paper, aluminum, corrugated paper, and leaf waste at the events. Community activities required to recycle include events sponsored in whole or in part by a municipality or held within a municipality and sponsored privately. Events include fairs, bazaars, picnics, or sporting events that will be attended by more than 200 or more people each day of the event.

Leaf Waste Diversion

Municipalities mandated to recycle under Act 101 must require residential and commercial establishments to separate and store leave waste for collection. Leaf waste includes leaves, shrubbery, tree trimmings, and similar materials, excluding grass clippings. These materials must be collected at least monthly. In order to comply with Act 101, mandated municipalities must at a minimum:

- 4) Implement an ordinance that requires leaf waste to be separated from municipal waste for recycling at residential and commercial, municipal, and institutional establishments, AND
- 5) Establish a scheduled day, at least once per month, when leaf waste is collected curbside or similar location, OR
- 6) Establish a scheduled day, no less than two times per year and preferably in the spring and fall, when leaf waste is collected curbside or similar location from residential and commercial establishments, AND facilitate a drop-off location or other collection alternative approved by the Pennsylvania Department of Environmental Protection that allows persons to drop-off leave waste for composting at least once per month. A leaf waste drop-off site can be in a neighboring municipality or at a private establishment provided there is an agreement in place to utilize the site, and residents and occupants of commercial establishments are informed of the drop-off location at least every six months.

Municipalities are encouraged to manage source separated Christmas trees as leaf waste for processing at DEP approved composting facilities.

Public Education and Outreach

Municipalities subject to the requirements of Act 101 must implement a comprehensive and sustained public education program. This program is to provide residents and owners/tenants/occupants of commercial, municipal, and institutional establishments with information on recycling program features and requirements. The educational program includes two features:

- **Initial Education** – At least 30-days prior to the start of a recycling program notify all persons occupying residential, commercial, municipal, and institutional establishments of the recycling requirements as contained in the ordinance.
- **Sustained Education** – Every six months the municipality must inform and remind all persons occupying residential, commercial, municipal, and institutional establishments of the recycling requirements.

Numerous forms of educating the public are acceptable and include:

- Newspaper advertisement circulating in the municipality;
- Public notice posted where such notices are customarily posted;
- Notices in other official notifications (i.e. utility bills);
- Website;
- Newsletter;

A combination of forms are acceptable and at least one form must be in print annually.

Implementation

Municipalities may implement their responsibilities for the collection, transportation, processing, and marketing of recyclable materials in one or a combination of the following ways:

- 1) Collect, transport, process, and market recyclable materials themselves;
- 2) Enter into a contract(s) with other entities for the collection, transportation, processing, or marketing of recyclable materials. If contracting for recycling services, the entity being contracted is responsible to the municipality for implementing of recycling activities.
- 3) Contract with a landfill or material recovery facility, in lieu of a curbside recycling program, that guarantees by contract that at least 25 percent of the waste received is recycled. The technology utilized in this program must have prior approval from DEP.
- 4) Utilize a recycling facility that demonstrates that the materials separated, collected, recovered, or created by the facility can be marketed as readily as materials collected through a curbside recycling program. In addition, the mechanical separation technology used by the facility has been demonstrated to be effective for the life of the facility.

Exceptions

The municipality is not required to collect, transport, process, or market recyclable materials or contract for these services if all of the following conditions are met:

- 1) The municipality is not collecting and transporting municipal waste from such establishment or activity.
- 2) The municipality has not contracted for the collection and transportation of municipal waste from such establishment or activity.
- 3) The municipality has adopted an ordinance as required, and the establishment or activity is in compliance with the provisions of the ordinance.

Act 140 Requirements for Section 904 Recycling Performance Grants

Overview

Act 101 was amended in 2006 by Act 140 to establishment requirements for the use of Section 904 Recycling Performance Grants.

Requirements:

Municipalities mandated to recycle under Act 101 and receive more than \$10,000 in funding from recycling performance grants must meet the following requirements:

- 1) Requires, through ordinance, that all residents have waste and recycling service.
- 2) Has an implemented residential recycling program and facilitates a commercial recycling program or participates in a similar county or multi-municipal program.
- 3) Has a residential and business recycling education program.
- 4) 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.
- 5) Has provisions, participates in a county or multi-municipal program or facilitates a private sector program for the recycling of special materials.
- 6) Sponsors a program, facilitates a program or supports an organization to address illegal dumping and/or littering problems.
- 7) Has a person or entity designated as recycling coordinator who is responsible for recycling data collection and reporting recycling program performance in the municipal or municipalities.

If these requirements are not satisfied by the municipality, then the grant funds awarded under this section must be expended by the municipality only to satisfy these requirements. If all these requirements are satisfied, then the grant funds awarded may be used for any expense as selected by the municipality.

Appendix B
Example Recycling Ordinance

Example Recycling Ordinance

Recycling Requirements

Title.

This article shall be known and may be cited as the "XX."

Program established.

There is hereby established a program for the mandatory source separation and collection of recyclable materials in XX. No person shall collect, remove, treat, transport, or dispose of recyclable materials and leaf waste in XX except in accordance with this article. The use of a registered and approved authorized collector will not relieve any person from compliance with this article.

Definitions.

As used in this article, the following terms shall have the following meanings:

Act 101

The statewide recycling requirement in Pennsylvania known as the Municipal Waste Planning Recycling and Waste Reduction Act of 1988.

Aluminum

Empty beverage and food containers, trays and plates comprised of 100 percent aluminum.

Authorized Collector

Person registered and authorized by XX to collect, remove, transport, and dispose of municipal waste, recyclable materials, and/or leaf waste for owners or occupants of single-family residential establishments, multi-family residential establishments, commercial establishments, institutional establishments, and municipal establishments.

Bi-Metal Containers

Empty food or beverage container made of steel with a thin plating of tin over the steel.

Cardboard

A structural paper material with an inner core shaped in rigid parallel furrows and ridges.

Commercial Establishment

A building or buildings used or designed for use for commercial purposes, including wholesale, retail, industrial, manufacturing, transportation, financial or professional services, offices, businesses, or other commercial activities.

Community Activity

Events sponsored in whole or in part by XX or conducted within XX and sponsored privately, which include, but are not limited to, fairs, bazaars, socials, picnics and organized sporting events that will be attended by 200 or more individuals per day.

Example Recycling Ordinance

Dwelling Unit

One or more rooms in a residential establishment in which rooms have fixed cooking facilities arranged for occupancy by one or more people in each room.

Glass

Empty bottles, jars, and food and beverage containers made of clear, blue, green, brown, or amber glass, excluding plate glass, window glass, automotive glass, porcelain, ceramic products, and glass ornaments.

Institutional Establishment

Of or pertaining to any establishment engaged in service to persons, including but not limited to hospitals, nursing homes, orphanages, schools, universities, churches and social or fraternal societies and organizations.

Leaf Waste

Leaves, garden residues, shrubbery and tree trimmings and similar materials, but not including grass clippings.

Magazine

A periodical publication containing a collection of articles, stories, photographs, illustrations, and other features usually bound with a paper cover and printed in one or more colors on glossy or chemically coated paper, excluding newsprint and all other paper or fiber materials.

Mixed Paper

Recyclable paper materials including paperboard/boxboard, junk mail, and other designated recyclable paper. Excludes cardboard containers, magazines, office paper, and newsprint.

Multi-Family Residential Establishment

A building or buildings under single or multiple ownership and designed as a residence for four or more families living independently of each other and doing their own separate cooking therein, including apartments townhomes, or condominiums.

Municipal Establishment

Of or pertaining to any office or other property under the control of any branch or arm of the Federal Government of the United State of America, the Commonwealth of Pennsylvania, or any political subdivision of the Commonwealth of Pennsylvania including, but not limited to, the XX, any counties, cities, townships, and municipal authorities.

Municipal Waste

Any garbage, refuse, industrial lunchroom or office waste and other material, including solid, liquid, semisolid or gaseous material, resulting from the operations of residential, municipal, commercial or institutional establishments and from community activities and any sludge not meeting the definition of residential or hazardous waste in the Solid Waste Management Act, Act of July 7, 1980, P.L. 380, No. 97, as amended, 35 P.S. § 6018.101 et seq., from a municipal, commercial or institutional water supply treatment plant, wastewater treatment plant or air pollution control facility. The term does not include source-separated recyclable materials or leaf waste.

Example Recycling Ordinance

Newspaper

Paper distributed at fixed or stated intervals, usually daily or weekly, having printed thereon news and opinions and containing advertisements and other matters of public interest.

Office Paper

Any white printed or unprinted sheets of ledger, bond, writing, or other papers, including letter-writing stationary, note paper, computer paper, envelopes, and other general purpose paper, including shredded paper.

Person

Any individual, partnership, association, corporation, institution, cooperative enterprise, trust, municipal authority, federal government or agency, commonwealth institution or agency or any other legal entity whatsoever which is recognized by law as a subject of rights and duties. In any provision of this article prescribing a fine, imprisonment or penalty or any combination of the foregoing, the term "person" shall include the officers and directors of any corporation or any other legal entity having officers and directors.

Plastic

Empty and clean plastic containers that contained food, beverage, cleaning, laundry, and other household products. Includes only rigid containers marked with a recycling symbol and a single number (i.e. 1, 2, 3, 4, 5, 6, or 7). Examples include soda and water bottles, milk and water jugs, laundry soap containers, produce and other food containers, and soap bottles. Excludes expanded polystyrene containers.

Recyclable Materials

Those materials specified by XX for collection in accordance with this article and recycling regulations that may be promulgated from time to time for separation, collection, processing, and recovery as part of a recycling program. These materials may include aluminum, bi-metal containers, cardboard, glass, leaf waste, magazines, mixed paper, newspaper, high grade office paper, and plastic.

Recycling

The separation, collection, processing, and recovery and sale or reuse of recyclable materials, which could otherwise be disposed of or processed as municipal waste.

Recycling Container

A container designated by the property owner or resident for the storage of recyclable materials. A recycling container may be provided by the property owner, resident or tenant, or the authorized collector. A container must be durable, watertight, and be at least 30-gallons in size with a label indicating the container is for recyclable materials.

Resident

Any person that owns, leases or occupies a property located in XX used as a residence.

Single-Family Residential Establishment

Of or pertaining to any occupied dwelling unit for human habitation, except multi-family residential establishment with four or more units. Home occupations incidental to the residential use within a dwelling unit are considered a "residential establishment."

Example Recycling Ordinance

Source-Separation

The separation of recyclable materials from municipal waste at the points of origin for the purpose of recycling.

Requirement for collection service.

All persons in the XX must contract with an authorized collector for the separate curbside or similar location collection of recyclable materials and leaf waste.

Self-haul allowance.

Persons may self-haul recyclable materials and leaf waste to a state-authorized recycling facility in lieu of contracting for curbside recyclable material and leaf waste collection services. Persons opting to self-haul materials must receive prior approval from the XX to self-haul, retain receipts and/or weigh tickets that document the quantity of recyclable materials and leaf waste disposed, and submit annual reports to the XX documenting their name, address, quantities of each material self-hauled, name and address of facility where materials were self-hauled, and other information as required by the XX. Reports must be submitted within 30 days of the end of each calendar year for the previous year.

Single-Family Residential Establishment.

- 1) Except as otherwise provided herein, all persons owning or occupying single-family residential establishments shall separate all recyclable materials from municipal waste. Recyclable materials shall be placed in recycling containers and the recycling containers placed curbside or in another designated location for collection by an authorized collector.
- 2) Separate collection of recyclable materials shall be arranged with an authorized collector by the owner or occupants of each single-family residential establishment. Owners or occupants of each single-family residential establishment and the authorized collector shall establish a collection frequency that shall occur no less than once per week.
- 3) The owner or occupant of the single-family residential establishment must obtain information from their authorized collector on how recyclable materials should be prepared for collection.
- 4) Requirements for collection.
 - a. All recyclable materials must be placed in a recycling container separate from municipal waste. Recycling containers may be provided by the authorized collector, property owner, or resident.
 - b. Recyclable materials must be prepared to prevent the materials from being blown about or littered on XX streets or on private property. This may include placement of recyclable materials in recycling containers with latching lids.
 - c. No persons shall place recyclable materials in containers used for the collection of municipal waste and no municipal waste shall be placed in recycling containers.

Example Recycling Ordinance

- d. Containers shall be placed at the curbside or another location as designated by an authorized collector for collection. Under no circumstances shall containers be placed on the paved portion of a roadway or sidewalk or otherwise obstruct the flow or vision of motorists or pedestrians traveling on adjacent roads, streets, or sidewalks.
 - e. No container shall be placed at the curb or in the front yard on any lot before 6:00 P.M. on the night prior to the scheduled collection.
 - f. Recyclable materials must be clean and dry and prepared according to the requirements of the XX or authorized collector.
- 5) Nothing herein shall be deemed to impair the ownership of recyclable materials by the person who generated them unless and until such materials are placed at the curb or similar location for collection by the authorized collector.

Multi-family residential establishments.

- 1) Owners, landlords, or agents of owners or landlords of a multi-family residential establishment must establish a system for source-separation, collection, transportation, and recycling of the recyclable materials generated at multi-family residential establishments. The system must include an appropriate number of labeled recycling containers at easily accessible locations to accommodate the amount of recyclable materials generated at each multi-family residential establishment. The system must also include written instructions to the residents of multi-family residential establishments to inform them of the requirement to recycle and the use and availability of the collection program. The XX reserves the right to require additional recycling containers if the XX deems there is insufficient recycling containers to serve residents.
- 2) Owners, landlords, or agents of owners or landlords of multi-family residential establishments must contract with an authorized collector for the separate collection of recyclable materials.
- 3) No persons shall place recyclable materials in containers used for the collection of municipal waste and no municipal waste shall be placed in containers designated for the collection of recyclable materials.
- 4) Recyclable material collection frequency shall be set by the owner, landlord, or agent of an owner or landlord of a multi-family residential establishment and the authorized collector, but shall occur no less than once a week. More frequent collection recyclable materials may be necessary to prevent recycling containers from being overfilled and cause materials to be blown about or littered on XX streets and private property.
- 5) The owner, landlord, or agent of an owner or landlord of multi-family residential establishments must provide a written report to the XX that lists the authorized collector collecting recyclable materials, the name and address of the property that recyclable materials are collected, the total quantity of each recyclable material collected, and the name and affiliation of the person submitting the report. Reports are to be completed on

Example Recycling Ordinance

a form supplied by the XX and shall be submitted annually, 30 days after the close of each calendar year.

- 6) Owners, landlords, or agent of an owner or landlord who comply with the ordinance shall not be liable for the non-compliance of residents.

Commercial, institutional, and municipal establishments.

- 1) Owners, landlords, or agents of owners or landlords of a commercial, institutional, or municipal establishment must establish a system for source-separation, collection, transportation, and recycling of recyclable materials generated at each building. The system must include an appropriate number of labeled recycling containers at easily accessible locations to accommodate the amount of recyclable materials generated at each building. It must also include written instructions to the tenants or occupants of commercial, institutional, and municipal establishments to inform them of the requirement to recycle and the use and availability of the collection program. The XX reserves the right to require additional recycling containers if the XX deems there is insufficient containers to serve occupants or tenants.
- 2) Owners, landlords, or agents of owners or landlords of a commercial, institutional, and municipal establishments must contract with an authorized collector for the separate collection of recyclable materials.
- 3) No persons shall place recyclable materials in containers used for the collection of municipal waste and no municipal waste shall be placed in containers designated for the collection of recyclable materials.
- 4) Recyclable material collection frequency shall be set by the owner, landlord, or agent of an owner or landlord of a commercial, institutional, or municipal establishment and the authorized collector, but shall occur no less than once a week. More frequent collection of recyclable materials may be necessary to prevent recycling containers from being overfilled and cause materials to be blown about or littered on XX streets and private property.
- 5) The owner, landlord, or agent of an owner or landlord of a commercial, institutional, or municipal establishment must provide a written report to the XX that lists the authorized collector collecting recyclable materials, the name and address of the property that recyclable materials are collected, the total quantity of each recyclable material collected, and the name and affiliation of the person submitting the report. Reports are to be completed on a form supplied by the XX and shall be submitted annually, 30 days after the close of each calendar year.

Community activities

- 1) The organizers or sponsors of a community activity must establish a system for source-separation, collection, transportation, and recycling of aluminum, plastic, glass, cardboard, high grade office paper, and leaf waste. Arrangements for the source-

Example Recycling Ordinance

separation and collection of these materials shall be the responsibility of the organizers or sponsors.

- 2) The organizers or sponsors of a community activity must establish a collection system that includes an appropriate number of recycling containers at easily accessible locations to accommodate the amount of recyclable materials generated. Community activity organizers and sponsors must provide signage and/or labels on recycling containers to indicate what recyclable materials are to be source-separated by event participants.
- 3) Organizers or sponsors must contract with an authorized collector for the collection of recyclable materials.
- 4) Organizers or sponsors of a community activity must provide a written report to the XX that lists the name of the community activity, the authorized collector collecting recyclable materials, the total quantity of each recyclable material collected, and the name and affiliation of the person submitting the report. Reports are to be submitted to the XX no later than 30 days upon the conclusion of the event.

Leaf waste.

- 1) It is prohibited and will be deemed a violation hereof for any person in the XX to put or cause to put leaf waste with municipal waste. Leaf waste shall be source-separated from municipal waste and recyclable materials generated on any property in the XX and stored in recycling containers until collection.
- 2) Nothing herein shall prevent any person from utilizing leaf waste for compost, mulch, or other agriculture, horticulture, or landscaping purposes on the property where the leaf waste is generated.
- 3) All persons in the XX shall arrange to have leaf waste collected curbside or similar location by an authorized collector separate from municipal waste and recyclable materials at a frequency of no less than once per month.
- 4) The owner, landlord, or agent of an owner or landlord of a multi-family residential, commercial, institutional, or municipal establishment must provide a written report to the XX that lists the authorized collector collecting leaf waste, the name and address of the property that leaf waste is collected, the total quantity of leaf waste collected, the name of the facility authorized by the State to receive collected leaf waste, and the name and affiliation of the person submitting the report. Reports are to be completed on a form supplied by the XX and shall be submitted annually, 30 days after the close of each calendar year.

Household hazardous waste, electronic waste, and lead-acid batteries

- 1) It shall be unlawful for any person to commingle hazardous or residual waste, as defined in Act 101, with municipal waste, recyclable materials, and/or leaf waste or to discard or otherwise dispose of hazardous or residual waste except by disposition in compliance with

Example Recycling Ordinance

applicable state and federal laws and regulations. For specific material recycling and disposal requirements, refer to the Chester County Solid Waste Authority or Pennsylvania Department of Environmental Protection guidelines.

- 2) It shall be unlawful for any person to commingle a lead acid battery with municipal waste, recyclable materials, and/or leaf waste or to discard or otherwise dispose of a lead acid battery except by delivery to an automotive battery retailer or wholesaler, to a secondary smelter permitted by the U.S. Environmental Protection Agency, or to a collection or recycling facility authorized under the laws of Pennsylvania.
- 3) In accordance with Act 108, no person may dispose of a Covered Device or any of its components with municipal waste. This type of waste requires special collection and disposal arrangements. Information on how to recycle Covered Devices may be obtained by the Chester County Solid Waste Authority or Pennsylvania Department of Environmental Protection. The XX accepts select covered devices for recycling at the XX Building during normal operating hours.
- 4) Large and small appliances containing Freon may not be combined with municipal waste. These appliances contain chlorofluorocarbons and Freon that must be removed by a certified professional, and these should be taken to a Freon-certified handler. Freon-containing appliances may include refrigerators, freezers, air conditioning units, dehumidifiers, and water coolers.

Prohibitions.

- 1) Collection by unauthorized persons - From the time of recyclable material placement at the curb or other designated location, it shall be a violation of this article for any person unauthorized by the XX to collect or pick up recyclable materials. Any and each collection in violation hereof from one or more locations shall constitute a separate and distinct offense punishable as hereafter provided.
- 2) Burning of recyclable materials and leaf waste - The burning of recyclable materials and leaf waste shall be prohibited at all times in the XX.
- 3) Littering/illegal dumping – It is unlawful for any person in the XX to dump or deposit recyclable materials, leaf waste, municipal waste, or any other refuse on any private or public property or grounds in the XX.
- 4) Overfilling containers – Containers of recyclable materials, leaf waste, municipal waste, or any other refuse must not be overfilled to provide for or allow materials to become displaced by natural or manufactured elements.
- 5) Storing/stockpiling materials – All persons in the XX are prohibited from storing, processing, or disposing of recyclable material on a property except at a facility or in preparation for the collection by an authorized collector as provided herein. Notwithstanding the forgoing, leaf waste may be composted onsite.
- 6) Public nuisance - It shall be unlawful and a public nuisance for any person to violate, cause or assist in a violation of any provision of this article or violate, cause or assist in the

Example Recycling Ordinance

violation of any rule, regulation or resolution promulgated by the XX pursuant to this article.

Impairment of ownership.

Nothing in this article or any regulation promulgated pursuant hereto shall be deemed to impair the ownership of recyclable materials and leaf waste by the persons who generated them unless and until separated materials are placed at curbside or similar location for collection by an authorized collector.

Ownership of recyclable materials.

Nothing in this article or any regulation promulgated pursuant hereto shall be deemed to impair the ownership of recyclable materials by the persons who generated them unless and until separated materials are placed at curbside or similar location and collected by an authorized collector.

Rules and regulations.

The collection of municipal waste and recyclable materials by municipal waste collectors and the preparation and collection of municipal waste and recyclable materials by property owners and residents of the XX shall be made in compliance with the regulations to be adopted by the XX of XX to carry out the intent and purpose of this article. Such rules and regulations shall be approved by resolution of the XX and, when so approved, shall have the same force and effect as the provisions of this article. Said rules and regulations may be amended, modified or repealed by resolution of the XX.


Enforcement and penalties.

- 1) Penalties. Any person who violates any provision of this article or of the regulations adopted hereunder or any person who engages in unlawful conduct as defined in this article shall, upon conviction thereof in a summary proceeding before a District Justice, be sentenced to pay a fine of not more than \$1,000 and not less than \$50 or to imprisonment for a term not exceeding 90 days. Each day or portion thereof that such violation continues or is permitted to continue shall constitute a separate offense. Each section of this article that is violated shall also constitute a separate offense.
- 2) Injunction. In addition to any other remedy provided in this article, XX may institute a suit in equity where unlawful conduct or a public nuisance exists as defined in this article for an injunction to restrain a violation of this article or any rules, regulations or resolution promulgated or issued by the XX pursuant to this article.
- 3) Concurrent remedies. The penalties and remedies prescribed by this article shall be deemed concurrent. The existence or exercise of any remedy shall not prevent the XX from exercising any other remedy provided by this article or otherwise provided at law or equity.

Construal.

Example Recycling Ordinance

The terms and provisions of this ordinance are to be liberally construed to best achieve and effectuate the goals and purposes hereof. This article shall be construed in pari materia with the Pennsylvania Code of Regulations, Storage, Collection, and Transportation of Municipal Waste and Act 101, and the rules and regulations adopted thereunder.



Appendix C
McKean County Municipal Solid Waste Management Plan

Table of Contents

SECTION 1 DESCRIPTION OF WASTE	1-1
1.0 Purpose	1-1
1.1 Residential, Commercial, and Institutional Fraction of the Municipal Waste Stream	1-4
1.2 Yard Waste Recycling.....	1-5
1.3 Biosolids and Septage Waste.....	1-6
1.4 Infectious and Chemotherapeutic Wastes	1-7
1.5 Construction and Demolition Waste.....	1-8
1.6 Residual Waste	1-8
1.7 Household Hazardous Waste	1-9
1.8 Covered Devices (Electronics) Recycling	1-9
1.9 Bulky Waste	1-10
1.10 Municipal Collection Practices.....	1-11
1.11 Disposal Needs.....	1-11
SECTION 2 DESCRIPTION OF FACILITIES.....	2-1
2.1 Existing Waste Disposal Facilities	2-1
2.2 Existing Waste Transfer Stations	2-2
2.3 McKean County Yard Waste Composting and Recycling Facilities	2-2
2.3.1 Organics Management Facilities in McKean County	2-2
2.3.2 Recyclables Drop-off Sites	2-3
2.4 Permitted Sites for Agricultural Utilization of Biosolids	2-3
2.5 Consideration of Existing Facilities	2-3
2.6 Facilities Designated in the Plan.....	2-3
2.7 Other Private Regional Facilities	2-5
SECTION 3 ESTIMATED FUTURE CAPACITY.....	3-1
3.1 Future County Population Projections	3-1
3.2 Waste and Recyclables Projections.....	3-2
3.3 Per Capita Waste Generation Rates.....	3-3
3.4 Per Capita Recyclables Generation Rate.....	3-5
3.5 Future County Municipal Waste Generation Projections	3-7
3.6 Possible Variations in Future Waste Generation Projections	3-9
3.7 Total Contracted Disposal Capacity Needs and Solicitation.....	3-12
SECTION 4 DESCRIPTION OF RECYCLABLE MATERIALS.....	4-1
4.1 The Materials Addressed By Act 101	4-1
4.2 Changes in Act 101 and Impact of These Changes on the County	4-4
4.3 Amount of Materials Recycled.....	4-5
4.4 Existing Material Recovery Operations	4-8
4.5 Summary of Municipal Recycling Programs	4-9

4.6	Summary of Municipal Educational Program.....	4-12
4.7	Environmental Benefits of Recycling	4-13
4.8	McKean County Recycling in Relation to PA Recycling Goals.....	4-14
4.9	Compliance	4-19
SECTION 5 – SELECTION AND JUSTIFICATION.....		5-1
5.1	Background.....	5-2
5.1.1	Securing Waste Disposal Capacity for McKean County	5-3
5.2	Overview of Current Municipal Waste Management System	5-4
5.3	Waste and Recyclables Management - Alternatives.....	5-5
5.3.1	Waste and Recyclables Collection	5-5
5.3.1.1	MSW Collection.....	5-5
5.3.1.2	Recyclables	5-8
5.3.1.3	Hauler Licensing or Oversight.....	5-10
5.3.2	Waste Transportation and Disposal	5-11
5.3.2.1	Transportation of MSW to Disposal Sites.....	5-11
5.3.2.2	Transportation of Recyclables to Collection/ Processing Site.....	5-11
5.3.2.3	Waste Disposal Capacity Assurance in McKean County	5-12
5.3.2.4	Hauling Cost Considerations of Contracted Waste Transfer and Disposal Sites	5-16
5.3.3	Yard Waste and Food Waste/ Organics Composting	5-17
5.3.4	Special and Non-curbside Materials Recycling.....	5-17
5.3.5	Appliance Recycling	5-17
5.4	New Program Recycling Goals and Opportunities	5-18
5.5	Waste and Recycling System Recommendations.....	5-21
5.5.1	Recommendations to be Implemented in Years 1-5.....	5-22
5.5.1.1	Recommendation Mandatory Waste Service.....	5-22
5.5.1.2	Recommendation Contracted Waste/Recycling Collection	5-22
5.5.1.3	Recommendation Voluntary Residential Curbside Recycling Collection .	5-23
5.5.1.4	Recommendation Transfer of Waste	5-23
5.5.1.5	Recommendation Transfer of Recyclables	5-23
5.5.1.6	Recommendation Registration for Waste/Recycling Haulers	5-24
5.5.1.7	Recommendation Waste Disposal Capacity	5-25
5.5.1.8	Recommendation Full Time Recycling Coordinator for McKean County	5-25
5.5.1.9	Recommendation Responsibilities of McKean County	5-25
5.5.1.10	Recommendation Program Support and Funding Options	5-26
5.5.1.11	Recommendation Drop-off Recycling.....	5-27
5.5.1.12	Recommendation Anti-burn Ordinance for Recyclables	5-27
5.5.1.13	Recommendation Illegal Dumping	5-28

5.5.1.14 Recommendation Corrugated Cardboard Recycling 5-29

5.5.1.15 Recommendation Electronics Recycling..... 5-29

5.5.1.16 Recommendation Household Hazardous Waste Collections 5-32

5.5.1.17 Recommendation Education 5-34

5.5.1.18 Recommendation Commercial Business Recycling 5-36

5.5.1.19 Recommendation Big Event Recycling 5-37

5.5.1.20 Recommendation Funding 5-37

5.5.1.21 Recommendation Biosolids 5-38

5.5.1.22 Recommendation Septage 5-39

5.5.1.23 Recommendation Pharmaceutical Collection 5-39

5.5.2 Recommendations to be Implemented in Years 5-10..... 5-39

5.5.2.1 Recommendation Standardization of Recyclable Materials 5-39

5.5.2.2 Recommendation Materials Recycling Facility (MRF) 5-40

5.5.2.3 Recommendation Illegal Dumping 5-40

5.5.2.4 Recommendation Curbside Organics Collection 5-41

5.5.2.5 Recommendation Operation of Compost Facilities 5-42

5.5.2.6 Recommendation Food Waste Composting 5-43

5.5.2.7 Recommendation C&D Waste and Recycling 5-43

5.5.2.8 Recommendation School Recycling Programs 5-45

5.5.2.9 Recommendation Municipal and Governmental Building Recycling ... 5-46

5.5.2.10 Recommendation Spring Cleanup Collection 5-47

SECTION 6 LOCATION 6-1

6.1 Location of Disposal/Processing Facilities 6-1

6.2 Location of Drop-Off Recycling Centers 6-5

6.3 Yard Waste/Composting Program Locations 6-5

SECTION 7 IMPLEMENTING ENTITY IDENTIFICATION 7-1

SECTION 8 PUBLIC FUNCTION 8-1

8.1 Public Function..... 8-1

8.2 County Ownership 8-2

8.3 Revenues and Expenses 8-3

SECTION 9 IMPLEMENTING DOCUMENTS 9-1

9.1 Documents Required to Implement the Municipal Waste Management Plan 9-1

SECTION 10 ORDERLY EXTENSION 10-1

10.1 Discussion 10-1

SECTION 11 - METHODS OF DISPOSAL OTHER THAN BY CONTRACT..... 11-1

SECTION 12 - NON-INTERFERENCE..... 12-1

SECTION 13 PUBLIC PARTICIPATION 13-1

SECTION 14 - OTHER INFORMATION..... 14-1

14.1 Marcellus Shale..... 14-1

14.2 Illegal Dumping 14-2

14.2.1 Issues and Causes..... 14-2
14.2.2 Statewide Dump Surveys 14-3
14.2.3 KPB/ PA CleanWays on the Causes 14-4
14.2.4 Dump Survey Study for McKean County 14-5
14.3 Open Burning 14-6
14.4 Funding for McKean County Programs 14-6
14.5 Future Challenges of Waste Management in McKean County 14-7

APPENDICES

APPENDIX A: SOLICITATION OF INTEREST FOR WASTE DISPOSAL CAPACITY
ASSURANCE

- SOI AND SAMPLE DISPOSAL AGREEMENTS
- PROOF OF PUBLICATION FOR SOI ADVERTISEMENT
- LIST OF SERVICES OFFERED BY RESPONDENTS
- TABLE 1
- TABLE 2
- TABLE 3
- TABLE 4
- RECOMMENDATIONS MEMO
- COMPLETE PACKET FOR PETITIONING TO BE INCLUDED IN PLAN

APPENDIX B: WASTE AND RECYCLING TONNAGES

- RE-TRAC REPORTS 2009-2013
- WASTE DESTINATION REPORTS 2004-2013

APPENDIX C: SURVEY RESPONSES

- SEWAGE SLUDGE SURVEY RESULTS
- WWTP SURVEY RESULTS

APPENDIX D: RECYCLING AND DISPOSAL INFORMATION

- RECYCLABLE MATERIAL ACCEPTED AT THE CASELLA LANDFILL/DROP-OFFS
- ELECTRONIC MATERIAL ACCEPTED AT THE CASELLA LANDFILL AND 2015 COSTS
- LATEX PAINT DISPOSAL INFORMATION
- SMOKE DETECTOR DISPOSAL INFORMATION

APPENDIX E: CDRA INFORMATION

- CDRA DEFINITION
- PADEP CDRA OVERVIEW
- PADEP ELECTRONICS RECYCLING INFORMATION
- HOUSE BILL 708

APPENDIX F: COMPOSTING

BACKYARD COMPOSTING INFORMATION
GRASSCYCLING INFORMATION

APPENDIX G: RECYCLING BENEFITS

WASTE COMPOSITION TABLE
EPA WARM MODEL RESULTS

APPENDIX H: GOALS

RECOMMENDED INITIATIVES AND RANKINGS
KEY CARD PROGRAM INFORMATION

APPENDIX I: SAMPLE BID DOCUMENTS, ORDINANCES AND FORMS

SAMPLE RECYCLING MUNICIPAL BID
SAMPLE WASTE AND RECYCLING MUNICIPAL BID
SAMPLE ANTI-BURN ORDINANCE
SAMPLE WASTE AND RECYCLING ORDINANCES
HAMPDEN TOWNSHIP (SINGLE CONTRACTED COLLECTOR)
UPPER ALLEN (PAY-AS-YOU-THROW SYSTEM)
BOROUGH OF HOLLIDAYSBURG (INCLUDES LICENSING/REGISTRATION
PROVISIONS)
CITY OF BETHLEHEM (SINGLE RECYCLER/MULTIPLE HAULER)
SAMPLE LETTER FOR BUSINESSES AND HAULERS FOR RECYCLING REPORTING
FORM FM-11, FORM FM-12 AND FORM FM-13

APPENDIX J: ORDINANCES

MUNICIPAL ORDINANCES
MCKEAN COUNTY MSW ORDINANCE

APPENDIX K: PUBLIC PARTICIPATION

SWAC MEETING #1
SWAC MEETING #2
SWAC MEETING #3

APPENDIX L: PLAN FINALIZATION

COPY OF NOTICE TO SWAC/MUNICIPALITIES/PADEP OF REVIEW PERIOD
MCKEAN COUNTY ADOPTION RESOLUTION
EXECUTED AGREEMENTS

APPENDIX M: OTHER [RESERVED]

fLQ-#S\$G<#e f<ef0e\$^^:#<Ff#l ^\$e\

SECTION 1 DESCRIPTION OF WASTE

1.0 Purpose

The purpose of this section is to describe the types of municipal solid waste (MSW) generated in McKean County that will be managed by the system defined in this Plan. To identify the types of present and projected municipal waste generated in McKean County on an annual basis, current and historical quantity data was used, including:

- ... Municipal Waste Management Plan for McKean County (2005)
- ... Pennsylvania Department of Environmental Protection (PADEP) Origin/County Waste Destination Reports for the period January 2009 through December 2013
- ... McKean County Re-TRAC Reports
- ... McKean County Population Projections from the McKean County Comprehensive Plan, adopted December 18, 2007.

A summary of this data is provided below. It shall be noted that 2014 data for waste disposal and recycling was not included in this Plan Update. At the time of Plan development, this information was not available.

TABLE 1.1 – TONNAGES OF MCKEAN COUNTY WASTE (BY WASTE TYPE) AND RECYCLABLES/ ORGANICS DISPOSED/DIVERTED, 2006 – 2013 (In Tons)

Waste Type	Year								5-Year
	2006	2007	2008	2009	2010	2011	2012	2013	Average***
Typical Residential, Commercial, Institutional MSW	23,626	23,630	17,700	19,366	20,014	19,084	18,661	17,425	18,910
Recyclables & Organics Diverted*	8,124	12,262	999	0	0	665	1,323	712	540
SUBTOTAL - Typical MSW + Recyclables/ Organics	31,750	35,892	18,699	19,366	20,014	19,749	19,984	18,137	19,450
Recycling Diversion, as a % of Typical MSW + Recycling	26%	34%	5%	0%	0%	3.3%	6.6%	3.9%	2.8%
Sewage Sludge	4,217	3,909	4,225	3,860	3,821	3,151	3,494	3,564	3,578
Infectious/ Chemo.	0	0	0	0	0	0	0	0	0
Construction/ Demo.	6,478	3,825	3,034	3,681	4,231	3,934	4,982	3,912	4,148
Ash Residue	0	0	0	2,176	5,146	6,203	5,367	4,815	4,741
Asbestos	96	62	117	56	87	68	497	57	153
TOTAL – All Categories of Municipal Waste + Recycling	42,541	43,688	26,075	29,139	33,299	33,105	34,324	30,485	32,070
Residual Waste	12,271	11,023	10,262	12,701	17,587	34,502	14,359	24,274	20,684
TOTAL – Municipal Waste, All Types + Recycling/ Organics + Residual Waste	54,812	54,711	36,337	41,840	50,886	67,607	48,683	54,759	52,755

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

*No tonnages for recyclables were reported in Re-TRAC for 2009 and 2010. This is further explained in Section 1. McKean County had a Recycling Coordinator in place in 2006, 2007 and part of 2009, which is reflected in the recyclables tonnages reported in those years.

***5 Year Average is for 2009-2013

1.1 Residential, Commercial, and Institutional Fraction of the Municipal Waste Stream

The municipal waste portion of the County's solid waste stream consists of waste generated by residential (homes, apartments), commercial (offices, retail stores, restaurants, industrial lunchrooms and offices, etc.), institutional sources (municipal buildings, libraries, schools, etc.), and community events. Recyclables generated/diverted from these sources are included in the tonnages reported below. Table 1.1 reports the total quantities of residential, commercial, and institutional waste processed or disposed of from McKean County sources from the years 2006 through 2013.

A review of Table 1.1 showed fluctuation in the reported amount of municipal waste disposed of by McKean County residents and businesses. Potential explanations for this fluctuation are discussed below. Based on this information, an average of the waste generated during the past five years was used to estimate the per capita waste generation rate. The per capita waste generation rate was applied to the projected population of McKean County to develop the waste disposal tonnages during the planning period. McKean County disposed of an average of 18,910 tons of MSW per year, at a disposal facility. Over a period from 2011 to 2013, recycling accounted for an approximate additional 900 tons of MSW per year. Therefore, it can be calculated that a total of 19,810 tons per year of Municipal Solid Waste was generated in the County and properly disposed or diverted.

Using the 2010 U.S. Census population for McKean County and waste generation from 2007 through 2013, a MSW generation rate of 0.42 tons/capita/year (2.3 lbs./capita/day) was obtained. Using the amount of waste recycled from 2011 through 2013, a generation rate associated with recycling services of 0.02 tons/capita/year (0.11 lbs./capita/day) was obtained.

There is an additional amount of waste and recyclables that did not make it to a proper disposal facility, were mislabeled as out-of-County waste, or were not reported to McKean County. It is estimated that approximately 12,000 tons/year of waste and recyclables existed in the McKean County waste stream that were either burned, illegally disposed of, mis-labeled as out-of-County waste by haulers who utilize out-of-County processing and disposal facilities, or were recyclables which were captured through cleanup events, drop-offs, etc., but were not reported to the municipality or County. This material was not accounted for in the waste destination

and Re-TRAC reports for McKean County. This material was accounted for in the waste projections for McKean County over the ten year planning period. It is believed with additional recycling programs and education and a reduction in illegal dumping and open burning of waste and recyclables, this total can be reduced to approximately 6,000 tons over the ten year planning period.

1.2 Yard Waste Recycling

Yard waste materials are organics which readily decompose in either an agricultural land application process or a composting system. There are currently three (3) municipal composting operations, Smethport Borough, City of Bradford and Kane Borough, which manage yard waste collected within the municipalities. Yard and leaf waste is collected curbside in Smethport Borough, City of Bradford and Hamlin Township and delivered to one of the three (3) compost facilities mentioned above. Materials accepted in these programs include leaves, yard waste and brush. Kane Borough residents may drop their yard waste at the municipal compost facility.

According to the Pennsylvania Department of Environmental Protection, there are other options for composting leaf and yard waste, if a compost drop-off or processing facility is not an option. Backyard composting and grasscycling are practices that residents can do at their own home. Providing this information to residents of McKean County can increase leaf and yard waste composting by residents. Grasscycling is a simple alternative to bagging grass clippings. Residents can simply leave the clippings on their lawn, where they break down in 7 to 14 days. The grass clippings act as top-dressing fertilizer and help keep lawns green and healthy. To conduct grasscycling, mow when grass is not wet and use a sharp mower blade. Don't let large clumps of grass clippings accumulate on the lawn and don't overuse abrasive chemicals and fertilizers, instead look for organic brands. If possible, use a mulching mower that chops the clippings into smaller pieces. Grass clippings may be used around vegetables or flowers to inhibit weed growth and retain soil moisture. Clippings shall be kept at least two inches away from young plants to avoid burning the new growth with excess nitrogen. Residents can add grass clippings to their compost pile for extra nutrients and to speed up the composting process. To avoid obnoxious odors, grass clippings should comprise no more than one-third of the pile.

Another option for recycling leaf and yard waste is backyard composting. A good mix of organic materials needed for successful composting consists of two parts “browns” (materials such as dead leaves that are high in carbon) and one part “greens” (such as fresh grass clippings and garden prunings that are high in nitrogen). Composting materials should feel moist like a damp sponge but not overly soggy. Compost should feel warm to the touch except in cold winter months. When materials decompose without oxygen, they can create unpleasant odors. Turn compost regularly to ensure that air reaches the center of the pile. For a list of materials that can and cannot be used in a backyard compost pile, see Appendix F. It’s recommended that residents place the compost site in a 4’x4’x4’ area out of direct sunlight. The site shall be an easily accessible spot on a grass or soil base. Composting can begin any time of the year, but it is easier to start in the fall, when leaves are abundant. Mix the ingredients and add water so the materials feel as damp as a wrung-out sponge. The pile shall be turned after a few weeks so that outside ingredients are exchanged with the ingredients from the center of the pile. Turn compost piles about once a month, except in cold winter conditions. If more water is necessary, it can be added during turning. Residents shall add a shovelful of garden soil or finished compost to the compost pile. This adds the essential microorganisms needed to break down the waste into compost.

Compost is ready for use when it looks dark and crumbly and none of the starting ingredients are visible. One way to test if compost is finished is to seal a small sample in a plastic bag for 24 to 48 hours. If no strong odors are released when you open the bag, the compost is finished and ready to be used. As a soil amendment, compost increases water retention, adds nutrients and increases soil health. Work it into the top 6 to 8 inches of the soil when planting. Compost can also be applied as mulch directly around the base of trees and shrubs.

More information about backyard composting and grasscycling can be found in Appendix F.

1.3 Biosolids and Septage Waste

To update and confirm available data on biosolids (i.e. sewage sludge) generation, a survey of wastewater treatment plants in McKean County was undertaken. Only one Wastewater Treatment Plant (WWTPs) responded to the survey as part of the 2015 Plan Update (Port Allegany).

Port Allegany accepts septage from local municipalities (Port Allegany Borough and Liberty Township). See Appendix C for the WWTP survey results.

The capacity of the Port Allegany Wastewater Treatment Plant is 1.3 million gallons per day (MGD). The annual sludge produced (biosolids) is approximately 12 tons. Port Allegany land applies their liquid sludge at Ridgeway. Additionally, the waste destination reports from PADEP listed the McKean County (Casella) Landfill as the landfill that accepted the majority of sludge from McKean County (approximately 3,600 tons annually). Port Allegany does not have any plans to expand their program or accept any additional material over the ten (10) year planning period.

If land application of biosolids were to be prohibited in the future, a handful of facilities operating in McKean County will be impacted. For planning purposes, it was important to assure that the disposal facilities selected in this Plan were able to accept the estimated septage produced in McKean County, if land application were to be prohibited.

Four (4) septage haulers replied to a separate survey. One (1) hauler reported that they land apply the material at their own site, one (1) hauler reported that they dispose of the material at the municipality, one (1) hauler reported that they take the material to the McKean County (Casella) Landfill, and one (1) hauler did not report their disposal facility. Septage hauler survey results are located in Appendix C.

1.4 Infectious and Chemotherapeutic Wastes

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

Most ICW is collected by one of the number of private companies that offer medical waste collection services to ICW generators in McKean County and incinerated. To ensure the proper handling of this material by private haulers, PADEP requires that all vehicles used for the commercial collection of ICW generated in the County are permitted by PADEP.

Phone calls were made to a select number of major haulers of ICW in McKean County, as well as a few major generators of ICW in McKean County. Most ICW generators reported using an outside contractor to manage their ICW waste.

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

1.5 Construction and Demolition Waste

The amount of Construction and Demolition (C&D) waste collected for disposal on an annual basis from McKean County sources was consistent over the past five years, at approximately 4,200 tons annually. The per capita rate for C&D waste is expected to remain steady over the next ten (10) years. Table 1.1 reports the total quantities of C&D waste processed or disposed of from McKean County sources from 2009 through 2013. Typical C&D waste materials include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development. Refer to Section 3, Table 3.3 for C&D waste projections.

1.6 Residual Waste

McKean County generates significant amounts of residual waste—that is, wastes (including sludges) generated by industrial, mining, agriculture, or water supply treatment facilities. While the County does not manage this waste for disposal, it bears mentioning because the County has disposed of 20,700 tons per year, on average, of residual waste since 1995 at the McKean County (Casella) Landfill and other facilities accepting municipal waste. The total tonnage of residual waste disposed in 2013 (24,275 tons) represented approximately 45% of the overall total tonnage of waste disposed from McKean County in 2013 (54,047 tons).

Although it was not a requirement to assure disposal capacity for residual waste as part of this Plan Update, it was important to consider if the disposal facilities included in the Plan accept residual waste and if they agreed to accept the anticipated residual waste generated in McKean County over the ten year planning period.

1.7 Household Hazardous Waste

Household hazardous wastes (HHW) are those wastes produced in the household that are hazardous in nature, but are not regulated as hazardous waste, under federal and state laws. HHW includes items such as old paints and paint related products, pesticides, pool chemicals, drain cleaners, and degreasers and other car care products.

Some HHW materials are also accepted at local private corporations, such as AutoZone, WalMart, Advance Auto Parts, etc. These include:

- ... Automotive batteries
- ... Oil filters
- ... Used motor oil

See Section 4 for a more detailed description of the private recyclers in McKean County and the materials they accept.

Residents of McKean County can visit www.earth911.com and search for collection points within a selected mile radius of their zip code for various recyclables materials. It is important that recyclers in McKean County keep their information up-to-date on this site.

1.8 Covered Devices (Electronics) Recycling

The Covered Device Recycling Act (CDRA), Act 108 of 2010 is an Act that establishes a recycling program for certain covered devices and imposes duties on manufacturers and retailers of certain covered devices, as well as other elements. A “covered device” is a covered computer device and covered television device marketed and intended for use by a consumer. A covered computer device is a desktop or notebook computer or computer monitor or peripheral, marketed and intended for use by a consumer. A covered television device is 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. A peripheral is a keyboard, printer or any other device sold exclusively for external use with a computer that provides input into or output from the computer.

Drop-off centers in McKean County do not currently accept electronics. The County has historically held at least one (1) electronics collection event annually, for limited items, for residents of the County.

The McKean County (Casella) Landfill accepts a variety of electronics year round at their facility. Additionally, a large variety of electronic devices are also accepted at the Goodwill Industries of North Central Pennsylvania, located in Kane, McKean County, PA.

Although Act 155 of 1994, The Household Hazardous Waste Funding Act, does not reimburse for the collection and transportation of items listed under the CDRA, it will reimburse up to 50 percent of the developmental and operational costs associated with collecting and transporting electronic items that are **NOT** covered under the CDRA. More information about registering an electronics (e-waste) collection event is contained in Section 5.

Additionally, partnering with an established electronics recycler may benefit the County by establishing a contracted rate for an electronics collection event, which the County may pass on to residents who utilize the event.

As part of this Plan Update, information regarding e-waste recycling is included in Appendix E. Details of the Covered Devices Recycling Act are presented in Appendix E. A list of the electronic items accepted at the Casella Landfill is included in Appendix D.

1.9 Bulky Waste

Bulky wastes are those wastes that include household furnishings, and white goods or appliances such as stoves, refrigerators, washing machines, dryers, mattresses and box springs, rugs, TV sets and other large electronic equipment, lawn mowers, auto parts, etc. Some municipalities conduct bulky waste collection programs either weekly, monthly, semi-annually,

annually or on an as-needed basis. Most bulky wastes are disposed of at a solid waste facility or processed for resource recovery. The County illegal dump survey confirmed that white goods and other bulky items make up a significant portion of the waste at the identified 73 illegal dump sites in the County. White goods contain scrap metal and sometimes copper wiring making it economically beneficial for scrap dealers to recycle these wastes. However, white goods also contain PCB's in their capacitors and Freon gas in refrigeration units. These materials must be removed before recycling.

McKean County held a recycling collection event in 2014, where residents were charged \$1.00 each for car/light truck tires and \$2.25 each for tractor trailer/race car tires. Additionally electronics were collected for \$1.00 each for fluorescent bulbs and \$10.00 each for Freon containing appliances. Plastics were also accepted at this event in the zero sort bins provided by Casella.

1.10 Municipal Collection Practices

The County conducted a survey in 2005 that was used to identify the methods local governments used with regard to waste collection and recycling activities. As part of this Plan Update, a few municipalities were called to verify that their collection method did not change since the 2005 Plan Update. Twenty-one (21) of the 22 municipalities responded to the 2005 survey. Of those that responded to the 2005 survey, eight (8) of the respondents utilized a private collection company under contract to the municipality (contracted collection), three (3) used municipal collection, and the remaining ten (10) required the residents to contract directly with a collector of their choice (subscription collection). Where the cost for the service was obtained in the 2005 survey, prices ranged from approximately \$35.00 to \$50.00 per quarter. During the follow-up phone calls for this Plan Update (2015), it was determined that collection methods have not changed in the municipalities. The municipality that did not respond to the 2005 survey, was called as part of this Plan Update and was confirmed to have contracted collection. The cost for service increased to approximately \$45 to \$60 per quarter.

1.11 Disposal Needs

The total amount of MSW (typical residential, commercial, and institutional waste), special handling waste (sewage sludge, C&D, ICW, ash, and asbestos), and residual waste generated by McKean County residents annually is approximately 57,000 tons. If the current recyclables

management programs were suspended, the recyclable material will require disposal. The amount of recyclable material generated annually by residents of McKean County is approximately 8,000 tons. The total amount of waste generated by residents of McKean County annually (MSW, special handling waste, residual waste, and recyclables), that may require disposal, is approximately 65,000 tons. Over the ten year planning period, this will be approximately 650,000 tons that may require disposal/processing for all categories of McKean County wastes (including recyclables).

SECTION 2 DESCRIPTION OF FACILITIES

This section describes the facilities that are currently being used to manage the municipal solid waste (MSW) generated in McKean County.

2.1 Existing Waste Disposal Facilities

The McKean County (Casella) Landfill, formerly known as the Kness Landfill, is located in Sergeant Township, McKean County. The current mailing address for the McKean County Landfill is Kane, PA. This Plan Update has utilized the current mailing address as the location of the McKean County Landfill, for convenience. McKean County materials disposed at this facility include municipal waste, construction and demolition (C&D) waste, sewage sludge, and residual waste. The facility is also permitted to accept contaminated soils. Special wastes are accepted at the site with prior approval from the Pennsylvania Department of Environmental Protection (PADEP). In addition to waste disposal, a recycling drop-off facility is operated on the property.

The County chose McKean County Solid Waste Authority's (Authority) Kness Landfill, the only disposal facility located in McKean County and owned and operated by the Authority, to manage its waste under its 1991 Plan. While the PADEP's County Waste Destination Reports indicate that small amounts of McKean County waste had been going to other disposal sites, Kness was the only facility designated in the 1991 Plan to accept waste generated in McKean County. The facility was transferred from the Authority's ownership to a private company, Rustick, LLC in 2005. Rustick, LLC sold the landfill to Casella Waste Systems, Inc. in February 2011. Over the past five years, the Casella Landfill has accepted nearly 100% of waste generated in McKean County. The Casella Landfill is currently the only landfill located within McKean County.

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

- ... Advanced Disposal Services Greentree Landfill
- ... Mostoller Landfill (IWS)

As the result of a Solicitation of Interest performed in the fall of 2014 as part of the 2015 Plan Update, the following disposal facilities are tentatively listed as designated disposal facilities to take McKean County MSW starting in 2015 and continuing through 2025, subject to execution of disposal capacity agreements with McKean County. A sample of that disposal capacity agreement is located in Appendix A. The selected MSW disposal facilities that are part of this plan tentatively include:

- ... McKean County (Casella Waste Systems) Landfill
- ... Chaffee Landfill (Waste Management)
- ... Advanced Disposal Services Greentree Landfill
- ... Seneca Landfill

2.2 Existing Waste Transfer Stations

There are currently no waste transfer stations located in McKean County. As a result of the Solicitation of Interest performed in the fall of 2014 as part of the 2015 Plan Update, two (2) waste transfer facilities are tentatively designated to accept and transfer McKean County waste from the period of 2015 through 2025, as part of the County’s integrated waste management system, subject to execution of municipal waste transfer agreements with McKean County. A sample of the transfer station agreement is included in Appendix A. The two (2) selected transfer stations are:

- ... Valley Waste Transfer Station
- ... Tri-County Transfer Station

2.3 McKean County Yard Waste Composting and Recycling Facilities

2.3.1 Organics Management Facilities in McKean County

Three (3) municipalities, Kane Borough, Smethport Borough, and City of Bradford, have municipal compost sites to manage the yard waste collected within the municipalities. There are no other known compost facilities within the County at the time of adoption of this Plan.

2.3.2 Recyclables Drop-off Sites

Casella Landfill operates a recycling drop-off at the same location as its landfill in Kane. This facility accepts corrugated cardboard, newsprint, office waste paper, computer paper, clear and colored glass, aluminum cans, steel and bimetal cans, and #1 - #7 plastic bottles and jugs.

There are five (5) recyclables drop-off sites located throughout the County, operated by Casella.

- ... Bradford Township
- ... Kane Borough
- ... Mt. Jewett Borough
- ... Wetmore Township
- ... Keating Township

2.4 Permitted Sites for Agricultural Utilization of Biosolids

Section 1, Section 1.3, summarized the current biosolids management system. There are no permitted land application sites in McKean County, according to a list obtained from PADEP, for biosolids.

2.5 Consideration of Existing Facilities

Chapter 271 mandates that the County Plan must consider facilities which meet the definition of "existing facility". In Section 5 of the Plan update, the selection and justification of the municipal waste program is outlined. In order to minimize the effect on landfill capacity of reserving space for McKean County waste and to allow for flexibility for backup capacity, McKean County decided to utilize multiple disposal facilities. This action was expected to help maintain competition in the area. McKean County's Plan is intended not to interfere with any existing facility's effort to find other customers or to expand their facilities.

2.6 Facilities Designated in the Plan

For purposes of this Plan update, the designated facilities that municipalities and licensed haulers may use, based upon receipt of capacity assurance information, are as follows:

... McKean County (Casella) Landfill
Casella Waste Systems
19 Ness Lane
Kane, PA 16735
(814) 778-9931
Contact: Matt Kingsley, General Manager
Figure 6-1 shows the geographic location of this facility

... Greentree Landfill
Advanced Disposal Services
635 Toby Road
Kersey, PA 15846
(814) 265-1744
Contact: Don Henrichs, General Manager
Figure 6-1 shows the geographic location of this facility

... Seneca Landfill
Seneca Landfill, Inc.
P.O. Box 1080
121 Brickyard Road
Mars, PA 16046
(724) 625-1511
Contact: Edward R. Vogel, Vice President
Figure 6-1 shows the geographic location of this facility

... Chaffee Landfill
Waste Management of New York, LLC
10860 Olean Road
Chaffee, NY 14030
(716) 983-9511
Contact: Christopher P. DeSantis, Vice President
Figure 6-1 shows the geographic location of this facility

... Tri-County Industries, Inc. Transfer Station
159 T C I Park Drive
Grove City, PA 16127
(724) 748-4705
Contact: Edward Vogel, Vice President
Figure 6-1 shows the geographic location of this facility

... Valley Waste Services, Inc. Transfer Station
261 Wallace Run Road
Beaver Falls, PA 15010
(724) 843-9373
Contact: Edward Vogel, Vice President
Figure 6-1 shows the geographic location of this facility

2.7 Other Private Regional Facilities

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

- ... Automotive Batteries and Fluids (including antifreeze) – Advance Auto Parts, AutoZone, Walmart, Monro, Dave’s Body Shop, and NAPA Auto Parts
- ... Batteries and Cell Phones - RadioShack
- ... Electronics – Casella Landfill drop-off (fee may be required) and Goodwill Industries
- ... Televisions – Best Buy, Goodwill Industries, Casella Landfill drop-off (fee may be required)
- ... Scrap Metal – Bendar Metals, Goodman Services, Inc., Connor’s Auto Parts, Walt Miles, Andrew’s Auto Salvage, Shunk’s Auto Parts and Auto Sales, ST&S Recycling, Segel & Son Inc.
- ... Tires – S&J Recycling, Inc., Green’s Tire Disposal, Snyder’s Tire Disposal, and local garages (call for fee information)
- ... Used Greeting Cards – St. Jude’s Ranch for Children, Recycled Card Program
- ... Mercury Thermostats – McKean County/PADEP partnership

An additional resource for McKean County residents is the PROP recycling hotline at 717-236-0800. Please note that if the PROP recycling hotline does not have information on the material a resident desires to recycle, they will direct the resident to call the McKean County Planning Department or Conservation District.

There are no drop-off facilities in or near McKean County, open to McKean County residents, for C&D recycling materials and many other hard-to-recycle items. Establishing drop-off locations and/or partnerships with recyclers for these items, for residents of McKean County, is a main recommendation of the 2015 Plan Update.

SECTION 3 ESTIMATED FUTURE CAPACITY

McKean County includes one (1) city, six (6) boroughs and fifteen (15) townships with a County population of 43,450 persons (2010 United States Census). Over a recent five-year period (2009 – 2013), McKean County municipal wastes were transported to three (3) disposal sites (most of the waste to one (1) landfill). A listing of these disposal sites, along with the tonnages of McKean County MSW accepted each year between 2009 and 2013, are presented in Table 3.1. The landfill that accepted most of the County's MSW for disposal during this recent time period is shaded in Table 3.1.

TABLE 3.1 – McKean County Municipal Waste Accepted at Processing and Disposal Facilities (2009 – 2013)¹

Site Name	County	2009	2010	2011	2012	2013	5 year total
Casella Waste Management	McKean	19,366.1	20,012.8	19,081.7	18,652	17,410	94,522.6
Advanced Disposal Services Greentree	Elk		0.9	2.1		9.3	12.3
Mostoller Landfill	Somerset				8.5	5.3	13.8
Total		19,366.1	20,013.7	19,083.8	18,660.5	17,424.6	94,548.7

Source: PADEP Waste Origin/ Destination Landfill Summary Reports

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

3.1 Future County Population Projections

Municipal waste generation is a function of a number of socio-economic factors, including population. Table 3.2 shows historic County populations from 1980 to 2010, and population estimates and forecasts for McKean County from 2015 through 2030. These population forecasts were extracted from the 2007 McKean County Comprehensive Plan.

TABLE 3.2 – HISTORIC AND PROJECTED POPULATIONS FOR MCKEAN COUNTY

YEAR	POPULATION
1980	50,635 Actual (Census)
1990	47,131 Actual (Census)
2000	45,936 Actual (Census)
2010	43,450 Actual (Census)
2011	44,855
2012	44,880
2013	44,905
2014	44,930
2015	44,955
2016	45,002
2017	45,049
2018	45,096
2019	45,143
2020	45,189
2021	45,252
2022	45,315
2023	45,378
2025	45,504
2030	45,899

Sources: U.S. Census of Population, 1980-2010.

Forecasts. 2007 McKean County Comprehensive Plan, Population

As Table 3.2 illustrates, the County is forecasted to have a slight growth of population over the ten (10) year planning period. McKean County's projected population from 2015 to 2025 is projected to increase by 549 persons over ten (10) years or about 1%.

3.2 Waste and Recyclables Projections

The three primary sources of data used in making projections for the amount of municipal wastes generated in the twenty-two (22) municipalities of McKean County are: the population projections from the 2007 McKean County Comprehensive Plan (Table 3.2); Re-TRAC data on recyclables and organics diverted from disposal through recycling/ composting (Table 1.1), and;

McKean County-generated tons of MSW disposed, taken from Pennsylvania Department of Environmental Protection's (PADEP) Waste Origin/Destination Landfill Summary Reports from 2007 through the year 2013 (Tables 3.1 and 1.1).

The estimates and projections of municipal waste generated in McKean County, presented in Table 3.3, are computed by taking into consideration historic per capita waste and recycling generation rates and applying these rates to the projected County population for years 2015 through 2030 (with some special considerations, that will be discussed in this section). The per capita generation rates were calculated by taking the net waste disposal tonnage data contained in the PADEP Waste Origin/Destination Reports for years 2009 through 2013, taking the reported tonnages of recyclables/organics diverted from disposal from Re-TRAC reports, and dividing the five-year averages of these tonnages (from Table 1.1) by the estimated population of McKean County during that time period, assumed for the purposes of these calculations to be the year 2010 U.S. Census population for McKean County. These calculated per capita waste generation rates for each waste and recyclables category were then multiplied by yearly population projections for years 2015 through 2030, to estimate waste and recyclables tonnages generated by McKean County over the planning period (with some special considerations/adjustments for recycling tonnage projections and illegal dump material capture). These waste and recyclables/organics projections, through year 2030, are presented in Table 3.3.

3.3 Per Capita Waste Generation Rates

The annual projected MSW waste generation and recyclables diversion projections for McKean County are based on per capita generation rates, as observed over the period of 2009 through 2013, the estimated national average per capita generation rate, in conjunction with the County population projections. During the 5-year period of 2009 through 2013, McKean County disposed or diverted an average total of approximately 31,500 tons per year (TPY) of municipal solid wastes (all categories), which was landfilled. Additionally, McKean County diverted approximately 900 TPY of recyclables.

Typical Municipal Solid Waste disposed of by McKean County, which includes residential, commercial and institutional waste, but not including recyclables/organics diverted from disposal, averaged approximately 18,900 TPY from 2009 through 2013. Using the 2010 U.S. Census population of 44,830 for McKean County, the **net MSW per capita** rate for municipal

waste generation from 2009 through 2013 averaged approximately **0.4218 tons per capita per year**. The national average per capita waste generation rate is 0.5 tons per capita per year for typical MSW.

Based on knowledge of disposal options utilized by residents of McKean County, it is assumed that the majority of the waste that makes up the difference between 0.4218 tons per capita per year and the 0.5 tons per capita per year is being disposed of illegally or burned. It is believed a small amount of waste may be disposed of out-of-County and reported as another County's waste. The majority of McKean County generated waste is disposed of at the McKean County (Casella) Landfill because it is centrally located in the County and it is the most cost effective disposal facility for waste haulers.

Based on the waste generation from 2009 through 2013, the mis-labeling of waste, burning of waste, and illegal disposal of waste is equivalent to an estimated average of 3,500 tons annually of typical MSW.

Sewage Sludge (the fraction that is dewatered and landfilled, but excluding land-applied liquid sludge) averaged 3,578 tons annually from 2009 through 2013. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for dewatered and landfilled sewage sludge is **0.0798 tons per capita per year**.

Infectious and Chemotherapeutic Waste (ICW) generated by McKean County and disposed in landfills averaged 0 tons annually from 2009 through 2013. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material is **0 tons per capita per year**.

Construction and Demolition Waste (C&D) generated by McKean County and disposed in landfills averaged 4,148 tons annually from 2009 through 2013, or **0.0925 tons per capita per year**. If C&D waste diversion increases through recycling initiatives, over the ten (10) year planning period, the Plan projects that C&D waste disposal **will slowly decrease between 2017 and 2025 at a rate of approximately 200 tons per year**. Although it is anticipated that C&D disposal will decrease over the planning period, as C&D recycling is increased, this fluctuation has not been accounted for in the projections. It is difficult to estimate when the C&D recycling

programs will take place and to what extent they will be successful, therefore, estimates do not reflect these programs in order to demonstrate a worst case scenario.

The Ash Residue component of Special Municipal Wastes generated by McKean County and disposed in landfills averaged 4,741 tons annually from 2009 through 2013. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material is **0.1058 tons per capita per year**.

The Asbestos component of Special Municipal Wastes generated by McKean County and disposed in landfills averaged 153 tons annually from 2009 through 2013. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material is **0.0034 tons per capita per year**.

Non-hazardous industrial waste (residual wastes) tonnages are not a component of municipal wastes, and this plan deals with municipal wastes as defined by Act 101 of 1988. However, it is noted that residual waste generated within McKean County and disposed averaged just over 20,000 tons per year from 2009 through 2013. Based on the year 2010 U.S. Census population, the average per capita waste generation rate for this waste material is approximately **0.4614 tons per capita per year**. The future projected generation of residual wastes in McKean County is included in the waste projection tables for convenience.

3.4 Per Capita Recyclables Generation Rate

The amount of material recycled or otherwise diverted from disposal in McKean County was fairly consistent between 2011 and 2013, at approximately 900 tons per year (TPY). The recorded recyclables tonnages in 2009 and 2010 were 0. It is highly unlikely that McKean County residents didn't recycle any material in these years. Most likely, it is assumed, that recycling tonnages were not reported to municipalities or the County in these years and did not get recorded through PADEP. It shall be noted that this was also the transition period to the Re-TRAC system through PADEP to record and maintain recycling tonnages in the state of Pennsylvania and this may also be a contributing factor to the 0 tonnage reported for recyclables in those years in McKean County. The overall low recycling tonnage reported in McKean County is most likely attributed to a difficulty obtaining accurate recycling tonnage totals from generators due to a reduction in staff availability and the illegal dumping and open

burning of recyclables. The majority of recyclables collected in McKean County was managed by the private sector, thus requiring municipalities and/or the County to obtain the recycling tonnages from private industry for accurate reporting.

As presented in Table 1.1, the estimated recycling rate for McKean County in 2013 was 2%. The average recycling rate over the past five years was 2.8%. The recyclables and organics component of typical MSW that was generated by McKean County and diverted from landfill disposal averaged 900 tons annually from 2011 through 2013. Based on the year 2010 U.S. Census population, the average per capita generation rate for recyclables and organics that were diverted from disposal and reported in McKean County is approximately **0.020 tons per capita per year**. The national average per capita recyclables diversion rate is 0.3 tons per capita per year for typical MSW. B&L assumed, based on the geographic region of McKean County that residents generated slightly less than the national average for recyclables diversion. B&L assumes residents of McKean County generated closer to **0.2 tons per capita per year** of recyclables and organics. The difference between 0.02 tons per capita per year and 0.2 tons per capita per year is assumed to be illegally disposed of, burned, landfilled, or diverted, but not captured in recycling tonnage reports by the municipalities and McKean County. Recyclables collected in McKean County by businesses, collection events and/or drop-offs may not have been reported to the County by the private haulers that collect this material. It is assumed this may account for the lower than expected recyclables tonnages reported in Re-TRAC annually. Based on the recyclables diversion from 2009 through 2013, the burning of recyclables, illegal disposal of recyclables, landfilling of recyclables, and missed capturing of recyclables tonnage is equivalent to an estimated average of 8,100 tons annually of recyclables and organics in McKean County. It is assumed that the majority of this tonnage (8,100 tons) is currently landfilled or captured, but not reported to the municipalities and/or the County.

Based on the waste generation in 2014 (30,193), net of recyclables diverted, it is estimated that approximately 9,000 tons of Act 101 recyclable materials (including electronics and HHW) is available in the McKean County waste stream, annually, for capturing and processing.

The recycling programs in McKean County were significantly reduced in 2005 when the landfill was sold to Rustick, LLC and McKean County discontinued their financial contribution to recycling programs throughout the County. The recycling programs in McKean County are

estimated to change over the ten (10) year planning period, due to the support of an Integrated Waste and Recyclables Management Program by local haulers and disposal facilities. The McKean County Planning Department, in coordination with the McKean County SWAC members, compiled a list of initiatives, goals and programs that may be developed in order to try to enhance and sustain the recycling programs, as well as identify options for residents that have had recycling programs eliminated. These programs, efforts and goals are included in Section 5 and in Appendix H.

This Plan Update is providing the tools (via ordinance templates) to create an optional curbside recyclables collection program for private “subscription” customers in McKean County. If curbside recyclables collection in non-mandated communities increases across McKean County, the County recycling rate may increase over time (recycling rates generated by recyclables drop-off services in these communities would likely be notably lower than they may be with more widespread curbside recyclables collection).

It is believed more recyclables are being collected in McKean County by the private sector, but not accurately reported to the representative municipality, therefore, the actual 5-year average may be closer to 5% or 10%, versus 3%. However, it is projected that new recycling programs may result in a slow but steady growth in tonnages recycled over the planning period, and an increase in the recycling rates. The next section of this report addresses future recycling projections.

3.5 Future County Municipal Waste Generation Projections

Table 3.3 presents the annual MSW waste generation and recyclables diversion estimates/projections for the County, from 2015 through 2030. These projections are tied to the population projections from Table 3.2 and the per capita waste generation figures developed in Section 3.3 and Section 3.4 of this section. The total waste generated in McKean County, excluding recyclables, is assumed to remain relatively steady over the ten (10) year planning period, due to stable populations and the current state of the economy observed in McKean County over the past five (5) years. New recyclables initiatives are anticipated to steadily increase recyclables tonnages over the ten (10) year planning period.

The recycling projections calculated in Table 3.3 are computed based on the anticipated implementation of new recycling initiatives and education, with an understanding that implementation of these programs will be steady over the ten (10) year planning period and will take a few years to observe the tonnages increase. It is anticipated that recycling rates will remain relatively steady in McKean County for the first two years of the planning period, while programs are being implemented, and will then begin to steadily increase each year over the ten year planning period, as residents are educated on the new programs and additional recycling initiatives are implemented. It is anticipated that recycling will steadily increase from 4% in 2014 to 5% in 2016 and will then continue to increase by approximately 1% per year over the course of the ten (10) year planning period, to 15% recycling by 2025.

Nationwide, there is a growing trend to recycle more of C&D waste. “Deconstruction and recycling” is becoming more common than the old “demolition and disposal” practices. C&D waste that was diverted through recycling in McKean County was not included in the recyclables diversion tonnages or recycling rate reported for McKean County, nor was it reported on the annual Re-TRAC Reports. The Plan Update projects that recycling of C&D waste will grow over time, and that the County’s C&D waste tonnage requiring disposal will decrease by approximately 200 tons per year over the ten (10) year planning period. This growing C&D recycled tonnage is not included in the recyclables diverted tonnage totals projected in Table 3.3, since it was not included in previous years and will not appear on the annual Re-TRAC Report.

When considering the disposal capacity needs for McKean County’s MSW, and when procuring the disposal capacity through a solicitation process, it is prudent to consider the need to accommodate a minimum of approximately 42,000 TPY of MSW disposal capacity each year (MSW, special handling waste and C&D), plus some additional allowance for disposal of currently diverted recyclables and organics (all categories of municipal waste), to provide for contingencies over the ten (10) year planning period of this Plan Update from 2015 to 2025. Disposal capacity assurances from Solicitation of Interest (SOI) respondents and potential disposal capacity needs for McKean County over the ten year planning period are included in Table 3.4. Table 3.4 demonstrates that contracting with the SOI respondents will give McKean County sufficient disposal capacity assurances over the ten year planning period.

3.6 Possible Variations in Future Waste Generation Projections

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

- ... Population loss or gain
- ... Changes in recycling activities and opportunities in McKean County, as a result of the Integrated Waste and Recyclables Management Program
- ... Changes in product packaging trends
- ... Increases in waste reduction programs, striving toward "zero waste disposal"
- ... Addition of non-mandated municipality recycling programs and drop-off facilities
- ... Increases in recyclable materials recovery rates
- ... Expansion of materials diverted/ recycled
- ... Economic factors; the Plan's waste generation estimates reflect a stable level, but not growth, in commercial/ business development
- ... Municipal burning bans, which may result in additional tons of waste requiring disposal
- ... Reduction of illegal dumping through education and enforcement

Product packaging, although criticized in recent years as being excessive, is still very sensitive to the demands of the marketplace in relation to consumer convenience, consumer manufacturing protection, and retail theft, which, in turn, are in response to the pressures and demands of current day society. Consumer convenience has been "revolutionized" by the microwave oven and single serve packaging which has mushroomed from the use of this modern appliance. Product tampering and the attendant lawsuits have resulted in increased packaging of some food and medicinal products. Retail theft contributes to over packaging of smaller items, the blister pack being an outgrowth of this societal problem. These product packaging tendencies along with a forecast of increases in "disposable" health care items and other products will tend to offset waste reduction programs. An edition of EPA's Recycling Times indicated that the amount of waste Americans generate will continue to escalate if no source reduction measures are taken. Thus, the opinion expressed herein, that source reduction measures instituted as a result of this plan will equally offset increased municipal waste generation rates (expressed as a per capita waste generation value), appeared to be a reasonable approach to take for planning purposes.

One of the most effective ways to both increase recycling and reduce waste volume is to implement pay-as-you-throw volume-based waste collection programs. This is one of a number of recommendations made to municipalities in this plan but this seems unlikely to become a widespread strategy unless municipalities take a more hands-on approach concerning waste collection and recycling. Additionally, it was acknowledged at SWAC meetings that municipalities in McKean County had previously implemented pay-as-you-throw systems, but they didn't appear to work, thus they were discontinued. It is imperative to understand what aspects of these pay-as-you-throw systems didn't work, prior to implementing this type of system again (i.e. insufficient oversight, accessibility of bags, population density, etc.). Despite the discontinuation of these programs in the past, the plan still encourages implementation of volume-based systems with an understanding of the appropriate aspects, in order to ensure their success.

The McKean County Solid Waste Authority (Authority) discontinued its County-sponsored recycling and integrated waste management and recycling programs in 2005 when the Authority sold the McKean County Landfill to Rustick, LLC. Casella, who purchased the landfill from Rustick, LLC, has maintained a majority of the recyclables drop-offs in the County. Many of the above-mentioned recycling efforts may take years to implement; the County's recycling activities and programs are in a state of transition at this time, as the County determines which programs it can sponsor, which programs may be sponsored on a municipal level, and which programs may be sponsored by the private sector. By steadily increasing recycling rates by 1% annually from a recycling rate of 4% in 2015, the Plan Update takes into account that the recycling programs offered in McKean County will be in transition and will be expanding over the course of the ten (10) year planning period.

If future recycling efforts, initiated by McKean County, municipalities, haulers, disposal facilities and the business community exceed the recycling rates that were projected over the next 10-15 years, slightly less capacity may be required for processing/disposal of the balance of McKean County's municipal waste stream than was noted in Table 3.3.

TABLE 3.3 – WASTE AND RECYCLING PROJECTIONS, 2010 – 2030 (In Tons)

Waste Type	Year																
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030
County Population	44,830	44,855	44,880	44,905	44,930	44,955	45,002	45,049	45,096	45,143	45,189	45,252	45,315	45,378	45,441	45,504	45,899
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Typical Residential, Commercial, Institutional MSW Generated (including Recyclables) ¹	31,381	31,399	31,416	31,434	31,451	31,469	31,501	31,534	31,567	31,600	31,632	31,676	31,721	31,765	31,809	31,853	32,129
Estimated Typical MSW (not including recyclables) Disposed Legally	20,014	19,084	18,661	17,425	18,952	18,963	19,351	19,371	19,842	19,863	20,335	20,363	20,845	20,874	20,448	20,477	20,655
Estimated Typical MSW (not including recyclables) Disposed Illegally or Mis-labeled	4,483	4,486	4,488	4,491	4,493	4,496	4,050	4,054	3,608	3,611	3,163	3,168	2,719	2,723	2,272	2,275	2,295
Estimated Recyclables & Organics in Waste Stream	6,884	7,829	8,267	9,518	8,006	8,010	8,100	8,109	8,117	8,126	8,134	8,145	8,157	8,168	9,088	9,101	9,180
Estimated Recyclables & Organics Diverted	0	665	1,323	712	1,258	1,259	1,575	1,892	2,210	2,528	2,847	3,168	3,489	3,812	4,135	4,778	6,426
Estimated Recyclables & Organics Remaining (Not Reported/Illegally Disposed/Landfilled)	6,884	7,164	6,944	8,806	6,748	6,752	6,525	6,217	5,908	5,598	5,287	4,978	4,667	4,356	4,953	4,323	2,754
Recyclables Diversion, as a % of Typical MSW + Recycling	0%	2%	4%	2%	4%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	15%	20%
Estimated Sewage Sludge Generated	3,821	3,151	3,494	3,564	3,586	3,588	3,592	3,595	3,599	3,603	3,607	3,612	3,617	3,622	3,627	3,632	3,663
Estimated ICW Generated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Estimated C&D Waste Generated	4,231	3,934	4,982	3,912	4,157	4,160	4,164	4,168	4,173	4,177	4,181	4,187	4,193	4,199	4,205	4,210	4,247
Estimated Ash Generated	5,146	6,203	5,367	5,367	4,815	4,755	4,760	4,765	4,770	4,775	4,779	4,786	4,793	4,799	4,806	4,813	4,854
Estimated Asbestos Generated	87	68	497	57	153	153	154	154	154	154	154	154	155	155	155	155	157
Total - All Categories of Special Handling Waste (not including C&D)	9,054	9,422	9,358	8,988	8,554	8,496	8,505	8,514	8,523	8,532	8,540	8,552	8,564	8,576	8,588	8,600	8,674
Total - All Categories of Municipal Waste + Recycling	33,299	33,105	34,324	31,037	44,162	44,124	44,170	44,216	44,262	44,309	44,354	44,416	44,477	44,539	44,601	44,663	45,051
Total - All Categories of Municipal Waste (Net of Recycling)	33,299	32,440	33,001	30,325	36,156	36,114	36,070	36,108	36,145	36,183	36,220	36,270	36,321	36,371	35,513	35,562	35,871
Total Residual Waste Generated	17,587	34,502	14,359	24,274	20,731	20,742	20,764	20,786	20,807	20,829	20,850	20,879	20,908	20,937	20,967	20,996	21,178
Total - Municipal Waste, All Types + Recycling/Organics + Residual Waste	50,886	67,607	48,683	55,311	64,893	64,866	64,934	65,002	65,070	65,138	65,204	65,295	65,386	65,477	65,568	65,659	66,228
MSW + C&D + recycling	35,612	35,333	36,398	35,346	35,608	35,628	35,665	35,703	35,740	35,777	35,814	35,863	35,913	35,963	36,013	36,063	36,376
MSW+C&D	35,612	34,668	35,075	34,634	34,350	34,369	34,090	33,811	33,530	33,249	32,967	32,696	32,424	32,152	31,878	31,285	29,950
MSW + Special Handling Waste + C&D	44,666	44,090	44,433	43,622	42,904	42,865	42,595	42,324	42,053	41,781	41,507	41,248	40,988	40,728	40,466	39,885	38,625
MSW + Special Handling Waste + C&D + Residual	62,253	78,592	58,792	67,896	63,635	63,608	63,359	63,110	62,860	62,610	62,357	62,127	61,897	61,665	61,432	60,881	59,803

3.7 Total Contracted Disposal Capacity Needs and Solicitation

Realizing that the County must ensure long-term disposal capacity, a "Solicitation of Interest" (SOI) document was prepared, advertised and distributed to interested processing/ disposal facilities. Refer to Appendix A for a copy of the SOI. This document solicited proposals from interested parties to provide disposal services to McKean County, for a maximum period of ten (10) years, with a 5-year initial term and an optional renewal after five (5) years. The SOI stated that the County will require a combined municipal waste disposal capacity for up to 24,000 tons per year of municipal waste (including residential/commercial/institutional waste, C&D waste, but excluding infectious/chemotherapeutic (ICW) waste, asbestos, sewage sludge and other "special handling" waste) during the ten year planning period. Over the past five (5) years, the highest annual tonnage total for municipal waste was approximately 24,240 tons. For the purposes of the SOI, B&L used a projection of 23,122 tons as the total municipal waste tonnage requiring disposal from McKean County in 2015. In the SOI, B&L increased the waste tonnage requirement by approximately 0.434 tons per capita per year, based on the projected population growth of McKean County, throughout the ten (10) year planning period. Therefore, in year 2025, the approximate total tonnage of municipal waste requiring disposal by McKean County was projected in the SOI to be 23,405 tons per year.

Based on B&L's waste projections (Table 3.3), which takes in to account the proposed reduction in illegal dumping and open burning over the ten year planning period, McKean County is projected to generate for disposal, from the waste categories of residential/ commercial/ institutional MSW and C&D waste, excluding sewage sludge, ICW, ash residue, and asbestos, an average combined total need of approximately 33,000 tons per year; adding in residual waste and special handling waste disposal needs, this average total need is approximately 62,400 tons per year over the ten (10) year planning period.

Table 3.4 demonstrates that the waste tonnage guaranteed from the respondent disposal facilities to the SOI is adequate to meet the MSW disposal needs of the County during the ten (10) year planning period. Section 6 contains a summary of the results of the SOI and the decisions made regarding selection of processing/ disposal sites.

Table 3.4 Waste Disposal Capacity Assurance (Tons)

Facility	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Seneca Landfill	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130	3,130
McKean County (Casella) Landfill ¹	64,866	64,934	65,002	65,070	65,138	65,204	65,295	65,386	65,477	65,568	65,659
WM Chaffee Landfill ²	31,200	31,200	31,200	31,200	31,200	31,200	31,200	31,200	31,200	31,200	31,200
Advanced Disposal Greentree Landfill ^{1,3}	64,866	64,934	65,002	65,070	65,138	65,204	65,295	65,386	65,477	65,568	65,659
Total Disposal Capacity Assurance	164,062	164,198	164,334	164,470	164,606	164,738	164,920	165,102	165,284	165,466	165,648
Projected Generation For Disposal (MSW, C&D, Sewage Sludge, ICW, Ash, Asbestos and Residual)	63,608	63,359	63,110	62,860	62,610	62,357	62,127	61,897	61,665	61,432	60,881
Recycling Diverted	1,259	1,575	1,892	2,210	2,528	2,847	3,168	3,489	3,812	4,135	4,778
Total Potential Capacity Needs	64,867	64,934	65,002	65,070	65,138	65,204	65,295	65,386	65,477	65,567	65,659
Capacity Needs Met	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

1: Will accept all of McKean County's waste annually

2: Only accepts MSW and C&D waste.

3: Does not accept ICW waste. Responded to the SOI that they will accept all of McKean County's waste.

SECTION 4 DESCRIPTION OF RECYCLABLE MATERIALS

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

4.1 The Materials Addressed By Act 101

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

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

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

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

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

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

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

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

Yard and Leaf Waste – Mandated municipalities are required to separate yard and leaf waste from other municipal waste. Also, since September 26, 1990, the Pennsylvania Department of Environmental Protection (PADEP) regulations do not allow any waste disposal facility to accept shipments comprised primarily of yard and leaf wastes unless a separate composting facility has been provided. Organic materials can be ground into mulch, or processed to create

compost, and has been proven to be beneficial in many municipal, residential and agricultural applications, while removing a substantial quantity of waste stream material from landfill disposal.

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

Electronic equipment contains metals that, if not properly managed or contained, can become hazardous wastes. The “Covered Device Recycling Act” (House Bill 708), PA Act 108 of 2010, establishes a recycling program for certain covered devices; imposes duties on manufacturers and retailers of certain covered devices; provides for the powers and duties of PADEP including enforcement; establishes the Electronic Materials Recycling Account in the General Fund; and prescribes penalties for noncompliance. Information on the CDRA is presented in Appendix E.

Provided markets can be found, various other types of materials in the municipal waste stream can be recycled. Tires, used motor oil, and automotive batteries are examples of recyclable items that pose disposal problems. Used tires can be retreaded, shredded and processed into crumb rubber for use in rubber plastic products, or they can be used to produce a durable ingredient in the production of asphalt. Alternatively, tires can be shredded and burned as a source of fuel. Garages in the County that sell tires offer to properly dispose of tires for a fee. PA Cleanways of McKean County sponsors an annual tire collection for residents of McKean County.

The metal in automotive batteries and the polypropylene plastic case are recyclable. Used motor oil can be refined to produce heating fuel, industrial lubricants and even new motor oil. Used textiles can also be recycled. Textiles can be reused as rags, or reprocessed into filler products such as insulation or furniture padding. Non-treated wood can be recycled into playground mulch and used as a fuel source.

4.2 Changes in Act 101 and Impact of These Changes on the County

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

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

- ... requires, through ordinance, that all residents have waste and recycling service
- ... has an implemented residential recycling program and facilitates a commercial recycling program or participates in a similar county or multi-municipal program
- ... has a residential and business recycling education program
- ... has a program of enforcement that periodically monitors participation, receives complaints and issues warnings for required participants and provides fines, penalties, or both, in its recycling ordinance
- ... has provisions, participates in a county or multi-municipal program or facilitates a private sector program for the recycling of special materials
- ... sponsors a program, facilitates a program or supports an organization to address illegal dumping and/or littering problems
- ... has a person or entity designated as recycling coordinator who is responsible for recycling data collection and reporting recycling program performance in the municipality or municipalities."

Section 2(d)(5) goes on to say that "If the requirements of paragraph (4) are not satisfied by the municipality, then the grant funds awarded under this section shall be expended by the municipality only to satisfy the requirements of paragraph (4)." Section 2(e) of Act 140 states

that “The Department may require budget documents or other expenditure records and may deny funding through this section if an applicant cannot demonstrate that funds have been expended on eligible activities.”

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

4.3 Amount of Materials Recycled

Current recycling activities within McKean County have a significant impact on the amount of solid waste being disposed of by the County. A total of approximately 700 tons of McKean County recyclable material was reportedly diverted from the waste stream and recycled in 2013. As discussed in Section 3.5 of Section 3, the County’s recycling rate is projected to be 4% diversion of municipal waste tonnage in 2015. This diversion rate is projected to remain steady if new recycling initiatives are not adopted. The McKean County Solid Waste Advisory Committee (SWAC) expressed a goal to increase recycling over the ten (10) year planning period. This Plan Update recommends implementation of new recycling initiatives over the ten (10) year planning period that will slowly ramp up the recycling rate to 15% by 2025. The recycling rate is projected to grow by approximately 1% annually, from 15% in 2025 to 20% by 2030.

The County had to reduce the funding for many of its recycling programs in 2005. Many of these programs remained, but were funded and managed by the private sector. McKean County had success with the private sponsorship of drop-off sites to serve areas of the County.

It is expected that if McKean County is able to facilitate the growth of existing recycling programs (like the establishment of new drop-off sites), and can help implement other recycling initiatives (such as optional curbside recycling collections in non-mandated municipalities, and the addition of new materials to existing and new drop-off programs), McKean County's recycling rate may indeed increase over the ten (10) year planning period from the current estimated 4% rate.

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

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

An examination of data from a recent R.W. Beck (described in detail below) statewide waste composition study conducted in Pennsylvania, suggests that of the remaining municipal waste currently being disposed of in Pennsylvania, there is additional discarded waste that can potentially be recycled. However, there are many factors that determine which materials are actually removed from the waste stream. These factors include, but are not limited to:

- ... availability of markets for the materials;
- ... economics of a recovery system;
- ... competing options;
- ... the percentage of people that participate in recycling;
- ... how easily the materials can be segregated for recovery;
- ... and how efficiently people are in diverting the materials for recycling.

The table labeled Waste Composition Estimate located in Appendix G, presents an estimate of the current composition of the discarded municipal waste stream (after source separation) by material (from best available data), as well as an estimate of the potential remaining tons of recyclables that may still be available for recovery in the discarded waste stream.

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

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

This information shows that there is still considerable room for improvement in recycling. For counties and municipalities to increase their recycling, they first need to establish a sustainable funding source to support recycling programs. If McKean County can establish non-County funding sources to stabilize and expand recycling programs, they may want to investigate expanding the types of materials collected curbside or drop-off, expand the number of sites and the hours of operation of drop-off programs, improve the education of residents, and focus on expanding recycling in commercial, institutional, and multi-family facilities. They should also consider increasing the number of special collections for household hazardous waste (HHW) and electronics materials throughout the County and investigate the expansion of organics composting opportunities.

Lastly, it is believed a large amount of recyclable material diverted from the waste stream in McKean County is not being reported to the County for inclusion in their annual reports. Establishing a method to more accurately obtain recycling tonnages from privately managed drop-offs, commercial industries and local collection events will increase the recycling tonnages reported to McKean County annually. This will result in a more accurate understanding of the recycling efforts currently in place in McKean County.

Although all of these ideas may not work in each municipality, there needs to be a greater emphasis on cooperation, with an analysis of what can realistically be achieved. Recycling programs in McKean County, not currently funded by the County, have demonstrated some

initial buy-in by private industry that may result in expanded recycling opportunities and success in the County. With decreased grant money to spend on programs, McKean County in conjunction with local municipal representatives should decide what its targeted recycling programs are, and take incremental steps toward realizing the desired end result.

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

Additionally, it is recommended that McKean County establishes outreach efforts for events held throughout the County during the year such as the Autumn Daze Car Show in Bradford, the County Fair and Craft Show in Bradford, the Craft and Vendor Fall Bazaar in Crosby, the Art in the Wilds in Kane, the Craft Show and Flea Market in Kane, the FallFest in Kane, the Flickerfest in Kane, the Italian Festival in Bradford, the Swedish Festival in Mt. Jewett, the McKean County Fair in Smethport, as well as others as they are scheduled. Efforts can also be made to establish recycling programs of commercial establishments and through the McKean County Chamber of Commerce.

A list of waste and recycling initiatives, as well as education initiatives were sent to the members of the McKean County SWAC in 2014. The SWAC members ranked the initiatives from 1 to 5, 1 being the most critical and 5 being least critical. These initiatives were evaluated based on their ranking and the most critical initiatives to be addressed by McKean County over the ten (10) year planning period were developed. These initiatives are discussed in more detail in Section 5. Additionally, a copy of the initiatives is located in Appendix H.

4.4 Existing Material Recovery Operations

There are currently no processing facilities in McKean County, operated by the County. There are a few private recycling processing facilities that accept the majority of McKean County recyclables. Table 4.1 lists the name, address, and materials accepted for each of the large private recyclers that accept recyclable materials for processing, marketing and shipping.

TABLE 4.1 – MAJOR PRIVATE COLLECTION SITES IN THE AREA (as of 2014)

FACILITY	LOCATION	MATERIALS ACCEPTED
McKean County Landfill	19 Ness Lane, Kane PA 16735	#1 plastic beverage bottles, #1 plastic clamshells, #1 plastic non beverage bottles, #1 plastic trays, #1 rigid plastics, #2 plastic bottles, #2 plastic clamshells, #2 plastic jugs – clear, #2 plastic jugs – colored, #2 rigid plastics, #3 plastic bottles, #4 plastics bottles, #4 rigid plastics, #5 plastic bottles, #5 plastics caps, #5 plastic clamshells, #5 plastic cups, #5 rigid plastics, #6 plastic bottles, #7 plastic bottles, Aluminum beverage cans, Aluminum food cans, Blue glass beverage containers, Blue glass containers, Booklets, Brown glass beverage containers, Brown glass containers, Cardstock, Catalogs, Chipboard, Clear glass beverage containers, Clear glass containers, Corrugated cardboard, Gift boxes, Green glass beverage containers, Green glass containers, Greeting cards, Magazines, Metal paint cans, Mixed paper, Motor oil containers, Newspaper, Office paper, Paper bags, Paper labels, Paper sleeves, Paper tubes, Paperboard, Phone books, Shredded paper, Steel cans, Steel lids, electronics (call to verify what material they accept)
Greentree Landfill	635 Toby Road Kersey, PA	Paper (including newspapers, magazines, office paper, etc.), Fiber (cardboard, fiberboard), Plastics (#1 - #7), Aluminum, and Steel
Bradford Post Office	115 Boylston St. Bradford	Catalogs, Magazines, Mixed Paper, Office Paper, Window Envelopes
Goodman Services, Inc.	286 High Street, Bradford	Scrap Metals, Other Recyclables
Recycall	Route 155, RD1, Port Allegany	Aluminum Cans, Glass, Pallets
Bednar Metals	59 Rear Fraley St., Kane	Aluminum Cans, Copper, Brass, Radiators, and Metals
Connor's Auto Parts	Ormsby – Route 59, Smethport	Metals, Cars

4.5 Summary of Municipal Recycling Programs

The 2010 U.S. Census figures indicate that there is one (1) municipality within the County with 5,000 or more persons or with a population density greater than 300 (Bradford City; 8,770

people). A few municipalities are just below the 5,000 person threshold and may be required to establish a recycling program during the ten (10) year planning period (Foster Township and Bradford Township). In accordance with Act 101, Bradford City mandates via ordinance the mandatory curbside collection of at least three (3) recyclable materials. Additionally, Port Allegany Borough contracts with a hauler for mandatory curbside collection of recyclable materials on a voluntary basis. Five (5) municipalities (Mt. Jewett Borough, Keating Township, Wetmore Township, Bradford Township and Kane Borough) have access to drop-off programs for the benefit of their residents and businesses. In addition, three (3) municipalities manage leaf and yard waste via municipally operated drop-off centers and compost this material on municipal property. These municipalities are Bradford City, Kane Borough, and Smethport Borough. Hamlin Township collects leaf and yard waste curbside and delivers this material to the Bradford City compost facility. Of the three municipalities with a compost facility, one (1) is mandated per Act 101. Fourteen (14) municipalities have no municipally managed or privately sponsored recycling program.

The majority of the McKean County recycling drop-off centers accepts all plastic bottles & jugs, aluminum cans, steel/tin cans, newspapers, office paper, glass and cardboard. Table 4.2 shows the drop off centers located in McKean County in 2014.

TABLE 4.2 – LOCAL RECYCLABLES DROP-OFF COLLECTION SITES

FACILITY	LOCATION
Bradford Township	136 Hemlock Street
Sergeant Township	19 Ness Lane (McKean County Landfill)
Hamlin Township	149 Temple Drive
Keating Township	17085 & ½ Route 6
Wetmore Township	318 Spring Street Kane, PA

Businesses and institutions have also developed programs to divert materials from the waste stream. The total amount of recyclables reportedly recovered from residential and commercial sectors in 2013 was approximately 700 tons (net of C&D recycling).

Commercial, institutional and retail establishments located in Bradford City, as well as community events in this municipality, are also required to participate in the Act 101-mandatory recycling program. This can include the recycling of glass bottles and jars,

aluminum cans, aerosol and steel cans, plastic containers and bottles, corrugated cardboard, newspapers, magazines & catalogs and high grade office and copy paper, plus leaf waste. Recyclables must be collected from these establishments at least once every two weeks, and more often if needed. Recyclables must be separated from trash, including placement of receptacles in public areas. Additionally, commercial, institutional and retail establishments located in the non-mandated municipalities in the County, as well as community events in these municipalities, are encouraged to voluntarily participate in the Act 101 recycling program.

Residents of Bradford City, Kane Borough, Smethport Borough, and Hamlin Township have the opportunity to collect and recycle yard waste materials such as leaves, grass clippings, and brush to the three (3) municipal compost facilities in the County. Yard waste is collected curbside in Bradford City, Smethport Borough and Hamlin Township and delivered to the Bradford City or Smethport Borough compost facility. Yard waste is not collected curbside in Kane Borough, but may be dropped off at the municipal compost facility. Table 4.3 lists the names and addresses for each of the compost facilities. The sites processed 180 tons of brush, grass clippings, and leaves in the year 2013.

To date, ten (10) municipalities in McKean County rely on private subscription for waste collection from residences. Three (3) municipalities, Bradford City, Bradford Township and Lewis Run Borough, utilize municipal collection with municipally operated collection trucks. Eight (8) municipalities utilize contracted collection with a single private hauler. Thus, the majority of curbside recycling is/will be performed by one or more private haulers in over 85% of the municipalities in McKean County. Each hauler is then responsible to deliver recyclables to a processing site of their choosing. Subscription collection programs are often, by their very nature, inefficient due to multiple collection trucks (different hauling companies) going up and down the same streets. Because not all customers use the same hauler, the resulting inefficiency can also cost more than a system where one hauler collects from all customers on one street, neighborhood, or municipality.

A recently completed study by Penn State Altoona Geography professor Dr. Tim Dolney confirms the high cost of these private subscription collection systems. Recommendations in this plan encourage a move toward more efficient collection practices. Appendix I contains

sample bid documents that a municipality can use if it chooses to bid for waste, recycling, or combined (bundled) collection services.

Table 4.4, located at the end of this section, lists each of the County's municipalities, the type of waste collection and residential recycling program used in each municipality in 2014, and the materials collected by the program.

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

Bradford Township conducts an annual clean-up day. Materials accepted at this event include white goods (including refrigerators), freezers, washers and dryers. Tires are not accepted at this event. The McKean County (Casella) Landfill has an expanded electronics collection program that accepts televisions, computers, printers, copiers, and appliances (fees are based on device size).

TABLE 4.3 – LOCAL COMPOST FACILITIES

FACILITY	LOCATION	HOURS OF OPERATION
Bradford City Compost Facility	DPW 112 Holley Ave.	M-F 8AM – 2:30 PM
Kane Borough Compost Facility	Glenwood Park, Hacker Street	M-F 6 AM – 10 PM (April through October)
Smethport Borough Compost Facility	275 S. Marvin Street - Sheds	M-F 7 AM – 3:30 PM

4.6 Summary of Municipal Educational Program

There are no County wide municipal education programs currently in place for waste reduction and recycling information. The McKean County Conservation District advertises the annual

tire collection and develops a County-wide newsletter that contains some information about recycling and waste reduction. The Conservation District is willing to work with the Planning Department to include additional information on recycling and waste reduction in the County-wide newsletter over the ten (10) year planning period. McKean County has a section on their website dedicated to recycling information and as part of this Plan Update; this section of the website will be revised and updated with information from the Plan Update. Additionally, as part of this Plan Update, the McKean County Conservation District is willing to include recycling and waste reduction information in their newspaper advertisements that run in the Bradford Era. Casella (who operates the only landfill in the County) offers residents education through posters and website information.

4.7 Environmental Benefits of Recycling

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

B&L performed an EPA WARM model computer evaluation, which estimates the impacts and benefits of recycling activities on our environment based on McKean County's 2013 Recycling Report Summary. The WARM model calculates various savings based on the tonnages of materials recycled. Appendix G contains the result tables of the EPA WARM model evaluation. The County's 2013 total recycling efforts provided environmental benefits that were the equivalent of the following estimated resources consumption savings and pollution reductions:

- ... A net reduction in greenhouse gas emissions by 1,526 metric tons of carbon dioxide equivalent or MTCO₂E);
- ... A reduction in the net energy consumption by 6,751 million BTUs (British Thermal Units);
- ... A reduction in oil consumption by 1,162 barrels of oil;
- ... A reduction in gas consumption of 54,340 gallons;

- ... A reduction of 321 average passenger cars on the road per year (based on the equivalent amount of energy and fuel used by a passenger car each year and the average CO₂ emissions released by a passenger car per year);
- ... Conserving 8 railway cars of coal

4.8 McKean County Recycling in Relation to PA Recycling Goals

Upon reaching the 25 percent recycling goal specified in Act 101 in 1997, the Governor's Office established a new goal of 35 percent recycling to be achieved by 2003. As indicated in Table 3.4, the recycling rate in McKean County has averaged approximately 2.8% over the last five years. Table 3.4, in conjunction with the Waste Composition Table in Appendix G, looks more closely at the materials diverted and attempts to determine how much of the material estimated to be generated is actually being "captured" in the County's recycling efforts. As illustrated in the Waste Composition Table, the County was only capturing a very small percentage of potentially recyclable materials based on recycling data from 2013. It is believed that there is actually more recycling than is indicated in this table, but the County has not had a full-time dedicated recycling coordinator for some time, and recycling education and data collection have not been given the attention required to boost the County's recycling rate.

A trend in packaging is occurring, away from heavier glass and metal containers to lighter, thinner-walled plastics and aluminum. This is a positive trend in source (tonnage) reduction, but also results in a lighter tonnage (and therefore, lower weight-based "percent recycled" tonnage) being recycled. Thus, the actual "percent recycled" rate (i.e. 25%) is becoming of less importance than just taking steps to optimize recycling, where practical. Even maintaining a 25% recycling rate over time may require increased recycling of lighter materials.

In an effort to increase recycling, McKean County may want to focus on strategies designed to expand or supplement existing recycling programs and to improve current data collection efforts. McKean County should support, promote and conduct recycling programs such as the HHW collection program, whenever feasible. Furthermore, McKean County may want to provide advice to municipalities developing or expanding programs such as additional yard waste collection (woody materials), curbside recycling collection, or establishing a recyclables drop-off facility.

Currently, 14 of the County's 22 municipalities do not have access to a recycling program, privately or publicly operated. Another strategy to further boost diversion is to encourage municipalities without recycling services to implement drop-off or curbside recycling programs. McKean County will provide technical assistance to help these municipalities if they choose to initiate drop-off programs or, if there is sufficient interest, curbside collection programs.

Previous estimates from the County show that most of the Act 101 materials are collected, even if in modest amounts, in ten (10) municipalities. Newspapers, magazines and catalogs, mixed paper, cardboard, glass bottles and jars, plastic bottles, and aluminum and steel cans, along with various types of yard waste, are collected in most of the curbside and drop-off programs.

Regarding reporting of recycling tonnages, some of the residential recycling programs are directly controlled by municipal governments, thus assuring that the amount reported is fairly representative of the amount of material actually recycled (assuming accurate reporting by the private haulers). Other municipalities have relied primarily on private sector drop-off locations or curbside collection, with accurate report confirmation by the County or municipality. Lastly, the majority of the municipalities with drop-off programs have their container serviced by the private sector, thus relying on the private sector for tonnage information. Information regarding the amount of material actually being recycled in commercial, industrial, institutional and apartment complex programs may be inaccurately reported, since a comprehensive record of recycling from those sectors requires that each individual establishment or the collector provide complete, accurate information. This is a problem that needs to be addressed by the municipalities, and is a requirement that is difficult to enforce. With municipal staff shortages it is difficult to "chase" recycling data.

Businesses and institutions can be encouraged to reassess their efforts and expand recycling programs where it is economically feasible. Such entities that are located in municipalities that are not mandated can still be encouraged to implement programs where it makes economic business sense. McKean County staff and/or municipal staff may want to consider contacting major retailers directly that manages their own recyclables. Going to the source ensures that data is gathered for all locations in the County, including data from generators in municipalities

where recycling is not mandated that may not be reporting recycling data to the County or municipality. However, it is unlikely that McKean County will have the resources to increase staff at any time in the near future; therefore developing a better and more efficient way of communicating with local businesses is the best option.

PADEP has generated Forms (Form FM-11, Form FM-12 and Form FM-13) to be used by commercial, municipal, institutional, waste and/or recycling haulers, document destruction companies, and other companies transporting recyclables. A copy of these Forms is included in Appendix I. Form FM-11 is used by commercial, municipal, or institutional establishments that recycle. The form is to be completed annually and submitted to the municipality by February 1st of each year. If a municipality or McKean County wants to collect recyclables tonnages more frequently than on an annual basis, this form shall be revised to include these submission deadlines. If a local business is a retail establishment with multiple store locations that coordinate recycling collection and markets materials through corporate headquarters, the business shall complete Form FM-13 and submit this form to McKean County and/or the municipality.

Form FM-12 is used by waste and/or recycling haulers, a document destruction company, a retail establishment with multiple store locations, a broker, a processor, or other company transporting recyclables generated in McKean County. This form shall be completed annually and submitted to the municipality where the recyclables are collected no later than February 1st of each year. If a municipality or McKean County wants to collect recyclables tonnages more frequently than on an annual basis, this form shall be revised to include these submission deadlines.

Form FM-13 shall be completed by a waste and/or recycling hauler, a document destruction company, a retail establishment with multiple store locations, a broker, a processor, or other company transporting recyclables generated in McKean County, only if McKean County has agreed to collect the recycling data at the County level.

Additionally, sample letters are included in Appendix I that may be sent to businesses and haulers in McKean County with the appropriate forms attached. These letters provide contact

information for the businesses and haulers and a brief overview of why these forms are important at the municipal and county level.

An additional resource for businesses in McKean County to use to gauge their recycling programs is the ReDi Index. The ReDi Index was developed by Al Matyasovsky, Lloyd Rhoades, and Brendan Bagley at Penn State University. The ReDi Index allows businesses to enter details of their waste stream's commodities and the type, location, and size of their facility. The ReDi Index then calculates the business' effectiveness and compares their program with other programs by type and locale. The ReDi Index can be found at the following location: <https://redi.opp.psu.edu/about>. This information may be used by businesses to promote their recycling efforts to their consumers.

The types and amounts of materials recycled by both the residential and commercial sector during the past five years (2009-2013) are presented in Table 4.5 below, with special reference to those recycled materials that have been targeted by the PADEP in Act 101, including: #1 - #5 plastics, yard and leaf waste, aluminum and bi-metal cans, glass (brown, green and clear), mixed grades or paper, office paper, OCC and chipboard, and newsprint. Other recyclable materials are summarized below in the "non-Act 101 materials" category.

TABLE 4.4 – MUNICIPAL RECYCLING PROGRAMS

MUNICIPALITY	POPULATION	MANDATED	PROGRAM	GLASS	ALUMINUM	STEEL/BI-METAL	CARDBOARD (OCC)	OFFICE PAPER	NEWSPRINT	MAGAZINES	PLASTIC	YARD WASTE
Bradford City	8,770	Yes	Curbside	X	X	X	X	X	X	X		X
Bradford Township	4,805	No	Drop-off	X	X	X	X	X	X	X	X	
Hamlin Township	734	No	Drop-off	X	X	X	X	X	X	X	X	
Kane Borough	3,730	No	Drop-off									X
Port Allegany Borough	2,157	No	Curbside	X		X	X		X			
Casella Landfill (Sergeant Township)	141	No	Drop-off	X	X	X	X	X	X	X	X	
Keating Township	3,021	No	Drop-off	X	X	X	X	X	X	X	X	X
Wetmore Township	1,650	No	Drop-off	X	X	X	X	X	X	X	X	

Source: Population estimates from U.S. Census Bureau

TABLE 4.5 – MCKEAN COUNTY MATERIALS RECYCLED (TONS)

Type	2006 ¹	2007 ¹	2008 ¹	2009 ²	2010 ²	2011	2012	2013
Act 101 Materials	4,895.9	5,043.1	573	0	0	652.4	1,321.4	707.7
Non-Act 101 Materials	3,228.2	7,219.1	425.8	0	0	12.8	1.1	4.1
Recycling Totals	8,124.1	12,262.2	998.8	0	0	665.2	1,322.5	711.8

**Source – Re-TRAC Reports for McKean County*

1: McKean County had a Recycling Coordinator in place in 2006, 2007 and part of 2008.

2: No recyclables were reported to PADEP in 2009 and 2010.

The table shows a fluctuation in materials recycled throughout the past five years, with 2012 having the highest reported recycling tonnages in this time frame, and 2009 and 2010 having the lowest tonnages reported (though this is assumed to be from a lack of reporting, versus participation). The table also shows that recycling reporting was significantly higher in 2006, 2007, and 2008. It was assumed this higher reporting value was a result of having a Recycling Coordinator in place. The Recycling Coordinator, during this time period, was responsible for tracking down recycling tonnages from local haulers, businesses, community events and local organizations that recycled material. It was assumed that recycling tonnage totals may increase, over the ten year planning period, if a Recycling Coordinator is once again implemented in McKean County. The table also shows that McKean County has recycled materials beyond those listed in Act 101, but that this may be an area for expansion based on the last five years of reporting.

As discussed in Section 3, Section 3.5, it was anticipated that McKean County's recycling rate will increase from an assumed 4% in 2014 to 15% by 2025. Table 3.4 reflects these growing recycling tonnage projections.

4.9 Compliance

Currently, there are no compliance enforcement options in place in McKean County. Compliance efforts are supported through education and outreach.

SECTION 5 - SELECTION AND JUSTIFICATION

The purpose of this section is to describe the process used to select and recommend components to the overall waste management system for McKean County and provide justification for the selections and recommendations. The County must ensure that the recommend system(s) provides the required capacity needed to properly process/dispose of all municipal waste generated within its boundaries for the next ten years. The system defined in this Plan must also create the fair, open and competitive market place required by the state's policy on the content of County Municipal Waste Management Plans.

The detailed evaluation of solid waste processing and disposal technologies was included and can be referenced in the County's 2005 Municipal Waste Management Plan. At that time, the County plan looked at the environmental, regulatory, economic, and harms/benefits aspects of a number of waste management options. It was determined at that time, that utilizing landfilling was the most economical solution for the County. The County has a landfill located within its borders that accepts municipal solid waste (MSW), special handling waste and residual waste (though residual waste is not a component of MSW that needs to be evaluated as part of this Plan Update). It is recommended that McKean County continue to utilize landfilling as the most economic and feasible waste disposal alternative for the ten (10) year planning period.

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

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

If a Zero Waste goal is on the distant horizon and a 25% recycling and composting diversion is a mid-range goal, a County-wide commitment to recycling and waste reduction is necessary and needs to be discussed in the County plan.

5.1 Background

In 2013, it is estimated that McKean County disposed of a total of approximately 30,000 tons of MSW (all categories), plus approximately 700 tons of materials that were recycled or otherwise diverted from disposal. In 2013, approximately 100% of the landfilled total was disposed of at the McKean County (Casella) Landfill and Advanced Disposal's Greentree Landfill (see Table 3.1).

Currently, waste haulers that operate within the County can dispose of the waste they collect at a landfill or transfer station of their choice, as long as the ultimate waste disposal site is designated in the County's solid waste management plan (2005). The McKean County (Casella) Landfill and Advanced Disposal's Greentree Landfill have accepted the vast majority of McKean County waste between 2009 and 2013. A Solicitation of Interest (SOI) was advertised in *Waste Advantage* (a national waste magazine), the *PA Bulletin* and the local *Bradford Era* to solicit responses from waste disposal facilities to assure disposal capacity for McKean County generated waste over the ten (10) year planning period. Hard copies of the SOIs were also mailed to the McKean County (Casella) Landfill and to Advanced Disposal's Greentree Landfill, based on their acceptance of a large majority of McKean County waste over the past five (5) years. Table 3.1 lists the landfills which accepted waste from the County in 2009-2013, as well as the tonnage of waste each landfill accepted in 2009-2013.

As shown in Table 3.4, the Plan Update predicts that normal municipal waste generation (from residential, commercial, and institutional sources) will remain relatively level (due to a stable population) at approximately 32,000 tons per year (TPY) over the next ten (10) years, or approximately 123 tons per day, 5-day basis, or TPD5). Recycling efforts (not including C&D recycling) are predicted to slowly grow over time, from approximately 1,300 TPY (5 TPD5) in 2014 to approximately 4,800 TPY (19 TPD) by 2025. It is estimated there will be an increase in the amount of waste disposed in the landfill resulting from an effort to decrease illegal dumping and open burning in McKean County over the ten (10) year planning period.

Generation of Special Handling Waste fraction of MSW, including dewatered sewage sludge, asbestos, infectious/chemotherapeutic waste, and ash, are expected to remain fairly constant at approximately 8,500 tons annually (approximately 33 TPD5).

C&D waste generation, which is not included in the above totals, is expected to remain constant at around 4,000 tons annually, but C&D recycling is expected to grow slightly (by an incremental 200 tons more in C&D recycling each year), thereby reducing the net quantity of C&D waste requiring disposal from 4,000 TPY (15 TPD5) in 2015, to approximately 2,000 TPY (8 TPD5) by 2025. This reduction is *not* demonstrated in the projections due to the fact that the increased recycling of C&D material annually will require program implementation at the County level.

In total, the tons of conventional MSW, Special Handling waste, and C&D waste requiring disposal (i.e. after recycling) from McKean County is expected to drop from an approximate combined 42,900 TPY (165 TPD5) in 2015 to 39,900 TPY (153 TPD5) by 2025. The SOI for disposal capacity assurance accommodates all of these waste disposal needs, over the next ten (10) years, as further described in this Plan Update.

Residual wastes generated in McKean County, not technically a part of this Plan Update, add an average of an additional 21,000 TPY (approximately 81 TPD5) of waste to the area's landfills.

5.1.1 Securing Waste Disposal Capacity for McKean County

As part of the Municipal Waste planning process, each county in Pennsylvania needs to secure ten (10) years of disposal capacity for municipal waste generated from within its borders.

Historically, McKean County's Municipal Waste Management Plan has provided that municipal waste from the County will be delivered to disposal sites based on:

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

Currently, under this modified “free market” waste system in place in the region, nearly 100% of municipal waste generated in McKean County is disposed of at two privately-owned and operated facilities, the McKean County (Casella) Landfill and Advanced Disposal’s Greentree Landfill. This method will continue to be utilized in this Plan Update for the ten (10) year planning period. This is further discussed in this section.

5.2 Overview of Current Municipal Waste Management System

Up to this point, the current municipal waste system involved ten (10) municipalities that require residents to individually subscribe with waste haulers for waste (and in some cases recyclables) collection, eight (8) municipalities that contract for waste (and in some cases recyclables) collection with one hauler, and three (3) municipalities where the municipality collects waste and/or recyclables curbside. The majority of processing and disposal of MSW is handled by private waste haulers. The private sector handles the consolidation and shipping of mixed recyclables at their Transfer Stations, as well as managing the processing and marketing of recyclables handled through their facilities. Processing and recycling/disposal of C&D waste is generally handled by the private sector. Biosolids (sewage sludge) and septage are mainly managed by a combination of wastewater treatment plants that accept sludge and private landfills, and infectious and chemotherapeutic waste is managed privately through contracted collection.

Four (4) municipalities in McKean County manage and process yard waste from residences and businesses.

There are five (5) privately operated recyclables drop-off locations in McKean County. Unfortunately, due to financial factors, McKean County does not have the financial strength to establish and operate additional drop-off locations to service residents of McKean County. The establishment of new recyclables drop-off locations through support from the private sector, as well as the establishment of drop-off locations through municipal support and operation is a recommendation and goal of the McKean County 2015 Plan Update for the ten (10) year planning period.

The McKean County SWAC has expressed a desire to expand the current recyclables collection program, to ensure that the maximum number of residents in the County is being offered

recycling options through a combination of drop-off and curbside recycling programs. It is a strong desire of this Plan Update to satisfy the needs of the County's residents and businesses through the growth of these recycling opportunities in the County, although this must be done with limited, to no County sponsorship or financial support, initially.

5.3 Waste and Recyclables Management - Alternatives

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

5.3.1 Waste and Recyclables Collection

5.3.1.1 MSW Collection

There are four (4) basic methods for the collection of MSW (residential/commercial/institutional refuse) that are practical in this region.

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

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

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

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

Subscription collection is used by ten (10) municipalities in McKean County. Although the current system appears to provide adequate services to its customers, efficiency is lower and costs are typically higher. The municipalities may want to consider municipal bidding for contracted collection of residential/institutional/small commercial customer refuse. In many situations, refuse collection fees decrease when local governments contract for refuse collection services (contracted collection) on behalf of their residents, compared to when residents directly contract for refuse collection through subscription collection. Eight (8) municipalities in McKean County currently use contracted collection, and the contracted collection appears to save the residents money versus individual subscription collection through competitive bidding for collection and disposal services. Residents with contracted collection throughout McKean County are seeing rates of approximately \$15.00 per month or \$180 per year for curbside collection of waste. Bag limits and bulk item acceptance varies. Frequently, individual subscriptions do not include bulky wastes, household hazardous waste (HHW), electronic waste (e-waste), and other special wastes pickups; extra charges will be levied for these “value-added” services.

In addition to the potential financial benefits of contracted collection, there are additional advantages as well. Contracted collection with private haulers allows local governments to indicate the types of collection services to be provided under contract (unlimited collection, pickup with can limits, or straight pay-as-you-throw; bundled curbside recycling services with the waste collection; bulky item pickup allowances; HHW and/or e-waste collection; may include direct customer billing; may or may not include disposal costs, at the municipality’s option; may include reporting requirements for wastes and recyclables collected; etc.). A municipal waste disposal contract can also (but does not have to) designate the disposal site or sites where the municipality wishes the contracted hauler to dispose of the municipality’s waste, and can also designate a site where the recyclables are to be taken (if part of the contract). Sometimes, haulers are hesitant to support contracted collection programs because they may be perceived as favoring larger haulers that have greater fleet and staff capabilities, or because the contract may contain contract requirements (insurances, guarantees, etc.) with which small haulers cannot easily comply. It is optional to contract for waste and recyclables separately, if preserving smaller haulers is important in a municipality. Additionally, it is optional to contract with multiple haulers to service municipalities that are more sparsely populated, in order to preserve smaller haulers in a municipality and make

collection more economical for residents. Contracted collection can reduce the number of waste vehicles within a municipality as compared to subscription collection, which results in more efficient collection with less truck traffic, road wear, air pollution and noise. Contracted collection may also help limit the occurrence of illegal dumping, as residents with this form of collection are provided with consistent and reliable refuse collection services and, therefore, are less likely to illegally dispose of waste and/or accumulate waste for long periods of time.

In some very rural areas, whether served under contract or by subscription, haulers may not want to provide service to an area due to the long distances between customers, poor roads, mountainous conditions, or distances between the area and their operation yard and a landfill. In these areas, partnering with neighboring municipalities to contract a larger residential base may be the only practical solution. In McKean County, municipalities with sparse population may want to consider joining and contracting specific route collections within the County that are broader than just one municipality, to one or to multiple haulers. Where subscription service to a rural area may be uneconomical, a defined route with customers may make the economics work for some haulers. For example, within a county, five different private haulers may service their municipalities. This scenario may provide waste collection service for residents who were not previously obtaining it due to their location within the county.

If municipalities decide that contracted collection through a municipal contract is worth pursuing, the municipalities may be able to coordinate collection with private haulers in multiple municipalities, thus potentially further decreasing the cost of refuse collection for residents, and increasing the efficiency and safety of collection for the waste haulers. Self-haul of waste is self-explanatory. Residents and businesses can haul waste directly to transfer stations and disposal sites, as long as self-haul customers are allowed to access the sites.

Another collection method for MSW is convenience centers. Convenience centers are essentially a drop-off facility for municipal solid waste. These were established in rural areas where waste haulers either could not service the residents or where the rates for service were too high per household. Although convenience centers were established through PADEP in

the past, no new convenience centers have been permitted. McKean County has very rural areas that may be best managed by a convenience center for MSW. If convenience centers are permitted through PADEP in the future, McKean County shall evaluate their rural areas to determine if a convenience center is appropriate to service their residents.

5.3.1.2 Recyclables

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

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

Source-separated recycling requires residents to separate their recyclables into separate containers at the curb. This method makes processing much simpler and inexpensive, and tends to result in a cleaner recyclable material collected (which improves market value). Dual-stream recycling is similar to source-separated recycling, with the recyclables commonly separated into two categories: bottles/ cans and paper fiber. Dual-stream recycling typically has the same benefits as source-separated recycling, but the collection method is slightly different. For example, cans, glass and plastics may go in one container while paper fiber (cardboard, newspaper, etc.) go in another. Both source-separated and dual-stream recycling operations require the hauler to either place recyclables from the curb into different containers in the recycling truck, or to make multiple collections, for transportation and delivery of the material to the recycling center. A variation of source-separated recycling is "curb-sort" services, where recyclables are placed at the curb commingled, and are then sorted into different collection truck compartments by the collection crew.

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

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

McKean County haulers currently utilize single stream or source separated collection or source separated collection through drop-off locations.

In many areas of the County, the only recyclables collection service that is offered is through the recyclables drop-off site option. The current municipally operated recyclables program has a total of five (5) recyclables drop-off sites scattered throughout McKean County, operated by Casella.

Only two (3) municipalities in McKean County currently offer some form of curbside recyclables collection program. Bradford City offers curbside collection of recyclable materials, which is collected by the municipality. Materials collected include: aluminum, glass, tin cans, cardboard, office paper, magazines, and newspaper. Port Allegany Borough contracts with a waste hauler to collect recyclables curbside from residents in the

municipality. Materials collected include: glass, aluminum, newspaper, and magazines. Cost to the residents is included in their waste collection fee.

5.3.1.3 Hauler Licensing or Oversight

In June 2002, Pennsylvania approved amendments to the existing solid waste management statutes (adopted as PA Act 90) that, among other provisions, established a statewide waste transportation safety program, including a licensing 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 McKean County need to meet the requirements of the State program, and hauler data collected from the State program is available on the Pennsylvania Department of Environmental Protection (PADEP) website at:

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

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

Some counties in the Commonwealth continue to register (alternatively 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. McKean County currently does not have a hauler registration/licensing program.

5.3.2 Waste Transportation and Disposal

5.3.2.1 Transportation of MSW to Disposal Sites

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

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

Within the geographic boundaries of McKean County, there are no permitted waste transfer stations, one (1) permitted landfill, and no permitted resource recovery facilities. MSW from residents within the County can be transported to the McKean County (Casella) landfill or any of the disposal facilities in the surrounding area, as long as the site accepts self-hauled waste.

5.3.2.2 Transportation of Recyclables to Collection/ Processing Site

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

Drop-off recycling sites can supplement curbside collection, and in areas where no curbside collection exists, provide the only opportunity for recycling. Drop-off recycling sites can enable a municipality to expand their current recycling program by enabling them to accept a broader range of materials from their residents than a hauler may collect. Typically, rural

municipalities are not mandated to recycle under Act 101, and thus haulers may not offer curbside recyclables collection. Drop-off locations can provide residents the opportunity to recycle when their hauler does not offer it. There is currently one (1) municipality which is mandated to recycle within McKean County.

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 recyclables 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. It is a recommendation of this Plan Update that information on municipal recycling opportunities, such as drop-off locations, is expanded to be included on social media sites, i.e. Facebook, Twitter, etc., municipal calendars, County calendars, and the McKean County website.

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

5.3.2.3 Waste Disposal Capacity Assurance in McKean County

Under Act 101, each County in Pennsylvania must secure municipal waste (MSW) disposal capacity to meet its needs for the next ten (10) years. There are a number of ways in which this requirement can be met. In McKean County, the County Commissioners have elected for this Plan Update to release a Solicitation of Interest (SOI) to interested waste disposal facilities to assure disposal capacity of municipal waste generated in McKean County over the ten (10) year planning period. This process to secure MSW disposal capacity was conducted in the fall of 2014 using a SOI and subsequent Submittal Forms. Disposal capacity and ceiling tipping fees were solicited for conventional MSW (from residential, commercial,

and institutional sources), as well as for sewage sludge (in dewatered cake form), asbestos, incinerator ash, Infectious/ Chemotherapeutic waste (ICW), and Construction & Demolition Waste (C&D) disposal.

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

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

Submission packages were received by Barton & Loguidice, D.P.C. (B&L) in October 2014, and were reviewed in accordance with evaluation criteria outlined in the SOI. A total of four (4) landfills and two (2) waste transfer stations responded to the SOI.

All disposal Respondents agreed to accept waste at their facilities for both the five (5) year initial and subsequent five (5) year renewal period, for a total of ten (10) years. McKean County's (Casella) Landfill stated that donations are considered on a case by case basis, Advanced Disposal's Greentree Landfill stated that requests for donated volume shall be submitted to the facility and will be reviewed on a case by case basis, Waste Management's Chaffee Landfill agreed to donate 0.5% of the tonnage of McKean County waste delivered each year for non-profit and public cleanup events, and Seneca Landfill agreed to donate 20 tons per year of landfill capacity for non-profit and public cleanup events. The McKean County (Casella) Landfill did not provide a backup facility as required in the SOI. All other disposal submittals included a backup facility as required in the SOI, in the event the primary contracted facility can not continue to service the needs of McKean County as proposed. Not all facilities agreed to accept all fractions of MSW, including special handling wastes; however, among multiple facilities, the needs of McKean County were met.

Additionally, all Respondents to the SOI were asked to confirm that they are properly permitted to accept municipal waste and all did so.

Both transfer station Respondents agreed to all terms of the SOI, and returned a signed draft transfer station agreement to document their acceptance.

Appendix A contains Table 1 and Table 2, which outline the SOI responses from the waste disposal facilities, Table 3, which shows the results of a transportation cost analysis for waste haulers to use the SOI respondents waste disposal facilities, and Table 4 which lists the proposed backup disposal facility for each Submittal.

All Respondents' submission packages were reviewed by B&L. The McKean County (Casella) Landfill submission was missing the Processing/Disposal Facility Questionnaire. Though this material was not considered critical to the submission, as a whole, the material was requested from Casella, by B&L, so as to evaluate the submission completely. Upon receipt of this information, all submissions were deemed acceptable and all disposal facilities were recommended for inclusion in the McKean County Solid Waste Management Plan Update by B&L. The SWAC and the McKean County Commissioners, upon further consideration/ clarification of the submissions and SOI requirements, accepted B&L's recommendation for the facilities inclusion in the Plan Update. A review memorandum contained in Appendix A documents a summary of all submittals and the facilities that were recommended for inclusion in the Plan Update, based on review, discussion, and recommendation by the SWAC. The selected facilities are listed in Section 6 of the Plan Update.

The SWAC has chosen to recommend to the County Commissioners contracting with four (4) disposal sites, along with two (2) transfer stations. Factors considered included proximity to McKean County, use of the primary existing facilities currently used by the private sector haulers, and the need to contract with multiple sites in order to provide for acceptance of all categories of municipal wastes. The details related to those selections are presented in Section 6 and in Appendix A. The four contracted disposal sites will provide more than the required minimum municipal waste disposal capacity assurance by McKean County for the next ten (10) years.

In addition, haulers and/or municipalities have the option to petition the Commissioners to use another facility not designated in the Plan update, if that facility is legally permitted and operating within the provisions of its permit, and can provide the County with a ten (10) year capacity assurance for that portion of the waste stream expected to be generated in McKean County and disposed of at another out-of-County facility. Any disposal facilities added to the Plan Update after the original 2014 SOI must pay any and all costs to revise the Plan and its documents as needed to include the respective facility, unless other arrangement are made with the County. The procedure to add a facility is as follows:

- ... First, a County hauler or municipality must petition the County Commissioners using the Petition Form to use a Non-Designated Facility shown in Exhibit 5-1.
- ... After receiving the Petition Form, the Commissioners will forward a Submittal Form to the facility. (See Appendix A)
- ... Upon receipt of the completed Submittal Form from the facility in question, the Commissioners will review and respond to the information in the Form within thirty (30) days.

The Commissioners will notify, in writing, the Planning Department and/or the Conservation District that a hauler or municipality has petitioned the Commissioners to utilize another facility. The Commissioners will convey, in writing, their decision on the request to the Planning Department and/or the Conservation District. If all information is in order on the Submittal Form the Commissioners will notify the hauler or municipality whether it will be at liberty to use the facility for disposal of McKean County generated municipal waste. Haulers or municipalities that use a facility other than the designated facilities in the Plan must also agree to submit quarterly reports, along with weight slips, to the Authority and/or County, to ensure proper disposal of McKean County generated municipal waste.

Any time a new facility submits a Submittal Form in accordance with this procedure, which is deemed to meet the Commissioner's requirements; the Commissioners will advertise in the local paper that a facility has expressed interest in being added to the current McKean County Solid Waste Management Plan and if any other facilities are interested in being included in the McKean County Solid Waste Management Plan, they may submit Submittal Forms at this time.

Appendix A contains a complete packet with instructions to complete the process of petitioning to use a facility not designated in the Plan update. Again, the process is set-up to allow the Commissioners to monitor where County generated municipal waste is being disposed to minimize risk of liability and to guarantee disposal capacity at the facility for the County municipal waste for at least ten (10) years.

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

It is the intent of the County to enter all new waste transfer and waste disposal agreements with selected facilities by the time this Draft Plan Update is adopted by the County. At that time, copies of the executed transfer and disposal contracts will be placed in Appendix A of this Plan Update.

5.3.2.4 Hauling Cost Considerations of Contracted Waste Transfer and Disposal Sites

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

As part of this Solid Waste Management Plan Update, Barton & Loguidice, D.P.C. (B&L) developed a spreadsheet that listed the roundtrip distance from the center of McKean County (assumed to be Kane, PA) to the waste disposal facilities that responded to the SOI. B&L took into consideration road networks, natural barriers (mountains, rivers, etc.), hauling distances, urban congestion, and other factors that they felt affected the travel distance a waste hauler would take to reach a waste disposal facility. B&L assumed a cost of \$3.00 per

mile for transportation of waste from Kane (a central point in the County) to a landfill. Transportation costs from Kane to a transfer station were assumed to cost \$1.50 per mile, and from the transfer station to the landfill it was assumed to cost \$3.00 per mile. Table 3, containing the results of the transportation cost analysis, is presented in Appendix A. This table may assist haulers in assessing the relative cost of using various disposal sites in the region.

Based on the locations of the MSW landfills, as shown on Figure 6-1 in Section 6, it is understandable, on a hauling cost basis, that most of McKean County's waste has been historically disposed at the McKean County (Casella) Landfill and Advanced Disposal's Greentree Landfill.

5.3.3 Yard Waste and Food Waste/ Organics Composting

Currently, there are no County operated yard waste composting facilities in McKean County. There are a few municipalities in McKean County that collect leaf and yard waste from their residents and either compost this material at a municipal location, or transport this material to a private sector composting facility.

5.3.4 Special and Non-curbside Materials Recycling

There are a number of materials that are recyclable but which are not generated on a daily or weekly basis and which are not regularly collected at the curbside or in the workplace. McKean County has a number of private sector recyclers that will accept these items at their facilities. Section 4 provides information on the larger private recyclers in McKean County. Additionally, residents are encouraged to visit the McKean County website to determine outlets available within their region for specific recyclable material. A recommendation of this Plan Update is for McKean County to continue to maintain information regarding private recyclers and hard-to-recycle materials on their website.

5.3.5 Appliance Recycling

Currently, McKean County (Casella) Landfill accepts appliances without Freon for a fee of \$10 for medium items and \$15 for large items, from residents of McKean County. Residents of McKean County may also take advantage of special collection events held by municipalities throughout the year, which often accept appliances, free of Freon. Additionally, many of the large hardware stores will remove old appliances when they deliver a new appliance. This may

come with a fee or may be free with delivery. PPL also has a take back program that residents of McKean County may take advantage of. Residents are encouraged to contact local hardware stores to ask about their recycling options for appliances. Specific provisions for proper recovery of Chlorofluorocarbon refrigerants (Freon) will be required of whatever entity handles these materials, so as to comply with Section 608 of the US Clean Air Act.

At this time, appliance recycling is not a critical item, as identified by the members of the SWAC, over the ten (10) year planning period. It is a recommendation of this Plan Update to include information on McKean County's website regarding appliance recycling availability through local hardware stores and special collection events. It is also a recommendation for McKean County to work with disposal facilities to offer special collection events, throughout the County, annually. It is recommended that appliances be accepted at these collection events.

Unfortunately, with the requirements for Freon removal, accepting appliances at existing drop-off centers can be difficult. Two initial concerns with accepting appliances at drop-off centers are the size of the material and Freon. Many drop-off centers in McKean County are currently privately managed and are not operated 24/7 with an attendant. There is not enough room or oversight at these facilities, currently, to effectively accept appliances. It is a recommendation of this Plan Update to continue to work with the private sector and local municipalities to expand their current drop-off centers. If current drop-off centers are expanded to include attendants or other forms of monitoring and if they have the available space, appliances may be added to the materials accepted at these facilities. Prior to acceptance of appliances, the facility will need to determine an outlet for the appliances and understand any requirements from the outlet for the appliances to determine if collection is possible. It is recommended that McKean County continue to provide guidance to municipalities and private industries interested in expanding their drop-off centers for the acceptance of appliances. It is also recommended that McKean County work with municipalities, if they develop appliance recycling at their drop-off centers, to provide education to residents.

5.4 New Program Recycling Goals and Opportunities

It is always a challenge to increase recycling, especially in areas of low population density. In an effort to provide residential and commercial recycling opportunities in rural areas of McKean County and increase the amount of material recycled, B&L, in coordination with the Planning

Department, developed a large number of initiatives and programs that can potentially enhance recycling in McKean County over the ten (10) year planning period. This list was shared with the members of the SWAC and the members of the SWAC were asked to rank these initiatives by order of importance for implementation over the ten (10) year planning period. The following initiatives are ranked “most critical” by members of the SWAC.

Municipal Recycling Recommendations:

- ... Develop new permanent recyclables drop-off facilities with convenience in mind
- ... Develop a method for more comprehensive reporting of recyclables collection to the County
- ... Adding additional recyclables material to existing drop-off facilities
- ... Streamline the recyclables collected curbside with all local haulers in the County

Municipal/Commercial Waste Collection Recommendations:

- ... Encouraging contracted residential curbside waste collection with curbside recyclables collection through draft contracts supplied to municipalities
- ... Encouraging contracted curbside waste collection for commercial businesses, including mandatory recyclables collection through draft contracts supplied to businesses

Special Recyclables Recommendations:

- ... Develop semi-annual County-wide HHW collection events
- ... Develop semi-annual County-wide e-waste collection events
- ... Contract with waste haulers for curbside HHW and/or electronics collection
- ... Develop a permanent yard waste drop-off location (municipal or County-wide)
- ... Develop a permanent yard waste compost facility (municipal or County-wide)
- ... Encouraging semi-annual (at minimum) spring cleanup collection events (sponsored by the township/private sector)

Educational Priorities:

- ... Expand current education through the use of social media, i.e. twitter, Facebook, etc. to educate residents and businesses.
- ... Develop PSAs to use on local TV, public access channels and local radio networks to educate residents and businesses

- ... Develop quarterly flyers to distribute to residents and businesses with recycling information
- ... Encourage the development of municipal newsletters that include waste and recycling information
- ... Develop education for residents on the negative side effects of burning waste and recyclables
- ... Develop a plan to target each sector present in the County (i.e. colleges, elementary schools, etc.) to encourage/support recycling and discuss waste collection/reduction methods
- ... Update McKean County website to be more user friendly and contain information about waste and recycling
- ... Develop a County newsletter that includes waste and recycling information
- ... Encourage schools to develop recycling programs
- ... Educate members of the County staff, County Commissioners, etc. so that all “core” local members understand the County’s waste and recycling initiatives, goals, options, etc.
- ... Develop a community calendar that includes waste and recycling information
- ... Require and/or encourage haulers to provide education and/or helpful hints to residents and the County semi-annually, informing them on how to and what to recycle and how to dispose this material
- ... Encourage big event activities to recycle by recognizing how much of the event waste goes into the trash
- ... Develop newspaper advertisements to educate residents
- ... Develop a method to reach out to the commercial businesses in the County to discuss recycling, obtain recycling tonnages, etc.
- ... Encourage the development of school competitions to get the community involved in recycling, or the participation in other state and national recycling/waste collection competitions
- ... Be a presence at local fairs, festivals, and big event activities, whether through recycling information, technical assistance for coordinators or collection events

Other General Recycling and Waste Goals:

- ... Encourage the development of ordinances that require waste haulers to collect bulk items and recyclables curbside and education to residents semi-annually
- ... Purchase surveillance cameras that move around to different drop-off sites
- ... Develop a hotline for illegal dumping and open burning reporting
- ... Hire an enforcement officer/partner with local enforcement for illegal dumping and open burning
- ... Hire a County Recycling Coordinator
- ... Encourage Pay-As-You-Throw waste disposal systems with local haulers
- ... Develop a public/private partnership for waste and recycling collection and infrastructure

5.5 Waste and Recycling System Recommendations

The overarching goal of the 2015 McKean County Municipal Waste Plan Update is to offer an integrated program of waste management and recycling programs to the residents and businesses of McKean County that

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

A long term goal of approaching zero waste will be built on a foundation of significant increased waste diversion during the term of this waste plan. The following measures are components of this recommended integrated waste and recyclables management program for McKean County. The recommendations have been broken down into two categories: recommendations to be implemented in years 1-5 and recommendations to be implemented in years 5-10. Many of these recommendations require time and effort to implement and oversight to maintain. The recommendations will be best implemented through a full time recycling coordinator.

5.5.1 Recommendations to be Implemented in Years 1-5

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

5.5.1.2 Recommendation Contracted Waste/Recycling Collection – The availability of cost-effective waste and recyclables collection services is recommended. Most areas of the County currently have subscription service or contracted collection. Municipal bid collection services have been shown in this County and in other areas of Pennsylvania to be cost-effective and to provide an opportunity to include recycling, bulky waste pickup, and other services to be bundled with waste collection services in the bid package. Bidding often results in competitive pricing. While this is a local municipal decision, this Plan Update recommends that municipalities consider bidding for contract services as a means to expand services, provide services to all residents, and ensure competition for cost-effective services. It is recommended that municipalities with contracted collection and those interested in contracted collection include in their request for bids, options that require haulers to provide pricing for services such as curbside recyclables collection, curbside HHW collection, curbside e-waste collection, pay-as-you-throw options, etc. It is also recommended as part of this Plan Update that all contracts for waste and/or recycling include a mandatory requirement for haulers to provide education to residents, quarterly, through flyers, that describes recycling opportunities, materials accepted, waste minimization techniques, grasscycling, backyard composting, etc. This material shall be required to be approved by McKean County prior to distribution. Particularly in the more suburban parts of the County,

the Plan recommends that municipalities consider bidding for curbside recycling as part of a bundled service, or as a separate bid for recyclables collection only. A template bid document for a municipal bidding of recycling services is provided in Appendix I.

5.5.1.3 Recommendation Voluntary Residential Curbside Recycling Collection– Mandatory curbside recycling for all suburban communities is ideal. Where a municipality does not require curbside recycling, this Plan Update recommends that “optional curbside recycling” be required via municipal adoption of an ordinance that requires any subscription hauler operating within the municipality to provide curbside recycling services to a customer that requests it. (This can be at additional cost to the customer or the municipality can require that fully integrated service be the standard service.) This shall not be a financial hardship on waste haulers since they are often providing that service in adjacent municipalities already. Additionally, bulk item collection and education may be added as part of this ordinance. A template ordinance to implement this is recommendation in Appendix I (bulk item collection and education are not included as part of the example ordinance).

5.5.1.4 Recommendation Transfer of Waste – The Plan Update supports the continued reliance on the private sector for waste hauling services, including the option of waste transfer to take the County’s municipal waste to out-of-County disposal sites. The Plan Update recommends the County enter into contracts with two (2) private transfer stations that responded to the SOI, to provide waste transfer services and recordkeeping in accordance with the Plan Update.

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

5.5.1.6 Recommendation Registration for Waste/Recycling Haulers – As of the 2005 Plan Update, it is no longer legal to license haulers at the County or municipal level, instead PADEP has created a statewide licensing program for waste haulers. This licensing program is applicable to waste vehicles over 17,000 pounds GVW. It is legal to establish a registration program at the County or municipal level for these vehicles. It is a recommendation of this Plan Update to establish a registration program for waste vehicles over 17,000 pounds GVW at the County level in years five (5) through ten (10) of the ten (10) year planning period. It is recommended that this registration program includes specific requirements of the hauler. It is also recommended that this registration program is included as part of the revised municipal waste ordinance which specifies a fine if a waste hauler is found in violation of the registration requirement.

The registration program shall require waste haulers, operating in McKean County, to:

- ... report recyclables collection tonnages monthly to the County,
- ... provide direct education to residents quarterly on waste and recycling (McKean County shall be responsible for providing the hauler information for each quarterly education brochure),
- ... participate in the production and distribution of an annual county calendar and/or quarterly newsletter that includes waste and recycling information, in coordination with McKean County, the McKean County Planning Department, and the McKean County Conservation District
- ... and provide McKean County an annual list of recyclable material collected (if material collected changes, McKean County and County residents must be notified prior to the first collection, in writing).

Additionally, the PADEP waste vehicle licensing program does not include waste vehicles under 17,000 pounds GVW. It is a recommendation of this Plan Update that McKean County considers licensing waste vehicles operating in McKean County under 17,000 pounds GVW. Licensing of vehicles less than 17,000 pounds GVW may include the payment of a small fee to operate within McKean County, as well as include the same registration requirements for waste vehicles over 17,000 pounds GVW. This may be advantageous if there are a large number of self-haul or small scale waste haulers operating in McKean County, where the

material arriving at the disposal facilities violates other requirements and recommendations of this Plan Update.

5.5.1.7 Recommendation Waste Disposal Capacity – The Plan Update calls for all municipal waste generated in the County, including Special Handling Waste, to be disposed at disposal facilities listed in the Plan Update. To meet the minimum requirements of municipal waste capacity assurance, and for related reasons explained in Sections 5 and 6, this Plan Update recommends the County enter contracts with four (4) selected disposal sites to assure disposal capacity over the ten (10) year planning period.

5.5.1.8 Recommendation Full Time Recycling Coordinator for McKean County – There is an overwhelming need for the expansion of recycling in McKean County, as a result of the SWAC meeting discussions. In order to implement many of the recommendations listed in this Section, it is necessary to have a staff person available on a full time basis. It is a recommendation of this Plan Update that McKean County consider hiring a full time Recycling Coordinator to implement and maintain the programs currently in place and to implement the recommendations in this Section. The PADEP awards Section 903 grant funds to eligible counties in Pennsylvania for 50 percent reimbursement of the approved cost of their county recycling coordinator’s salary and expenses. Applications are submitted annually by April 30th for the previous calendar year.

The role of the Recycling Coordinator shall include continuing to manage and coordinate the County’s recycling programs where affordable and feasible, to look for ways to expand feasible programs in the future, and to secure new funding sources and sponsorships to support current and expanded programs.

5.5.1.9 Recommendation Responsibilities of McKean County – In order to implement the recommendations in this Section, it is important to ensure everyone in McKean County has an understanding of the goals and initiatives of the Plan Update. In order to do this, it is recommended that McKean County conduct meetings with all County staff, County Commissioners, municipal officials, etc. to review the “goals” of the Plan Update, short term and long term. During this meeting, McKean County can address questions from the staff

and ensure all parties in attendance know where to go for information. This recommendation shall be the first thing implemented as part of this Plan Update.

It is a recommendation of this Plan Update that McKean County continues to strive to collect all available data on recycling diversion of McKean County recyclables. Forms FM-11, FM-12 and FM-13 were created by PADEP to report recyclables tonnages diverted from the waste stream from drop-offs, collection events, businesses, and haulers. This form may be revised to pertain to the specific sector's recycling practices. It is recommended that McKean County distribute this form to local businesses, municipalities, local private recyclers and haulers. It is recommended that McKean County requests monthly reports of recycling collection from these sectors, submitted on the reporting form. Additionally, it is a recommendation of this Plan Update that McKean County develop a method to track recyclables tonnages monthly at the County level, based on data received on the recycling tonnage report form. This may be in the form of an excel spreadsheet. It is recommended that the recycling report be distributed to major recyclers in the first five (5) years of the ten (10) year planning period. It is also recommended that McKean County continue to roll-out the recycling tonnage report to additional recyclers over the ten (10) year planning period.

When a natural disaster occurs, the primary waste component that will result is organic in nature (such as trees, brush, and construction type debris). This type of waste should be processed to minimize the volume requiring disposal in a landfill. Items in the waste that cannot be processed, and process residues, could be disposed of at a designated facility. The least expensive means for disposal of this waste should be considered. It is recommended that McKean County work with each municipality to identify a location for the storage of retrieved debris resulting from a natural disaster. Facilities designated in the Plan should be contacted, after the emergency, to determine the feasibility of using them to process, or dispose of, the waste in the event of a natural disaster in McKean County.

5.5.1.10 Recommendation Program Support and Funding Options – All of the SOI Respondents indicated a willingness to further discuss ways to support the sustainability of the County's integrated waste and recycling programs in the future. This Plan Update recommends McKean County initiate further discussions with disposal sites to determine if new means of program support and sustainability can be developed. It is also recommended

that McKean County continue to work with municipalities, haulers and other stakeholders to help facilitate new sponsorships of current or new recycling and waste diversion programs and educational efforts. Support from other municipalities is crucial to the financial sustainability of these special wastes, recycling and composting efforts. A list of the services initially offered by the disposal facilities, as part of the SOI response, is included in Appendix A.

5.5.1.11 Recommendation Drop-off Recycling – This Plan Update recommends that McKean County continues to work with the private sector to maintain the current recyclables drop-offs in the County. Additionally, it is recommended that McKean County work with local municipalities to establish two (2) additional permanent drop-off facilities for recyclables collection within the first five (5) years of the ten (10) year planning period. This may be accomplished by establishing a key card program at a new drop-off facility, and/or encouraging municipal partnerships to establish or expand recyclables drop-off facilities that are open to residents of multiple municipalities. The key card program is described in more detail in Appendix H. It is recommended that these drop-off facilities be located in the municipalities with the greatest populations and no current recycling program. It is a recommendation of this Plan Update to first consider establishing a permanent drop-off in one or more of the following municipalities; Annin Township, Norwich Township, Ceres Township, Corydon Township, Hamilton Township, Lafayette Township, Lewis Run Borough, Liberty Township, Foster Township, Otto Township, and/or Eldred Township.

5.5.1.12 Recommendation Anti-burn Ordinance for Recyclables – Open burning of municipal wastes, including recyclables, is a waste of resources, creates air pollution, and can be an unsafe and risky practice, especially during times of high fire hazard risk. In order to qualify for some Act 101 grants, PADEP requires that areas served by the grant must prohibit the burning of recyclables. This Plan Update therefore recommends that all municipalities in the County adopt an anti-burning ordinance for recyclables. Initially, it is recommended that, at a minimum, each municipality with a recyclables drop-off location or curbside collection of recyclables has an anti-burn ordinance in place for recyclables in order to apply for grant funding. Prior to a new recyclables drop-off location opening for residents use, it is recommended that McKean County confirms that the municipality has an anti-burn ordinance in place. For purposes of this provision, this should include a ban on the burning of traditional curbside and commercial materials.

At the time of Plan Update preparation, the traditional curbside and commercial materials included:

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

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

5.5.1.13 Recommendation Illegal Dumping – The Plan Update supports the elimination of illegal dumping in the County. It is especially important that municipalities understand that comprehensive, convenient and affordable waste and recycling services are the primary contributor to the reduction of improper disposal practices, and municipalities should, therefore, facilitate their implementation. This may be done through an ordinance that requires all residents in a municipality to have access to proper waste disposal. An ordinance that mandates access to proper waste disposal may be satisfied by offering residents contracted waste collection with one hauler or multiple haulers, by providing municipal collection, or by satisfying that residents of the municipality have access to a haulers for subscription collection (no areas where haulers will not service).

Further, the Plan Update supports cleanup and educational efforts to help remove materials from existing illegal dumps and to educate residents and businesses on the reasons not to illegally dispose of municipal wastes and recyclables. To offer community service support, two (2) of the four (4) disposal capacity assurance contractors under this Plan Update include an allowance for public and non-profit groups to dispose of limited quantities of dump cleanup materials at the disposal sites for free; the contracted disposal sites offering free disposal of dump cleanup waste over the next ten (10) years include Waste Management's Chaffee Landfill and Seneca Landfill. Both McKean County (Casella) Landfill and Advanced

Disposal's Greentree Landfill responded that they are willing to consider donating space for public and non-profit groups to dispose of dump cleanup material on a case by case basis.

Additionally, it is recommended that the County strengthens their current municipal solid waste ordinance to allow for greater enforcement and consequences for violators who illegally dispose of waste. Illegal disposal offenses may be tiered based on their severity or occurrence and a fine amount may be associated with the tiers of offenses. This ordinance shall be modified in coordination with local judicial representatives, local police representatives, County Commissioners, the Conservation District and the Planning Department.

5.5.1.14 Recommendation Corrugated Cardboard Recycling – With an aspiration to work towards the Pennsylvania state recycling goal of 35% recycling diversion in the coming decade (15% or more within the next ten (10) years, as projected in Table 3-3 in Chapter 3), it is recommended that corrugated cardboard recycling be maximized, and that all reasonable efforts be employed to avoid the disposal of this valuable resource. Corrugated cardboard is a readily available recyclable material both residential curbside and commercially in the County and throughout much of Pennsylvania, therefore it is recommended that municipalities consider placing a ban on disposing of this material with their waste, at least in the more suburban and urban areas. Additionally, it is recommended that recycling of corrugated cardboard be included as a requirement of building permits throughout McKean County.

5.5.1.15 Recommendation Electronics Recycling – In order to address the recovery of electronics that are now required to be recycled under the Covered Device Recycling Act (Act 108 of 2010), the SWAC determined electronics recycling is a critical issue in McKean County. Further information on the CDRA Act and electronics recycling is included in Appendix E. Based on this determination, this Plan Update will focus on making recommendations for electronics recycling over the ten (10) year planning period. There are currently limited outlets for electronics in McKean County. The McKean County (Casella) Landfill currently accepts some forms of electronics at the drop-off located at the Landfill site. A specific list of what they currently accept is located in Appendix D. It is recommended that McKean

County continue to work with Casella to accept this material and educate residents of the County on what material is accepted at the drop-off.

There are several private industries, in and around McKean County, that accept electronics for recycling, such as Goodwill Industries, Best Buy, RadioShack, OfficeMax, Lowe's, Target, Staples, and Home Depot, to name a few. Residents are encouraged to contact these facilities to determine what materials they accept.

It is a recommendation of this Plan Update that McKean County continue to work with local municipalities to offer guidance and support, when available, for safe electronics handling and recycling. It is recommended that McKean County focus on educating residents on the CDRA Act and how this Act impacts residents and their electronic waste.

Although Act 155 of 1994, The Household Hazardous Waste Funding Act, does not reimburse for the collection and transportation of items listed under the CDRA, it will reimburse up to 50 percent of the developmental and operational costs associated with collecting and transporting electronic items that are **NOT** covered under the CDRA. The event/program must be registered and approved using the current HHW registration form through PADEP. Reimbursable costs include:

- ... Costs associated with advertising and public education (expenses only)
- ... Costs associated with the collection of electronic devices that are **not** covered under the CDRA. If the program collects covered devices along with other types of electronics, the sponsor of the program will need to pro-rate the costs based upon the amount of each type of material collected. Costs associated with the collection, transportation and recycling of covered devices is **not** eligible for reimbursement.

It is a recommendation of this Plan Update that McKean County investigate funding opportunities to establish and maintain a semi-annual electronics collection program (which may be held in conjunction with a HHW collection event) that is open to all residents of the County. It is also recommended that McKean County registers and receives approval of an e-waste/HHW program, prior to final development, to allow McKean County to apply for grant reimbursement. It is recommended that a County-wide electronics collection event be established during the first five (5) years of the ten (10) year planning period.

It is recommended that McKean County consider other funding and/or sponsorships for an electronics collection event. It is recommended that McKean County reach out to local private industry to solicit sponsorships for an electronics collection event, which may offset the costs for the County. Sponsors may include manufacturers of electronics, local interest groups, e-waste recyclers, etc. It is recommended that McKean County determine if private industries, who currently accept electronics for recycling, are interested in recycling e-waste material that is collected during an e-waste collection event. A public/private partnership may be developed for collection and transportation/recycling of e-waste material.

Additionally, partnering with an established electronics recycler, such as Covanta (with an e-waste collection facility in Philadelphia), Reverse Logistics, or All Green Electronics, may benefit the County by establishing a contracted rate for an electronics collection event, which the County may pass on to residents who utilize the event. It is recommended that McKean County continue to investigate available e-waste recyclers in and around the County and, once selected, it is recommended that the County choose a collection site that is easily accessible for residents and appropriate for the e-waste recycler chosen. Security of these sites shall be considered as well.

It is a recommendation of this Plan Update to consider incorporating e-waste collection into the larger community events that take place in McKean County, annually. Offering residents of McKean County an e-waste collection event, during a high traffic event will increase the amount of e-waste collected and potentially decrease the amount of e-waste disposed illegally.

It is a recommendation of this Plan to investigate curbside electronics collection options for residents of McKean County. For the municipalities in McKean County that currently contract for municipal waste collection and for those municipalities that consider this option in the future, it is recommended to include an option in the bid document, when requesting bids for a new contract/term, for curbside collection of electronics. This will require the waste hauler to bid on this portion of the waste collection contract. Depending on the cost to residents for this service, a municipality may decide whether or not to include this option in their waste collection contract. A recent example of including curbside collection of

electronics in a waste collection bid is Millcreek Township in Erie County. Millcreek Township received bids from waste haulers for curbside electronics collection and determined that the cost to residents, for this added service, was appropriate and cost effective. Residents in this Township are offered year round collection of electronics curbside through the contracted waste hauler. Residents are required to call an 800 number set up by the waste hauler to schedule a pick-up. The waste hauler sends a HHW kit (used for both HHW and electronics collection) to a resident's home, which the resident is required to use for their electronics items. The waste hauler will give residents a collection day during the initial call. Residents are expected to leave their HHW kit outside of their door on the collection day given.

Additionally, it is recommended that municipalities with contracted service include an option in their bid documents that allows for residents to drop-off electronic material to a designated location (i.e. municipal building, drop-off center, etc.) as part of their waste collection contract. This will allow residents from apartment, condo, and townhome complexes, as well as residents from mobile home parks (if not included in the service route) to recycle electronic material. It is recommended that these residents also be required to call a designated number and schedule a collection through a partnership with the hauler and municipality.

5.5.1.16 Recommendation Household Hazardous Waste Collections – This Plan Update recommends that McKean County continue to support municipally sponsored HHW collection program events, with available resources and private industries, such as Recycall, that accept HHW material. The scope and frequency of such collections shall be dependent upon the resources and support available to the municipalities and McKean County. Additionally, it is a recommendation of this Plan to work toward conducting at least semi-annual HHW collection events at the County level, as funding becomes available.

Act 155 of 1994, The Household Hazardous Waste Funding Act, will reimburse 50 percent of the developmental and operational costs for the collection and transportation of household hazardous waste items. The event/program must be registered and approved using the current HHW registration form through PADEP. Reimbursable costs include costs associated with advertising and public education (expenses only).

It is a recommendation of this Plan Update that McKean County investigate funding opportunities to establish and maintain a HHW collection program (which may be held in conjunction with an electronics collection event). It is also recommended that McKean County registers and receives approval of an HHW/e-waste program, prior to final development, to allow McKean County to apply for grant reimbursement. It is recommended that a County-wide HHW collection event be established during the ten (10) year planning period, be held semi-annually, and be open to all residents of McKean County.

Additionally, McKean County will continue to educate residents on available outlets for HHW items through their website, flyers, public announcements, etc., as funding for education is available. It is a recommendation of this Plan Update for McKean County to work with the private sector, both haulers and disposal facilities to provide such education for residents of McKean County.

It is also a recommendation of this Plan Update to investigate curbside HHW collection options for residents of McKean County. For the municipalities in McKean County that currently contract for municipal waste collection and for those municipalities that consider this option in the future, it is recommended to include an option in the bid document, when requesting bids for a new contract/term, for curbside collection of HHW. This will require the waste hauler to bid on this portion of the waste collection contract. Depending on the cost to residents for this service, a municipality may decide whether or not to include this option in their waste collection contract. A recent example of including curbside collection of HHW in a waste collection bid is Millcreek Township in Erie County. Millcreek Township received bids from waste haulers for curbside HHW collection and determined that the cost to residents, for this added service, was appropriate and cost effective. Residents in this Township are offered year round collection of HHW curbside through the contracted waste hauler. Residents are required to call an 800 number set up by the waste hauler to schedule a pick-up. The waste hauler sends a HHW kit to a resident's home, which the resident is required to use for their HHW items. The waste hauler will give residents a collection day during the initial call. Residents are expected to leave their HHW kit outside of their door on the collection day given.

Lastly, it is recommended that municipalities with contracted service include an option in their bid documents that allows for residents to drop-off HHW material to a designated location (i.e. municipal building, drop-off center, etc.) as part of their waste collection contract. This will allow residents from apartment, condo, and townhome complexes, as well as residents from mobile home parks (if not included in the service route) to recycle HHW material. It is recommended that these residents also be required to call a designated number and schedule a collection through a partnership with the hauler and municipality.

5.5.1.17 Recommendation Education – This Plan Update recognizes that education of the public on proper waste management and recycling is crucial to the success of a growing, sustainable integrated waste and recycling program in McKean County. The continuation and expansion of such educational efforts by the public and private sectors are recommended in this Plan Update. Support from both municipal and private sector partners is crucial for a sustainable educational effort.

It is a recommendation of this Plan Update that the McKean County website be updated in the first five (5) years of the ten (10) year planning period to include information for residents on recycling outlets, links to websites that provide additional recycling information, information about waste minimization, information for commercial and retail establishments on recycling opportunities, etc. A good example of a user friendly website that contains recycling information for both residents and businesses is Berks County Solid Waste Authority's website. Upcoming recycling events are clearly scrolled in the center of the homepage for resident's easy access. Contact information is displayed prominently at the bottom of the homepage, while special materials recycling information is dedicated on the right hand side of the page, providing links and information to topics such as e-waste, HHW, paper shredding, pharmaceutical collection, and other special wastes. This website recognizes efforts of the community by highlighting illegal dump cleanup programs and providing a link to the year-end report.

Additionally, a link to recycling drop-off locations, which includes locations, acceptable materials, unacceptable materials, and available times is prominently noted in the top right of the homepage. There are additional links on the left hand side of this website that include information such as nearby landfills and transfer stations, composting sites, hauling companies, municipal recycling programs, listings of PA brokers, processors, MRFs and end

users for recyclable materials, local recycling centers, the solid waste management plan, tips for residents on green living, green purchasing, green cleaning and being energy efficient, tips for businesses on how to go green, and links to the recycling reporting forms. This information may be used by local municipalities, businesses and residents.

It is recommended that McKean County add to their current website to include similar information on recyclable materials and initiatives discussed in this Plan Update. As recycling programs are initiated in the County, the website may be updated accordingly. It is recommended that McKean County work with municipal officials to periodically evaluate municipal recycling websites and informational pages to make sure the information for their municipality is correct and up-to-date on the County website, such as recyclables drop-off locations and contact information.

It is a recommendation of this Plan Update that McKean County works with the local community (i.e. local interest groups, schools, etc.) to develop public service announcements (PSAs) on waste and recycling. These PSAs may be used on local TV networks, public access channels, and local radio networks to educate residents and businesses on the waste and recycling efforts of the County. It is recommended that McKean County work with local TV networks and radio channels to request donated air time for broadcasting of the PSAs.

It is also a recommendation of this Plan Update that McKean County expand their social media presence in order to reach a younger demographic. This recommendation shall include the establishment of a Twitter account and a Facebook account. These social media outlets shall be used to spread information on recycling and waste minimization, proper disposal techniques, the negative side effects of open burning, e-waste, HHW, and pharmaceutical collection events, National Holidays such as Earth Day and America Recycles Day, links to articles on waste and recycling activities, recognition for municipalities and businesses in McKean County that establish/enhance their waste minimization and recycling efforts, etc.

It is a recommendation of this Plan Update that McKean County work with local municipal representatives to establish a municipal newsletter and/or calendar, where budgets allow, that provides residents with information regarding waste and recycling initiatives,

opportunities and requirements. Additionally, these newsletters and/or calendars may be used to highlight initiatives enacted by the local municipalities and local events.

It is a recommendation of this Plan Update that McKean County work on creating a Community newsletter and/or calendar that contains events in the County, recycling outlet information, highlights waste and recycling efforts in the County, highlights different aspects of the waste and recycling goals of the Plan Update, etc. This is recommended in the first five (5) years of the ten (10) year planning period. As funding may not be available at the County level, it is recommended that the County seek sponsors for this newsletter and/or calendar from local businesses, organizations, and/or waste industries. Sponsorship may also be required as part of the waste hauler registration program, discussed in Section 5.5.2.3 of this Section.

It is a recommendation of this Plan Update that McKean County develop newspaper advertisements to promote recycling, remind residents not to burn recyclables or illegally dispose of waste as part of a “Green” McKean County initiative. It is recommended that McKean County work with the local newspaper to request free or donated space for these newspaper advertisements quarterly. It is recommended that McKean County work with local schools to involve students in the newspaper advertisements and potentially develop an annual school competition related to a waste and recycling advertisement that will be used as one of the quarterly ads.

5.5.1.18 Recommendation Commercial Business Recycling – It is a recommendation of this Plan Update that McKean County target each sector of waste generators located in the County. This includes commercial businesses. It is recommended that McKean County work with the commercial business to determine what recyclable material is generated at the facilities. It is recommended that McKean County suggest to commercial businesses that they set up a “green committee” that will initiate recycling efforts, work on waste minimization efforts, and be the point of contact for the County. The County shall work with the “green committee” on reporting recyclables monthly on the provided recycling reporting form.

5.5.1.19 Recommendation Big Event Recycling – It is a recommendation of this Plan Update for McKean County to develop a list of all major events, such as festivals and fairs, that take place throughout McKean County annually. It is recommended that McKean County staff meet with the event coordinators and municipal representatives, well in advance of the events date, to discuss their current waste and recycling management system for the event. It is recommended that the County discuss ideas with the organizers on how to increase or establish recycling diversion at their event and ways to reduce waste generation at these events. It may be valuable to evaluate where waste and recyclable receptacles are located during the event to ensure they are convenient for event attendees. It is recommended that McKean County staff discuss with the event organizers that they shall require their waste and recycling hauler to report waste and recycling tonnages to the organizers at the completion of the event. Organizers shall provide this information to the local municipal official and the County. Additionally, it is recommended that McKean County use these opportunities to set up a booth/table at big events to provide information to event attendees about McKean County’s recycling initiatives, recycling education programs, and other important McKean County information. It is recommended that McKean County contact big event organizers in years five (5) through ten (10) of the ten (10) year planning period.

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

One option available to municipalities and private businesses to fund the collection, processing, and communication projects that are intended to increase recycling access and rates is the Closed Loop Fund. The Closed Loop Fund is made up of Consumer Goods Companies and Retailers who are creating economic value by increasing recycling rates. The Closed Loop Fund provides 0% interest loans to municipalities and below market interest loans to private companies to develop local and recycling infrastructure. Their goal is to

invest \$100 million over the next five (5) years. The current companies and retailers participating in this program are Walmart, Coca-Cola, Pepsico, Johnson and Johnson, Procter and Gamble, Unilever, Keurig, and Goldman Sachs. More information on this program can be found on their website at: <http://www.closedloopfund.com/page/about>. This funding source may be used to develop a permanent yard waste drop-off facility or compost facility for residents of McKean County.

Another option for funding of recycling programs and other related programs in McKean County, that is *not* a recommendation of this Plan Update, but should be discussed is developing a tax on all households in McKean County to support a “green” or “environmental” fund. It is understood that taxes are to be avoided, as much as possible in McKean County. It is worth noting that a tax of \$20 a year on all households in McKean County will produce over \$360,000 a year in funding, that can be used to support many of the programs recommended in this Plan Update, as well as other green initiative programs and environmental stewardship programs. It shall be noted that Townships are allowed to charge a recycling tax to residents to support recycling programs.

An additional option for funding recycling programs in McKean County is to include a recycling fee in contracts used by Townships to solicit waste and/or recycling collection. If a hauler is unable to provide curbside recycling to residents of the Township, a Township may require, as part of the contract, that a hauler provide a fee (to be determined by the Township) that may be used to provide recycling programs to the residents of that Township, i.e. drop-offs.

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

5.5.1.22 Recommendation Septage – The County should continue to rely on private haulers for the collection of septic tank pumpings (i.e. septage), for eventual disposal as treated biosolids as noted in Recommendation B&S1. As indicated with biosolids, the current system is adequate to handle the septage processing needs of the County over the next ten (10) years.

5.5.1.23 Recommendation Pharmaceutical Collection – It is a recommendation of this Plan Update that McKean County pursue the development of a year round pharmaceutical collection program with local private industries. In years past, the U.S. Department of Justice (DoJ), in coordination with the Drug Enforcement Administration (DEA), conducted a National Prescription Drug Take-Back Day. This program typically took place in September of each year. Currently, the DoJ and the DEA are not initiating the pharmaceutical collections, but they are encouraging DEA registrants to apply to become a year round collector of pharmaceutical waste. Current regulations authorize certain DEA registrants (manufacturers, distributors, reverse distributors, narcotic treatment programs, retail pharmacies, and hospitals/clinics with an on-site pharmacy) to modify their registration with the DEA to become authorized collectors. All authorized collectors may operate a collection receptacle at their registered location, and collectors with an on-site means of destruction may operate a mail-back program. It is a recommendation of this Plan Update that McKean County coordinate with local law enforcement agencies and DEA registrants to establish year round collection locations throughout McKean County for residents to dispose of unused, unwanted or expired medication.

5.5.2 Recommendations to be Implemented in Years 5-10

5.5.2.1 Recommendation Standardization of Recyclable Materials – It is a recommendation of this Plan Update that McKean County consider the standardization of recyclable materials collected within the County. It is recommended to work with local waste haulers and recyclables processing facilities to collect the same recyclables materials curbside across the County, as well as standardize the materials accepted at drop-off facilities across the County. This recommendation will allow McKean County to develop educational material, i.e. TV and newspaper ads, that may be used in all municipalities, therefore saving time and money.

5.5.2.2 Recommendation Materials Recycling Facility (MRF) – It is known that a MRF existed on the McKean County Landfill property when the site changed from Rustick, LLC to Casella. It is also known that the structure still exists on the landfill site, though it is no longer a functioning MRF, but instead used for site storage. It is not known if any of the equipment from the MRF still exists on site. It is a recommendation of this Plan Update that McKean County reach out to Casella to gauge their interest in a partnership to develop and operate a MRF (possibly operated by ReCommunity Recycling) at the McKean County Landfill facility for residents of McKean County. ReCommunity Recycling is committed to a zero waste vision, which includes the conversion of dual stream recycling into single stream technology, more larger, more convenient and innovative new recycling bins, new ways to secure active recycling behavior at home, at work, and in schools and to introduce green transformational energy technologies that will convert that part of the waste stream that is not recycled as commodities into environmentally-friendly energy feedstocks. Recyclable materials are brought to the ReCommunity MRF, baled or loose, and are then fed through the ReCommunity process to separate the various recyclable materials. There may be a partnership opportunity between ReCommunity and Casella to use the existing MRF structure at the Casella Landfill to house a new ReCommunity MRF that would service the residents of McKean County.

Additionally, there may be a partnership or expansion opportunity for Casella to use the existing MRF structure as a recyclables transfer station. A centrally located MRF or transfer station for recyclables in McKean County may allow haulers to offer curbside recyclables collection to residents of McKean County, where this service was not previously offered, because the transportation costs are reasonable.

5.5.2.3 Recommendation Illegal Dumping – It is a recommendation of this Plan Update that McKean County develop a hotline for illegal dump/dumping reporting. Residents will be able to call a 24/7 hotline and report an illegal dumping situation or an illegal dump that they discovered. The hotline will have a call log of McKean County employees that the call will be directed to. This recommendation will engage the community to get involved in eliminating illegal dumping and offer some voluntary enforcement through the residents. It is recommended that enforcement and ramifications for illegal dumping be established at the County level, prior to developing the hotline. Enforcement and ramifications shall be agreed

upon and discussed with County staff, County Commissioners and necessary local judicial officials. It is recommended that McKean County discuss a partnership between local law enforcement and the County to police illegal dump sites and fine violators when found. This enforcement may also be used to address open burning. It is recommended that the hotline and the enforcement partnership be established within the first five (5) years of the ten (10) year planning period.

It is also a recommendation of this Plan Update that McKean County contact Keep Pennsylvania Beautiful to apply for their Illegal Dump Surveillance Support Pilot Program Grant. This grant was established to provide organizations with three high quality surveillance cameras and provide training and technical assistance to help capture evidence at active, illegal dumpsites. It is a recommendation of this Plan Update that McKean County considers purchasing additional surveillance cameras through County funding and/or donations to place at active illegal dumpsites, based on the success of the Keep Pennsylvania Beautiful surveillance cameras. It is recommended that the surveillance cameras, both from the pilot program and potential County-owned cameras be placed at illegal dumpsites during year five (5) through ten (10) of the ten (10) year planning period.

5.5.2.4 Recommendation Curbside Organics Collection – It is recommended that the three (3) municipalities currently offering residents curbside organics collection maintain these programs. It is also a recommendation of this Plan Update that municipalities that develop an RFP for waste and recyclables collection during the ten (10) year planning period, or whose existing contract expires during the ten (10) year planning period, consider including an option in the RFP for curbside organics collection to determine the estimated cost to residents for this service. If the cost to residents is reasonable, a municipality may consider including this option in their final contract for waste and recyclables collection.

At this time, it is determined that expansion of curbside organics collection is not a critical item, as identified by the members of the SWAC, over the ten (10) year planning period. Curbside organics collection may be revisited during the ten (10) year planning period, by municipalities that contract for waste collection, as part of their bidding options, if funding for curbside organics collection becomes available and the interest in the community to participate in curbside organics collection makes the economics justifiable.

5.5.2.5 Recommendation Operation of Compost Facilities – It is recommended that the four (4) municipalities currently operating a municipal compost facility maintain these facilities. It is recommended that McKean County offer support for these facilities, when available. It is determined, by the SWAC, that development of a County operated compost facility is a critical item for this ten (10) year planning period. Although there are many benefits to developing a compost facility that may be used by residents of McKean County, there is a significant capital cost involved with the development of such a facility. Funding may be available for the equipment needed for a compost facility, through the Section 902 grants of Act 101, managed by PADEP. Through the Section 902 grants, up to 90 percent of eligible recycling program development and implementation expenses may be reimbursed through this grant. This funding is available for a wide spectrum of equipment. It is recommended to contact the local PADEP Regional Representative to determine when a grant application period is available for this funding and what requirements are associated with this funding. If additional funding opportunities become available over the ten (10) year planning period that may be allocated to the development of a compost facility, it is recommended that the County solicit the expertise of a professional consultant to perform necessary evaluations prior to the development of the facility. These evaluations may include, but are not limited to, a land search for available property for the development of the site, a fatal flaw analysis to determine if the proposed site meets zoning, land development and permitting requirements for a compost facility, permitting assistance to permit the compost facility through PADEP, site development assistance, including local permitting, and technology evaluation to determine which composting technology is best suited for the application.

Another opportunity that may exist for McKean County to have access to a compost facility is a partnering opportunity with a private industry. Advanced Disposal, a local hauler in McKean County and the owner of a nearby waste disposal facility (Greentree Landfill in Elk County), currently operates compost facilities in Wisconsin and Michigan. It is a recommendation of this Plan Update to reach out to Advanced Disposal and gauge their interest in expanding their compost operations into Pennsylvania and New York, through the development of a compost facility in McKean County.

Lastly, many landscape businesses do a small amount of composting for the materials they collect at job sites and sometimes for materials dropped off by local residents. It is a

recommendation of this Plan Update to reach out to local landscape businesses and determine if they accept yard waste material for composting or if they would be interested in expanding their compost operations to allow residents of McKean County to drop off this material at their facility. As part of this public/private partnership, it is recommended that McKean County reach out to the local PADEP Regional Representative to determine if Section 902 funding (for compost equipment) may be used to purchase equipment that will be owned by the County, but used at local landscape facilities. The equipment may be moved to landscape operations across the County to reach the maximum number of residents. This will alleviate the expense of buying and developing a site for a compost facility at the County level.

5.5.2.6 Recommendation Food Waste Composting – At this time, it is determined that food waste recovery and subsequent composting is not a critical item, as identified by the members of the SWAC, over the ten (10) year planning period. Food waste recovery may be revisited during the ten (10) year planning period, if funding for food waste recovery becomes available and the interest in the community to participate in food waste recovery makes the economics justifiable.

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

It is a recommendation of this Plan Update that McKean County works with municipal planning departments to require C&D recycling as part of the building permit conditions. This may be included as a percentage of the C&D waste generated, or all of the C&D waste generated.

It is also a recommendation of this Plan Update that McKean County reach out to private C&D recycling companies in the surrounding area to gauge interest in establishing a satellite site in McKean County, work with McKean County to hold C&D collection events, and/or establish/service a permanent C&D recyclables collection location at one of the municipal drop-off locations. Recycall, located in Port Allegany, will accept some forms of C&D material, in particular metal, electronics, appliances and fixtures. Triad Recycling and Energy, based in Tonowanda, NY, specializes in the recycling of construction and demolition debris. Although, not currently servicing McKean County, PA, they do service Erie, PA and may be interested in expanding their business into McKean County. Although their facility may not be easily accessible for all residents of McKean County, a nearby option for the eastern part of McKean County is Advanced Disposal's Greentree Landfill. This facility accepts C&D material for disposal. It is recommended that McKean County investigate markets for various C&D material generated in the County and reach out to these industries to develop partnerships for recycling C&D material generated by residents and businesses of McKean County.

Home C&D waste generated during remodeling, roof or shingle/siding replacement, home additions, flooring replacement, etc. often ends up in illegal dumps in an effort to avoid the cost of disposal. Some haulers will not accept this material from residential customers, even though the McKean County Landfill, where nearly all of the County's waste is disposed, is permitted to accept C&D waste. Some homeowners in municipalities with individual subscription services may have chosen not to have waste collection service. When it is 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 be dumped illegally.

The County will consider investigating options for the safe disposal of small volumes of C&D waste such as those described above, including, but not limited to: requiring haulers to pick up these materials and deliver them to the County's designated disposal facility as part of a waste management ordinance; educating citizens about the availability of safe and legal opportunities to dispose of these materials (i.e. the Waste Management Bagster Program); 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; enforcing the County's municipal waste ordinance as it applies to illegal dumping, etc.

While the County wants to consider C&D waste recycling over the next ten years, it should be noted that it is unlikely that it will be found to be an economically feasible option to operate at the County level, without private sector assistance. However, the County is interested in supporting and educating a C&D recycling program that encourages recycling of materials from C&D waste when it is economically feasible.

5.5.2.8 Recommendation School Recycling Programs – It is a recommendation of this Plan Update to enhance and/or develop school recycling programs. It is recommended that McKean County reach out to school administrators at each school in McKean County to determine what they currently do in regards to waste minimization and recycling. It is recommended that McKean County work with the school administrators to develop a recycling program, in coordination with the municipality that will increase the school's recycling participation/program and encourages waste minimization.

It is a recommendation of this Plan Update that McKean County develop a generic school assembly program that addresses waste minimization and recycling. It is recommended that McKean County volunteers to conduct this assembly in schools with an established recycling program who commit to increase their recycling program as a result of the assembly. It is recommended that the assembly have the ability to be tailored slightly to address the recycling program in place at each school.

It is a recommendation of this Plan Update that McKean County develop County-wide school competitions that encourage recycling and educate students on the three r's, reduce, reuse, recycle.

It is a recommendation of this Plan Update that McKean County encourage school administrators and teachers to visit websites, such as PADEP, Carton Council and McKean County's website, for information on school recycling programs and activities.

It is recommended that McKean County implement the school recycling programs in year five (5) through ten (10) of the ten (10) year planning period.

5.5.2.9 Recommendation Municipal and Governmental Building Recycling – It is a recommendation of this Plan Update that McKean County encourage all governmental buildings and municipal buildings in McKean County to establish a standard that involves waste minimization and recycling. The material to be recycled at the facilities may be determined through a waste audit. It is recommended that McKean County advise governmental agencies to contact professional consultants to assist in waste audits. Based on a waste audit, the materials in the current waste stream may be determined and will allow the professional consultant to recommend the material to be included in the recycling program. It is recommended that waste audits are completed in the five (5) to ten (10) year portion of the ten (10) year planning period. Recyclables collection at all governmental buildings may be included in a Request for Proposals (RFP) from waste/recycling haulers to service these facilities.

An optional recommendation of this Plan Update is for McKean County is to develop an RFP for recyclables drop-offs at each municipal building throughout McKean County for use by residents. It shall be determined if municipalities with permanent drop-offs want to participate in this RFP. The RFP may specify weekly service of the drop-offs, with an option to negotiate the collection frequency at McKean County's or the Hauler's request, if it is determined that bi-weekly or monthly service may be more efficient. The RFP shall require the minimum recyclables materials to be collected at the drop-offs. The RFP shall require 24/7 access to the drop-off for residents and may specify security measures that must be installed prior to collection. A fee may be collected by the awarded entity for use of the drop-off. This fee may be charged to all residents of the municipality, directly by the entity or it may be charged to the municipality and the municipality may bill all residents of the municipality. It is recommended that the RFP include a requirement for reporting of recyclables tonnages to the municipalities and County on a monthly basis. It is recommended the contract term be 3-5 years with optional renewals, to allow for evaluation of the program.

A hypothetical situation was evaluated for six (6) municipalities in McKean County, with populations over 1,500 and no current recyclables drop-off locations, to estimate the cost to residents for this recycling recommendation. Based on an estimated pull cost of \$240 per pull (estimate provided in 2014 by a large hauler) and six (6) municipal drop-offs with an estimated 5,980 households (based on 2.4 persons/household average), the annual cost for weekly pulls is approximately \$75,000. The cost to residents in these municipalities is approximately \$15 annually. As stated above, this cost may be billed by the hauler directly to residents or by the municipalities to the residents, with a quarterly, semi-annual or annual option. Municipalities may partner to place a drop-off in a neutral location if this is more advantageous for their residents, which may reduce the number of drop-offs and subsequently reduce the total cost of the program.

5.5.2.10 Recommendation Spring Cleanup Collection – It is a recommendation of this Plan Update that McKean County establishes semi-annual, County-wide spring cleanup collection events. These may be sponsored/partially-funded by the local waste haulers, waste disposal facilities, municipalities, etc. If a municipality currently has a spring cleanup “day”, it is recommended that McKean County encourage these municipalities to hold their events on the same day, so as to advertise the events County-wide on TV, in newspapers, on social media, etc.

EXHIBIT 5-1
McKEAN COUNTY PROCESSING/DISPOSAL FACILITY
PETITION FORM TO USE A NON-DESIGNATED FACILITY

Purpose of Petitioning Process - McKean County has secured a sufficient amount of disposal capacity for all municipal waste generated from County residents and businesses. However, the County's Plan has defined a process by which a hauler or municipality may be able to use another facility not designated in the Plan update. This form is used to notify the County Commissioners of a party's interest in using another facility and to provide the Commissioners with the necessary information to contact a facility representative to determine whether the facility is legally permitted and operating in accordance with the provisions of its permit. Upon receipt of the Petition Form, McKean County will send the facility a Submittal Form that must be completed and returned to the McKean County Commissioners. Please complete this form and forward to the:

McKean County Commissioners
500 West Main Street Smethport, PA 16749

Petitioning Party's Name: _____

Address: _____

Phone Number: _____

Name of Requested Facility: _____

Facility Contact Person: _____

Facility Address: _____

Phone Number: _____

Fax Number: _____

E-Mail Address: _____

Explanation for requesting additional facility:

SECTION 6 LOCATION

This Section identifies the location within and outside the County of each municipal waste processing, disposal and recycling facility, which accepts municipal waste for recycling, processing or disposal.

6.1 Location of Disposal/Processing Facilities

There is currently one (1) municipal waste disposal facility in McKean County. The County has decided that for this Plan Update, it will allow municipal waste generated in McKean County to be taken, at the generator's or hauler's option (as appropriate), to any duly licensed/permitted waste processing or disposal facility in the Commonwealth of Pennsylvania, or to any duly licensed/permitted processing or disposal facility in another state, as long as they are a designated facility in this Plan. A facility may file a petition to be added to this Plan, if the facility was not included as a designated disposal facility at the time of Plan implementation.

Act 101 requires the County to contract with at least one (1) processing/ disposal site to secure the minimum municipal waste disposal capacity needs of the County for the next ten (10) years. To meet this minimum contracting obligation under Act 101, the County conducted a Solicitation of Interest (SOI) process in the fall of 2014. The SOI also solicited municipal waste transfer stations that handle McKean County's municipal waste to agree to minimum procedures to comply with the Plan Update, including proper reporting, waste manifesting, and delivery of McKean County's municipal waste to processing/ disposal facilities approved in the Plan Update.

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

The following municipal waste transfer and disposal sites have been tentatively selected for inclusion in this Plan Update, subject to successful execution of transfer or disposal capacity contracts (as appropriate) with the County. These facilities were chosen so that all the perceived needs of the County were addressed over the ten (10) year period. Both transfer

facilities were included so as to facilitate the most cost-effective consolidation and transportation of solid waste. The four disposal facilities were chosen so that these needs will be met:

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

It is noted that two (2) of the four (4) disposal capacity assurance contractors chosen under this Plan Update included an allowance for public and non-profit groups to dispose of limited quantities of dump cleanup materials at the disposal sites for free. The contracted disposal sites offering free disposal of dump cleanup waste over the next ten (10) years were Waste Management’s Chaffee Landfill and Seneca Landfill. Additionally, the remaining two facilities agreed to consider donations of free space on a case by case basis. These facilities are the McKean County (Casella) Landfill and Advanced Disposal’s Greentree Landfill.

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

Transfer Station Facilities

Tri-County Industries, Inc.
159 T C I Park Drive
Grove City, PA 16127

Valley Waste Service, Inc.
261 Wallace Run Road
Beaver Falls, PA 15010

Disposal Facilities

Chaffee Landfill (WM)
10860 Olean Road
Chaffee, New York

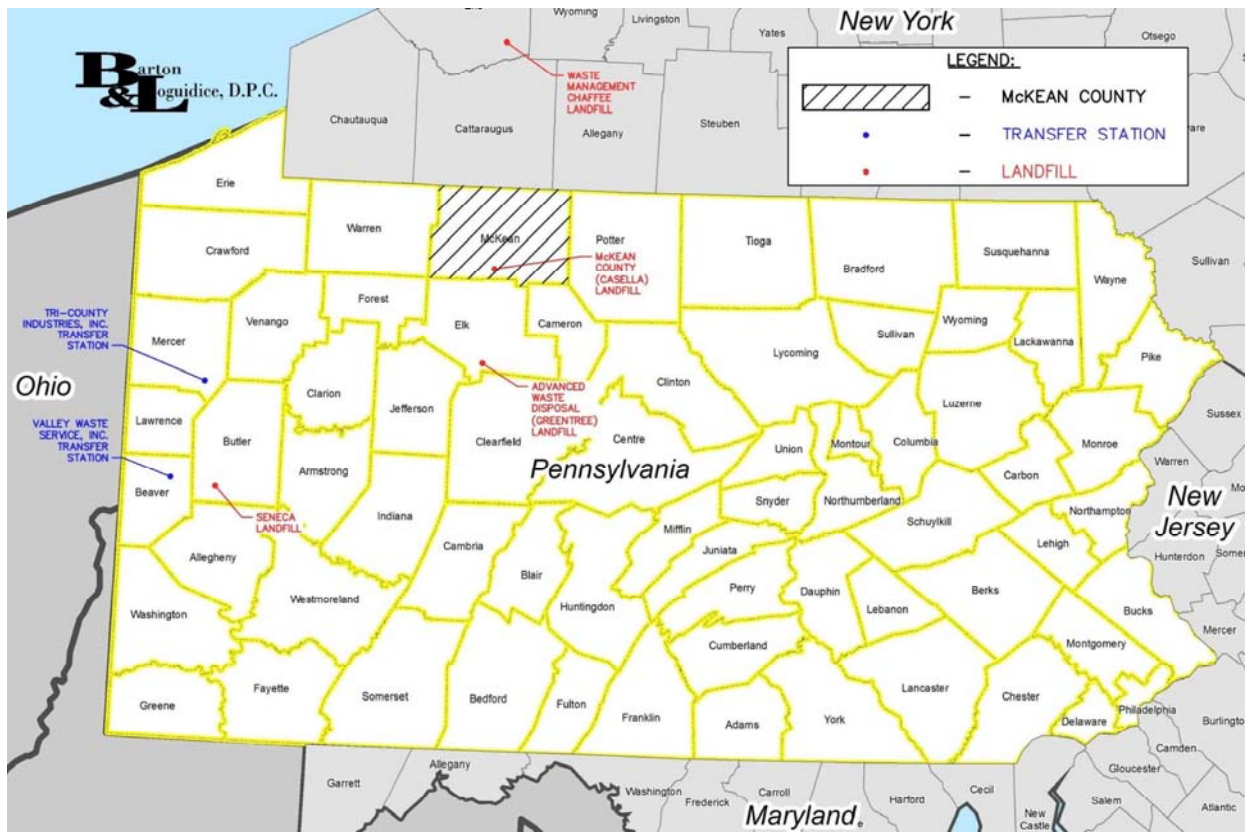
Greentree Landfill (Advanced Disposal)
635 Toby Road
Kersey, PA 15846

McKean County Landfill (Casella)
19 Ness Lane
Kane, PA 16735

Seneca Landfill
421 Hartmann Road
Evans City, PA

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

Figure 6-1: Contracted Waste Disposal Capacity Landfill and Transfer Station Locations



6.2 Location of Drop-Off Recycling Centers

There are five (5) private drop-off recycling centers in McKean County located in the following municipalities:

Table 6.1
Location of Drop-off Recycling Centers

Municipality
Bradford Township
Kane Borough
Mt. Jewett Borough
Wetmore Township
Keating Township
McKean County (Casella) Landfill

These drop-offs are shown on Figure 6-2.

6.3 Yard Waste/Composting Program Locations

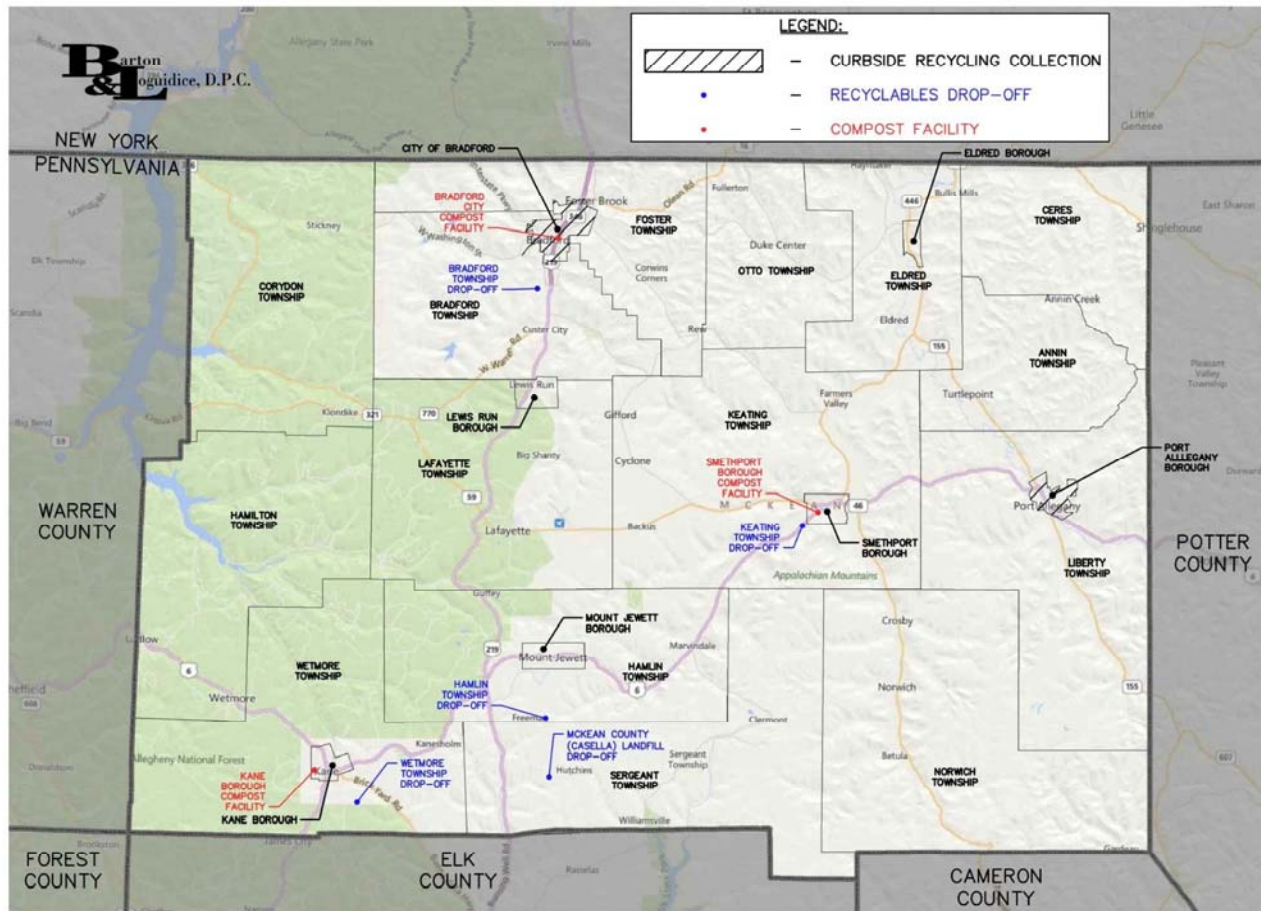
Currently, four (4) municipalities in the County offer leaf and/or yard waste collection. They are:

Table 6.2
Location of Yard Waste/Composting Programs

Municipality
Kane Borough
Bradford City
Smethport Borough

These compost facilities are shown on Figure 6-2.

Figure 6-2: Existing Recycling Infrastructure in McKean County



SECTION 7 IMPLEMENTING ENTITY IDENTIFICATION

The McKean County Board of Commissioners are responsible, effective September 2005, for implementing parts of the Plan and Plan Update that involve the processing and disposal of municipal waste and recyclables through the Municipal Waste Management Ordinance for County of McKean State of Pennsylvania, as amended in 2015. More specifically, McKean County oversees agreements executed (or to be executed) by the County to secure adequate disposal capacity for municipal wastes that will be generated within McKean County over the next ten (10) years. McKean County will also be responsible for exploring and implementing additional recycling programs and facilities as deemed necessary or as cost-effective and affordable opportunities arise in the future. The McKean County Commissioners have the full legal authority to implement the Plan Update. The County's recycling program is administered by the McKean County Planning Department and the McKean County Conservation District.

The McKean County Planning Department, the McKean County Conservation District, and McKean County will continue to offer assistance to the existing and proposed municipal recycling programs. Likewise, the McKean County Planning Department, the McKean County Conservation District, and McKean County will continue to offer technical assistance to the non-mandated McKean County municipalities that currently recycle on a voluntary basis or to those that may choose to establish a voluntary or mandatory recycling program in the future.

The County is authorized under Act 101 to take any and all actions and to exercise all such powers as are necessary to design, develop, finance, construct, own, operate and manage a County-wide, assured long-term integrated Municipal Solid Waste Management System that is environmentally safe, economical and uses proven technology. Such powers and actions include but are not limited to the power to promulgate rules, regulations, fees and penalties applicable to the collection, storage, transportation, processing, recycling and disposal of Municipal Waste generated, collected, stored, transported, recycled, processed or disposed within the County.

These specifically include the power to:

- a. Develop, adopt, revise and implement a municipal waste management plan for the County

- b. To develop and implement an integrated Municipal Waste Management system for the County to insure the proper collection, transportation, processing and disposal of all municipal waste generated within the County.
- c. Adopt ordinances, resolutions, regulations and standards for the processing and disposal of MSW as long as it is not less stringent or in violation or inconsistent with Act 97 or Act 101.
- d. Require that all MSW generated within its boundaries shall be properly collected so as to insure it is processed and disposed at designated facilities contained in the County Plan.
- e. To administer and enforce a registration program for haulers and vehicles transporting waste collected within the County.
- f. To promulgate rules, regulations, fees and penalties applicable to the collection, storage, transportation, processing, recycling and disposal of municipal waste generated, collected, stored, transported, recycled, processed or disposed within the County.
- g. To apply for and receive grants under Chapter 9 of Act 101 to develop and implement the Plan.

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

Spring 2015	Disposal agreements are executed with waste transfer and disposal facilities
May 2015	Draft Non-Substantial Plan Update is released, 30-day SWAC and Municipal comment period begins
June 2015	Municipal Waste Management Plan Update comment period ends

June 2015	Comment/ Response document prepared, final plan modifications are made based on public input.
July 2015	Final Plan Update adoption by McKean County Commissioners
August 2015	Ratified plan is submitted to the PA Department of Environmental Protection for final approval
September 2015	Anticipated Pennsylvania Department of Environmental Protection (PADEP) Plan Approval date
August 30, 2015	Former Disposal Capacity Assurance Contracts with McKean County expire
September 1, 2015	New Disposal Capacity Assurance Contracts with McKean County commence
Late 2015/Early 2016	Plan recommendations are formally conveyed to municipalities
Sept. 2015- Sept. 2016	One-Year Plan Update implementation period from PADEP approval date

SECTION 8 PUBLIC FUNCTION

8.1 Public Function

McKean County is the contractual signatory to the waste transfer station agreement and waste disposal capacity assurance agreements with other entities that were solicited under this Plan Update. The County Commissioners will retain responsibility for implementation of disposal-related elements of the plan, including, but not necessarily limited to, execution and oversight of disposal capacity agreements. The County may also apply for grant funding to help finance future planning and implementation efforts to promote and implement elements of this Plan Update. The implementation of Plan Elements may also be satisfied by the McKean County Planning Department and/or the Conservation District, who employs staff members who oversee recycling coordinator duties and responsibilities. Therefore, the County Commissioners, the Planning Department, and the Conservation District will maintain roles in the public function of this Plan Update.

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

The McKean County Planning Department, the McKean County Conservation District, McKean County, and other municipalities within the County, reserve the option to own or operate recyclables processing facilities, recyclables drop-off facilities, materials transfer facilities, and/or composting facilities in the future if it becomes in the best interest of the residents of McKean County, the Planning Department, the Conservation District, or the individual municipalities to do so.

8.2 County Ownership

Pursuant to Act 101, the public interest requires that waste collection, transport, storage, processing, disposal and recycling be a public function. Public function does not require County ownership or operation of equipment or facilities. McKean County does not currently own or operate any existing solid waste processing or disposal facilities within or outside of McKean County. The County has determined as part of this Plan Update that its obligation to provide for the processing and disposal of all municipal waste generated within the County continues to be best served by reliance on long-term Disposal Contracts with privately or publicly owned processing and disposal facilities. This approach meets the goals of the County in that it is:

- ... County-wide
- ... Long-term
- ... Assured
- ... Integrated
- ... Protective of public health and safety
- ... Environmentally safe
- ... Cost-effective

Through the planning process, the County has met its obligation to provide for long-term assured disposal capacity through a Solicitation of Interest for Waste Disposal Capacity and subsequent Waste Disposal Capacity Agreements.

Casella Waste Systems, Inc. (Casella) owns and operates the former Kness Landfill, now McKean County Landfill. The McKean County Landfill is the primary disposal facility for McKean County municipal waste, taking virtually 100% of McKean County's waste over the past five (5) years. Three other facilities have been designated in the Plan to accept waste from McKean County. They are Advanced Disposal's Greentree Landfill, Waste Management's Chaffee Landfill, and Seneca Landfill. Haulers or municipalities that wish to use another facility not presently designated in the Plan may petition the McKean County Commissioners to do so, and must provide quarterly reports, with weight slips for verification, to the Planning Department, the Conservation District, and/or County for the tonnage of waste disposed in other facilities. The County Commissioners shall not unreasonably withhold permission to use another facility as long as the facility (1) holds a valid permit issued by the state where the

facility is located, (2) is operating in accordance with the provisions of its permit; and (3) can provide the County with a ten (10) year capacity assurance for that portion of the waste expected to be generated in McKean County and disposed of at another out-of-County facility. By contracting with four (4) disposal facilities, the County has assured and confirmed sufficient disposal capacity and fixed maximum cost that is committed to the County through executed Disposal Agreements for a ten (10) year period until 2025.

8.3 Revenues and Expenses

The development and implementation of the County Municipal Solid Waste Management Plan as required by Act 101 is a complex and time consuming task that requires professional expertise in waste management, engineering, administration, law and finance. To fulfill its duties under Act 101, the County elected to engage the professional services of consultants, engineers and solicitors to advise the County with respect to Act 101 and prepare the Plan Update.

While these activities are eligible for partial funding reimbursement from DEP under Act 101 grants, a portion of the cost of Plan development and a substantial portion of the cost of implementing the Plan must be borne by the County.

SECTION 9 IMPLEMENTING DOCUMENTS

9.1 Documents Required to Implement the Municipal Waste Management Plan

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

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

- ... Sample Municipal Waste Disposal Capacity Agreement (Appendix A)
- ... Sample Municipal Waste Transfer Station Agreement (Appendix A)
- ... Samples of Various Types of Waste and Recycling Ordinances (Appendix I)
- ... Samples of Various Types of Anti-Burn Ordinances (Appendix I)
- ... Samples of Various Forms of Municipal Bid Documents for Waste and Recyclables Collection (Appendix I)
- ... Executed Disposal Capacity Contracts (Appendix A)
- ... Plan Finalization, Ratification and Approval Documents and Resolutions (Appendix L)
- ... McKean County Facility Qualification Form (Appendix A)
- ... McKean County Municipal Waste Ordinance and proposed amendments (Appendix J)

The Municipal Waste Disposal Capacity Agreement is the mechanism by which the County may assure capacity for County-generated municipal wastes at the County Designated Facilities, as defined in this Plan. These contracts provide certain assurances to McKean County and contain ceiling tipping fee pricing for various types of wastes throughout the ten (10) year planning period. Appendix A contains the ceiling pricing structures of the contracted disposal facilities (Table 2 - Detailed Summary of SOI Responses).

The Municipal Waste Transfer Station Agreement is the mechanism by which the County may assure that transfer stations are accurately reporting McKean County waste tonnages and operating under the requirements of this Plan Update.

The McKean County Municipal Waste Ordinance will be amended to specify that any hauler/municipality collecting and/or transporting municipal waste generated in McKean County must deliver such waste to County-designated disposal or processing facilities. The Rules and Regulations section of the Ordinance will describe requirements for the County's municipal waste hauler registration/licensing program (if one is enacted), and is the vehicle by which the County can implement and operate its hauler registration/licensing program.

The McKean County Facility Qualification Form is the mechanism for determining whether or not another facility is qualified to accept municipal waste from McKean County. This form will be used when a hauler or municipality petitions the County Commissioners to use another facility other than the designated facilities, McKean County (Casella) Landfill, Advanced Disposal's Greentree Landfill, Waste Management's Chaffee Landfill, Seneca Landfill, Tri-County Industries Transfer Station, or the Valley Waste Service Transfer Station for the disposal of municipal waste.

Upon completion of this Plan update, the McKean County Board of Commissioners will adopt the revised Plan in the form of a resolution contained in Appendix L.

The completed Plan and resolution will be submitted to DEP for approval. Upon approval by DEP, each municipality within the County will receive a copy of the completed Plan revision advising them of the County's adoption and DEP's approval.

Should additional implementing documents become necessary for full implementation of this Plan, the McKean County Commissioners, assisted by the Planning Department and the Conservation District, will exercise its authority for the adoption and execution of any and all documents deemed necessary to carry forth its obligations and to implement this Plan.

SECTION 10 ORDERLY EXTENSION

10.1 Discussion

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

The contractual arrangements resulting from the Solicitation of Interest for Waste Disposal Capacity for transfer and disposal services include facilities that currently handle the vast majority of municipal wastes generated by McKean County, and the Plan Update encourages extension and development of drop-off recycling facilities by both public and private sponsors. The County will continue to offer technical support to municipalities with composting sites in the County, as well as drop-off sites that accept a wide variety of conventional and hard-to-recycle materials in the County.

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

As this Plan is implemented, continued effort will be focused in providing for orderly extension of the system including management of Construction and Demolition Waste, Residual Waste, sludge, septage, Infectious, and Chemotherapeutic Wastes. To that end, every ten (10) years, the County will perform a comprehensive review of its Plan and an analysis and description of the waste being generated in the County to ensure that the System is performing as planned and waste is being recycled and disposed consistent with the Plan and Act 101.

The County shall prepare and file revisions to this Plan as deemed necessary by the County and in the manner provided for by Section 501(c) of Act 101. The County shall continue to

implement the County Municipal Solid Waste Management System for the remaining years following adoption of this Plan. The County will monitor its capacity assurance if necessary and as required under Act 101. The County's implementing documents, including its Ordinances are distinct from the Plan and will remain in effect beyond any ten (10) year planning horizon.

SECTION 11 - METHODS OF DISPOSAL OTHER THAN BY CONTRACT

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

- ... Reduction
- ... Recycling
- ... Processing
- ... Disposal

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

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

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

Under Section 303 of Act 101, each county in the Commonwealth of Pennsylvania is required to insure the availability of adequate permitted processing and disposal capacity for Municipal Waste generated within its boundaries for a minimum of a ten-year period. In order to insure capacity, the County can reserve capacity in, or own a disposal Facility. The County chose to reserve capacity via disposal agreements with multiple disposal facilities, and does not intend to direct waste by means other than by contract.

SECTION 12 - NON-INTERFERENCE

Act 101 instructs that the County Plan must insure that it will not affect the design, construction, operation, financing or contractual obligations of any municipal waste landfill or resource recovery facility located in the County that meets certain criteria. The McKean County Municipal Waste Management Plan does not interfere with the design, construction, operation, financing or contractual obligations of any other municipal or private waste processing or disposal facility. This Plan also does not interfere with any local solid waste ordinances, zoning regulations or currently established municipal waste management plans.

This Plan does not substantially impair the use of the remaining permitted capacity, or the capacity that can be made available through reasonable expansion of Existing Facilities. The County will not interfere with, or attempt to interfere with, the efforts of Existing Facilities to find Municipal Waste customers whose Municipal Waste does not comprise part of the McKean County Tonnage.

SECTION 13 PUBLIC PARTICIPATION

McKean County has utilized a combination of means and methods to provide for public participation both in the preparation of and in the implementation of the 2015 Update to the McKean County Municipal Waste Management Plan. The Board of Commissioners of McKean County reactivated the McKean County Solid Waste Advisory Committee (SWAC) mid-year 2014 at the start of the planning process. This reconstituted committee, representing a wide variety of public, waste and recycling industry, and environmental groups and agencies in the County, first met to discuss the Plan Update on September 17, 2014, and has since met on December 16, 2014 and May 19, 2015 to provide feedback and input of ideas into the planning process. The SWAC has provided review and comment on draft plan materials, summary documents, and draft chapters of the Plan Update as they were completed. Handouts and meeting notes from SWAC meetings are included in Appendix K.

Barton & Loguidice (B&L), the solid waste planning consultant for McKean County, established and has maintained a public information webpage on its corporate website (www.BartonandLoguidice.com) to disseminate information on the project electronically to the SWAC and the public, and to provide information access to those who could not attend the SWAC and other public meetings.

The existing Municipal Solid Waste Management Plan for McKean County, ratified and adopted as of July 2005, and prepared through its own public participation process, was utilized as a basis for this update of the County Plan. Changing conditions and updated information were evaluated and incorporated in the Plan Update.

The 2015 McKean County Municipal Waste Management Plan Update was released for a 30-day municipal comment period on June 15, 2015 to the twenty-two (22) constituent municipalities of McKean County (one (1) city, six (6) boroughs and fifteen (15) townships) and was submitted for review and comment at the same time to PADEP. Upon completion of the 30-day comment period and incorporation of comments received, the McKean County Board of Commissioners will adopt a final version of the Plan Update. The adopted and ratified Plan Update will be submitted to PADEP for final approval.

SECTION 14 - OTHER INFORMATION

14.1 Marcellus Shale

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

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

The following facilities responded to the Solicitation of Interest for waste disposal capacity and stated that they either currently accept or are permitted to accept Marcellus shale residuals:

- ... Seneca Landfill
- ... McKean County Landfill
- ... Greentree Landfill

14.2 Illegal Dumping

14.2.1 *Issues and Causes*

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

Pennsylvania, and counties like McKean, may have a more severe problem because of the large number of municipalities that manage residential waste through individual subscription systems. Ten (10) of the twenty-two (22) municipalities in McKean County are currently served by subscription collection programs. In subscription collection municipalities, some residents choose to dump their waste illegally rather than pay a hauler for proper collection and disposal. However, there are other factors that contribute to the problem. Some haulers will not service rural or isolated parts of the County, thus forcing residents to self-haul their waste to the nearest landfill or transfer station for proper disposal. Also, some haulers will not collect waste that may 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.

14.2.2 Statewide Dump Surveys

Keep Pennsylvania Beautiful (KPB) (formerly PA CleanWays) is a non-profit organization that works to eliminate illegal dumping and littering. The organization began surveying illegal dump sites in 2005. KPB's goal was 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 common. The materials used to make the illegal drug are tossed along the roadside in illegal dumps, and are extremely toxic.

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

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

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

- ... Areas of concentrated trash
- ... Areas of scattered trash that:
 - × Are not considered roadside litter
 - × Appear to have new trash thrown on them occasionally (more than twice per year)

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

Two types of dumpsites that are not evaluated by KPB/ PA CleanWays are farm dumps and private dumps. A majority of today's farmers have inherited farm dumps on their properties, although some farmers continue to practice this illegal method to save money and time. Private dumpsites are those dumps which are put on the property by current or previous owners. These dumpsites can include stockpiles of scrap, yard waste, household trash, and other things found in an illegal dumpsite. A dumpsite is usually determined to be private by its proximity to a residence, or marked private with "no trespassing" signs.

14.2.3 KPB/ PA CleanWays on the Causes

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

Municipal curbside trash collection is unavailable.

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

Recycling programs are unavailable or inconvenient.

Act 101 dictates that all communities with populations over 10,000, and densely populated municipalities between 5,000 and 10,000, have recycling programs. Communities that fall outside these parameters must opt for curbside or drop-off recycling programs on their own. Depending on the county, many or all of these communities don't have funding to support a

curbside recycling program. Curbside recycling communities have reported a lower incidence of residential waste dumping.

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

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

Shortage of enforcement.

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

Education.

Illegal dumping has been a learned habit for many. Prior to anti-dumping laws, it was common practice to use unlined 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 fundamental to diminish the habits learned, and to teach the public proper and safe disposal practices.

14.2.4 Dump Survey Study for McKean County

KPB/ PA CleanWays conducted a survey of open dumping practices in McKean County in 2009. In the 2009 study, KPB/ PA CleanWays identified 73 dumpsites that contained an estimated total of 165.5 tons of trash. The 73 dumpsites were located in fifteen (15) of the County's twenty-two (22) municipalities. These dumpsites ranged in size from 0.5 tons to 15 tons of waste. Eighty-two percent (82%) of the dumpsites were considered to be a continuous problem where dumping occurs routinely. Five (5) of these dump sites had "No Dumping" signs present; however, all of these sites were considered to be active dumpsites at the time of inventory. Fifty-two percent (52%) of the dumpsites were visible or partly visible from the roadway. Forty percent (40%) of the surveyed dumpsites were in the vicinity of some sort of waterway or body of water. Nine (9) 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 waste items. Recyclables were also commonly found while surveying the sites. The following municipalities had illegal dumpsites surveyed by KPBP/PA CleanWays: Annin Township, Bradford Township, Ceres Township, Corydon Township, Eldred Township, Foster Township, Hamilton Township, Hamlin Township, Keating Township, Lafayette Township, Liberty Township, Norwich Township, Otto Township, Sergeant Township, and Smethport Borough.

14.3 Open Burning

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

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

14.4 Funding for McKean County Programs

As part of this Plan Update, it is recognized that County support and funding for recycling and waste minimization programs is limited and may be limited over the ten (10) year planning period. As part of this Plan Update, the SWAC discussed other funding opportunities for McKean County to maintain and expand their recyclables collection program and waste minimization programs. Funding for McKean County programs is recommended to come from partnerships with private industry, waste haulers, waste disposal facilities, grant opportunities through PADEP, municipal partnerships, and local businesses. It is a recommendation of this

Plan Update to encourage partnerships, wherever possible, for support of the recommended recycling and waste minimization programs in this Plan Update. Funding recommendations are discussed further in Section 5.

14.5 Future Challenges of Waste Management in McKean County

Beyond funding concerns, McKean County wants to develop a method that engages all of the municipalities in the County to help them understand and support the goals of the solid waste management plan update. Research by the Professional Recyclers of Pennsylvania (PROP) has confirmed that municipalities and counties that fail to adequately address solid waste management and recycling experience:

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

This ultimately results in a significantly greater likelihood of:

- ... Illegal dumping
- ... Open burning