

November 19, 2007



Mr. Dale Henry
Recycling Coordinator
Northumberland County
911 Greenough Street
Sunbury, PA 17801

Dear Dale,

This letter summarizes the findings of our commercial recycling project for the Act 101 mandated communities of Northumberland County. This project was performed as part of a Recycling Technical Assistance project from the Pennsylvania Department of Environmental Protection (DEP) through the Solid Waste Association of North America (SWANA).

Details of the study findings and recommendations are provided in the sections below. Educational materials (fact sheets) and post card and letter samples are provided in the appendices.

Executive Summary

Based on the interviews conducted for this Project, it appears that there is significant room for improvement in Northumberland County to increase both commercial recycling and the reporting of recyclables. Some haulers indicated that they do not receive many requests to provide commercial recycling reports. Therefore, it may be beneficial for the communities to take the approach that Milton Borough has, receiving recycling reports from the haulers directly.

In addition, while the businesses that recycle tend to recycle corrugated cardboard only, recycling of other materials appears to be minimal. Some haulers indicate that there are not adequate outlets for other recyclable materials, therefore haulers have no incentive to collect additional materials beyond corrugated cardboard. R. W. Beck recommends the following, in order to increase commercial recycling and reporting in Northumberland County:

- It is important for the municipalities and the County to focus education and outreach efforts on large entities that generate large amounts of recyclables. Often they serve as “leaders” in the community, and others will follow their actions.
- All of the mandated communities should consider developing or improving their web sites in order to easily and cost-effectively provide information regarding recycling, including a downloadable version of the educational materials developed for this Project as well as a downloadable recycling report form.
- Municipalities should try to develop a database of email addresses so that reminders about recycling and recycling reporting can be emailed directly to businesses. This could save the municipalities a considerable amount of money in printing and postage costs, and would allow them to send out more frequent reminders.

- The County Recycling Coordinator should meet with large businesses to discuss their implementation and/or improvement of recycling programs. It is important to obtain “buy-in” from top management – they are more likely to ensure that the program has the resources required to be sustained. The County Recycling Coordinator and municipal staff might consider conducting waste audits at some of the larger businesses, and perhaps consider hosting a seminar or workshop to show smaller businesses how to conduct waste audits at their sites.
- When the municipalities and the County Recycling Coordinator are seeking means of helping entities implement and/or improve commercial recycling, they should consider the feasibility of businesses located in close proximity sharing containers. This can help share costs and alleviate space concerns. In addition, while one business may not generate an ample quantity of recyclables to justify service, combined, they may.
- Municipalities with municipally-collected residential curbside recycling programs may consider expanding their program to include small businesses – such that the small businesses could, for a nominal fee, be included on the household recyclables collection route. Similarly, when it is time to re-negotiate another contract, this is something municipalities should consider including in the services requested.
- The municipalities, DEP, and the County might consider strengthening the collection infrastructure by adding additional “tip spots” for recyclables, such as transfer stations, to make recycling more convenient (and less costly) for haulers, businesses, and institutions.
- The County might consider presenting commercial recycling education and outreach materials through the area chambers of commerce or other business organizations. These types of organizations reach a broader audience than those focused solely on recycling. It is important to focus on the business benefits of recycling, such as improved image, potential net cost savings, and improved employee morale. The fact that recycling is mandatory in these five communities should also be highlighted, but secondarily.
- The County might consider, perhaps in cooperation with a local Chamber of Commerce, developing a “Green Business” logo. Businesses could be provided with a sticker that they can place on their door or window, indicating that they recycle and/or conduct other green practices. A recent survey conducted by Grant Thornton LLP indicates that 77 percent of the businesses surveyed said they expected corporate responsibility initiatives to have a major impact on their business strategies over the next several years. A representative of Grant Thornton indicates that “Companies are realizing that strong investment in corporate responsibility programs is both a civic obligation and a successful business strategy.” Stickers or plaques provided to businesses should have a year on them, so that they are encouraged to earn the standing each year.
- The County and municipalities should encourage businesses to track their progress, and consider some sort of contest to encourage businesses to compete against each other.

- The County and its mandated municipalities should work with haulers to develop a reporting program whereby the haulers report directly to the commercial entities. Although most ordinances place the reporting burden on the businesses directly, having the haulers provide this information could be considered an “added value” to the businesses and institutions being served. It removes the steps of the business having to request the report from the hauler, and the hauler providing the report to the business, before it is passed on to the Township, Borough, or City. Another plus would be that there would be far fewer reports to review.
- The County Recycling Coordinator and/or municipal staff should distribute recycling education materials, such as those developed as part of this Project, to businesses and institutions. Businesses may be more open to recycling when they feel they are being provided with resources, rather than simply reprimanded. Businesses and institutions should be reminded that it is important that they monitor their trash situation, simultaneously with their recycling. As the recycling program evolves, they may be able to decrease their trash container size(s) and/or frequency of collection, which will reduce collection costs.
- The County and/or DEP might consider working with local haulers and processors to ensure that there are adequate outlets and collection infrastructure for high-grade office paper. Most haulers contacted for this project indicate that they collect corrugated cardboard, and nothing else, from the business sector. Often one barrier to recycling high-grade office paper is the ability to accept shredded paper. This potential should also be addressed. If adequate markets are identified, an educational campaign should be implemented to make businesses aware of the haulers that will accept high-grade office paper.

Background

Northumberland County is home to approximately 94,556 people (2000 Census) and spans 477 square miles. The County is located in east-central Pennsylvania, and is largely rural. There are two cities, 11 boroughs, and 23 townships in the County. Five of the municipalities are mandated to recycle under Act 101. Per Act 101, these communities must ensure that recycling programs are available to both residential and commercial entities. The focus of this project is on commercial recycling. Per Act 101, Section 1501 (c) (iii), commercial, institutional, and municipal establishments in mandated communities are obligated to recycle high-grade office paper, aluminum, corrugated cardboard, and yard waste, if generated by the commercial and institutional establishments. Some municipalities mandate the recycling of additional materials as well. Further, Act 101-mandated municipalities are required under Section 304 (f) to provide a report to the County recycling coordinator describing the weight or volume of materials that were recycled by the municipal recycling program in the preceding calendar year. Per Act 101 Section 103, municipal recycling programs are defined as:”a source separation and collection program for recycling municipal waste or source-separated recyclable materials, or a

program for designated drop-off points or collection centers for recycling municipal waste or source-separated recyclable materials, that is operated by or on behalf of a municipality. It includes any source separation and collection program for composting yard waste that is operated by or on behalf of a municipality.”

Mandated municipalities in the County are required to provide Northumberland County’s recycling coordinator with information on commercial recycling by commercial businesses by February 15th of each year. Counties who submit documentation to DEP each year indicating the tons of recyclables collected via residential and commercial programs are eligible to receive Act 101, Section 904 Performance Grants. Further, mandated communities that do not provide this information to the County recycling coordinator are in violation of Act 101, and local businesses may be in violation of local ordinances as well, if they fail to provide this information, and may potentially face fines for such an infraction.

According to Northumberland County’s recycling coordinator, the mandated municipalities in the County (Coal Township, Milton Borough, Mount Carmel Borough, Shamokin City, and Sunbury City) have had limited success in prompting commercial establishments to comply with their reporting requirements. The municipalities generally do not fine the businesses, however. The County initiated this technical assistance project in order to provide municipalities with a “tool kit” of sorts to further encourage local businesses to recycle, and to report their recycling figures. The County hopes this will result in increased recycling, and perhaps an increase in Act 101 Section 904 grants, which could be used to further promote recycling in the County. As part of this technical assistance project, R. W. Beck:

- Conducted interviews with recycling officials from each of the five mandated municipalities in the County in order to:
 - Understand the degree to which commercial establishments are recycling;
 - Understand the degree to which commercial establishments are reporting their recycling tons;
 - Gain an understanding of the recycling ordinances and potential penalties in each municipality;
 - Gain an understanding of the types of businesses that could benefit from increased education about recycling; and
 - Identify haulers providing commercial recycling services in the jurisdiction.
- Interviewed commercial haulers to understand:
 - Haulers’ perspectives regarding the extent to which local commercial establishments recycle; and
 - Identify barriers and potential solutions to reporting recycling tonnages.
- Developed a notice letter template for municipalities to adapt to send to businesses and institutions to encourage them to recycle and report recycling information;

- Developed “friendly reminders” for businesses about the communities’ recycling ordinances; and
- Developed guidance documentation (fact sheets) that is suitable for mailings, in-person distribution, or use on a web site. The topics for the facts sheets were identified through the municipal interviews. The fact sheets include:
 - Fact Sheet #1 – Recycling at Your Business or Institution (Overview);
 - Fact Sheet #2 – Recycling in Offices;
 - Fact Sheet #3 – Developing a Recycling Program at Work (More detail than Fact Sheet #1);
 - Fact Sheet #4 – Conducting A Waste Assessment;
 - Fact Sheet #5 – Recycling in Retail Operations; and
 - Fact Sheet #6 – Recycling in Schools.

This letter report provides the feedback from these efforts, and the appendices include the educational materials developed for this project.

Mandated Community Interviews

Table 1 provides a summary of information regarding the mandated communities including a description of the output of their interviews, by community.

Table 1
 Summary of Information from Mandated Communities

Mandated Municipality	Population ¹	Square Miles	Number of Commercial/Institutional Establishments (Estimated)	Recycling Contact Person
Coal Township	10,626	26.5	50 – 60	Charles Fhuey, (interim) ¹ 570-644-1066 (o)
Milton Borough	6,650	3.8	32	Chuck Beck 570-742-8759 cbeck@miltonpa.org
Mount Carmel Borough	6,390	0.7	156	Joe Bass 570-339-4486 mcboro@verizon.net

¹ Greg Schoffler was interviewed, however before this report was finalized, he ceased working for the Township. Charles Fhuey will act as an interim contact until Greg is replaced.

Mandated Municipality	Population ¹	Square Miles	Number of Commercial/Institutional Establishments (Estimated)	Recycling Contact Person
Shamokin City	8,009	0.8	50	Dave Bohanick 570-644-0878 dbohanick@shamokincity.org
Sunbury City	10,610	2.2	200	Mike Kirkstetter 570-988-1930 Mak12@ptd.net

¹ Based on 2000 Census

A Summary of the mandated communities' interview responses and highlights of their recycling ordinances is provided in Table 2.

Coal Township – Coal Township's recycling coordinator indicated that they have had limited success in encouraging commercial establishments to report their recycling figures. Most businesses are served by private haulers, though some smaller businesses self-haul their recyclables to the Coal Township Recycling Center. The Center does not have a truck scale however, upon request, will weigh loads on the internal scale, and provide small businesses with weight receipts. The recycling coordinator indicates, however, that most small businesses do not request weight slips. The recycling coordinator also believes that there is an opportunity to educate businesses about the requirement to recycle, as well as to report their recycling figures. The recycling coordinator, who is new to the program, hopes to hold some seminars in the future to educate commercial and institutional entities about recycling requirements, and how to recycle. He believes that many businesses are indeed recycling, but some still need to understand the requirements.

Milton Borough – Milton Borough has approximately 32 businesses and institutions. The Borough manager, Mr. Chuck Beck, believes that most do an adequate job of recycling cardboard, and most businesses do not generate much in the way of aluminum cans or high-grade office paper to justify setting up a program for those materials, specifically. Businesses hire their own hauler for commercial recycling and trash collection. Milton Borough is served by three haulers – Waste Management, Gordon Waste, and B&W Disposal. He indicates that he receives reports from these haulers annually, and that they indicate on their reports total tons of each commodity recycled, and the businesses they served, but not the breakout of tons recycled by each business. A DEP representative indicates that this type of reporting is acceptable for their purposes, as long as tons recycled can be broken out into "residential" and "commercial".

Mount Carmel Borough – Mr. Joe Bass, the Borough's manager, indicates that the Borough, which spans less than a square mile, has about 156 businesses and institutions that are required to provide information. He indicates that compliance is poor – he receives very few

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commercial recycling reports. The Borough has been trying to encourage commercial businesses to recycle and report their tonnages by sending letters to the businesses. Though their ordinance gives them the power to levy fines for non-compliance, they have never done so. They have been trying to take a cooperative approach, but this has not been successful. Mount Carmel Borough's ordinance also stipulates that recycling shall take place at community activities.

Shamokin City – Shamokin City strengthened their recycling ordinance in June, 2007. One improvement to the ordinance is the addition of a penalty (of \$100 to \$1,000, or 30 days in jail) for each violation of the ordinance. The City Manager indicates that they wanted to revise the ordinance in hopes of encouraging more commercial and institutional establishments to recycle and report their tonnages. He indicates that compliance in both of these areas has been poor. There are 50 establishments from which the City Manager tries to solicit recycling reports, however he realizes that there are also many smaller businesses, as well. He indicates that some large commercial establishments, such as Weiss's markets and the municipal buildings, have been complying with the recycling ordinance, but others, including many coffee shops and restaurants, do not recycle. The City has placed advertisements in the newspaper about the new law, and sent letters out as well. In November of this year, the City Manager will also remind businesses via a letter and advertisements that their recycling reports will be due to City Hall on January 31st. The City requests that these reports be accompanied by weight slips provided by haulers. Haulers operating in the City include Renn's Trash Removal, Waste Management, and Shingara Hauling.

Sunbury City – Sunbury City indicates that most of the larger commercial establishments are doing a good job of recycling and reporting their recycling tonnages. The City has a Recycling Center where recyclable items are collected. Many businesses deliver recyclables to the Center. The City sends mailings to 200 commercial and institutional establishments to try to obtain recycling information, and they receive responses from approximately half. Waste Management is reportedly the most frequently used commercial hauler in the City. Others serving the area include Hometown Disposal and Heims Disposal. The City's recycling coordinator indicates that although their recycling ordinance gives them the power to levy fines for non-compliance, they have never done so. He also believes schools could possibly recycle more materials. He thinks they do well with cardboard, but not the other materials they generate, such as high-grade office paper, steel cans, and plastic.

Table 2
Summary of Commercial Recycling Information for Mandated Communities

Mandated Municipality	Coal Township	Milton Borough	Mount Carmel Borough	Shamokin City	Sunbury City
Recycling Ordinance	Ordinance A – 266, Section 4, Article VIII, “Resource Recovery Program” – Section 3	Chapter 204 , Article I	Chapter 20, Part 2	Amended Ordinance No 339, E-1	Chapter 133, Section 3 and Ordinance No 1108
Year Ordinance Passed	1989	1991	1991	2007	1988
Materials Mandated to be Recycled	High-grade office paper, corrugated paper, aluminum, leaf waste	Not stipulated. By default, Act 101 materials – High-grade office paper, corrugated paper, aluminum, leaf waste	High-grade office paper, corrugated paper, aluminum, leaf waste, and other materials designated by the Borough Regulations (steel cans, bi-metal cans, and glass containers, per regulation)	High-grade office paper, corrugated paper, aluminum, and other materials designated by City Regulations (includes bi-metal and glass containers) and leaf waste	High-grade office paper, corrugated paper, aluminum, and leaf waste. Also, by regulation (Article VIII C 3), clear glass, colored glass, newsprint)
Reporting Requirements	Not included in ordinance language	Each entity must submit a report annually to the Borough in accordance with Borough Regulations. Stipulates that records must be kept by collector.	Commercial establishments must report tons recycled annually to Borough.	Every multi-family housing property, commercial, municipal, institutional establishment and community activity to report annually, and include weight slips.	Not included in ordinance language

Mandated Municipality	Coal Township	Milton Borough	Mount Carmel Borough	Shamokin City	Sunbury City
Other	Recycling must also take place at all community activities.	Recycling must also take place at all community activities.	Recycling must also take place at all community activities.	Recycling must also take place at all community activities. Municipality also has the right to pursue injunctive relief to prevent violations of the ordinance.	It is a violation to not separate and recycle recyclables, and it is a separate offense for the failure to "separate and recycle each container of non-recyclables which also contains recyclables."
Penalty for Not Recycling	\$100 to \$1,000 upon conviction, or imprisonment for up to 90 days, or both. The continuation of violation for each successive day shall constitute a new and separate offense.	\$7 for each of first 3 violations – (ticket by mail) – If 3 or more violations issued in a year, penalty for subsequent violations is \$25. Failure of payment within 7 days increases fee to \$50. Each violation constitutes a separate offense.	Up to \$1,000 or up to 30 days imprisonment. Each violation of any provision and each day the same is continued is a separate offense.	\$100 to \$1,000 upon conviction and costs of prosecution, or imprisonment of up to 30 days – each violation of each provision for each day is a separate offense.	\$100 to \$1,000 and cost of prosecution, and up to 30 days imprisonment if fine not paid.
Penalty for Not Reporting	Not included in ordinance language	As above	Up to \$1,000 or up to 30 days imprisonment. Each violation of any provision and each day the same is continued is a separate offense	As above	As above

Mandated Municipality	Coal Township	Milton Borough	Mount Carmel Borough	Shamokin City	Sunbury City
Haulers Providing Commercial Recycling	<ul style="list-style-type: none"> ▪ Waste Management ▪ Deitrick's Disposal ▪ Renn's Disposal ▪ Jones Disposal and Hauling ▪ Moser Brothers Sanitation ▪ Keystone Sanitation 	<ul style="list-style-type: none"> ▪ B&W Disposal ▪ Waste Management ▪ Gordon Waste 	<ul style="list-style-type: none"> ▪ Waste Management ▪ Mostick Brothers ▪ Dietrik Disposal ▪ Bednar Sanitation ▪ Renn's Disposal ▪ Robert Jones ▪ James Miller Hauling 	<ul style="list-style-type: none"> ▪ Renn's Disposal ▪ Waste Management ▪ Shingara 	<ul style="list-style-type: none"> ▪ WM ▪ Hometown Disposal ▪ Heims Disposal
Types of Businesses that Could Benefit from Education	Offices, institutions (e.g., correctional facilities)	Schools	Small businesses	Coffee shops, restaurants	Schools
Issues With Commercial Recycling	Need to educate businesses/institutions about requirements and encourage a higher level of participation for both recycling and reporting.	Most are recycling what they generate, and having good luck with reporting from haulers directly.	Need to improve participation and reporting.	Need to improve participation and reporting.	Need to improve reporting – only hear back from 50% of businesses/institutions.

Hauler Interviews

R. W. Beck contacted several haulers in order to gain an understanding of:

- The degree to which they believe local commercial establishments recycle;
- The haulers' ability to provide the businesses with commercial recycling tonnage information;

- The barriers that exist to providing the commercial/institutional establishments with commercial recycling tonnage information; and
- Any other feedback from the haulers regarding how the County might most effectively obtain commercial recycling data.

The haulers R. W. Beck was able to contact include:

- Renn’s Recycling;
- Hometown Disposal;
- Waste Management.

R. W. Beck also attempted to contact other haulers but did not receive return calls, or found that they were not suitable for interviewing. These companies included:

- Bednar Hauling – No longer in business;
- Dan Shingara Enterprises – Primarily in the roll-off and household hauling business;
- Heim’s Disposal (left multiple messages, no reply);
- B&W Disposal (obtained some information, but representative was to call back with additional information, and did not); and
- Moser Disposal (left multiple messages, no reply).

Responses to the telephone interviews are summarized in Table 3.

Table 3
Summary of Responses from Hauler Interviews

Interview Question	Responses
Perception regarding whether commercial establishments recycle	<ul style="list-style-type: none"> ■ Several haulers indicated that they only collect cardboard for recycling. ■ One hauler indicated that they accept aluminum cans, as well as cardboard, for recycling. ■ All haulers indicated that the level of interest in recycling is low among businesses and institutions. ■ Most businesses do not want to pay for recycling – it is an extra cost, and they don’t want to do it – haulers can’t force the businesses to recycle.

Interview Question	Responses
Perception regarding whether commercial establishments report tonnages	<ul style="list-style-type: none"> ▪ Most businesses do not request reports. If anyone requests it, they are provided with a report. ▪ One hauler indicated that he provides reports directly to municipalities.
Barriers to recycling	<ul style="list-style-type: none"> ▪ Some businesses have space constraints. ▪ Haulers have no place to take certain materials. They do not want to offer recycling of certain materials if they have to drive a long way to a processor or end market. One hauler, however, indicated that he has markets for all materials, and will even collect them completely commingled (e.g., single-stream). ▪ Businesses do not want to pay the extra cost of recycling.
Barriers to reporting	<ul style="list-style-type: none"> ▪ One hauler indicated that they estimate tons for each customer because, like most haulers, they don't have an onboard scale. Stated that it is a relatively simple procedure. ▪ One hauler indicated the reports are sent directly to the municipalities, upon request.
Other feedback	<ul style="list-style-type: none"> ▪ There is no place to take yard waste – no one will accept it. If they do accept it, they want it to be chipped or ground, and this is not feasible for the haulers.

Conclusions and Recommendations

Based on R. W. Beck's research for this project and other similar work, the following recommendations and conclusions can be drawn regarding improving recycling and recycling reporting in commercial and institutional establishments:

- There is a need to improve both recycling participation and reporting in the mandated communities of Northumberland County.
- Haulers (particularly small haulers who do not own a MRF) report that they are not paid for many commodities (only paid for metals) so there is little incentive for them to offer recycling. Avoiding disposal costs may not be enough of an incentive, particularly if they have to drive a significant distance to deliver the materials.
- It is important for the municipalities and the County to focus education and outreach efforts on large entities that generate significant amounts of recyclables. Often they serve as "leaders" in the community and others will follow their actions.
- All of the mandated communities should consider developing or improving their web sites in order to easily and cost-effectively provide information regarding recycling, including a

downloadable version of the educational materials developed for this Project, as well as a downloadable recycling report form. The County, too, might consider updating their web site to include more information about commercial recycling.

- Municipalities should try to develop a database of email addresses so that reminders about recycling and recycling reporting can be emailed directly to businesses. This could save the municipalities a considerable amount of money in printing and postage costs, and would allow them to send out more frequent reminders.
- The County Recycling Coordinator should meet with large businesses to discuss their implementation and/or improvement of recycling programs. It is important to obtain “buy-in” from top management – they are more likely to ensure that the program has the resources required to be sustained. The County Recycling Coordinator and municipal staff might consider conducting waste audits at some of the larger businesses, and perhaps consider hosting a seminar or workshop to show smaller businesses how to conduct waste audits at their sites.
- When municipalities and the County Recycling Coordinator are seeking means of helping entities implement and/or improve commercial recycling, they should consider the feasibility of businesses located in close proximity sharing containers. This can help share costs and alleviate space concerns. In addition, while one business may not generate an ample quantity of recyclables to justify service, combined, they may.
- Municipalities with municipally-collected residential curbside recycling programs may consider expanding their program to include small businesses – such that the small businesses could, for a nominal fee, be included on the household recyclables collection route. Similarly, when it is time to re-negotiate another contract, this is something municipalities should consider including in the services requested.
- The municipalities, DEP, and the County might consider strengthening the collection infrastructure by adding additional “tip spots” for recyclables, such as transfer stations, to make recycling more convenient (and less costly) for haulers, businesses, and institutions.
- The County might consider presenting commercial recycling education and outreach materials through the area chambers of commerce or other business organizations. These types of organizations reach a broader audience than those focused solely on recycling. It is important to focus on the business benefits of recycling, such as improved image, potential net cost savings, and improved employee morale. The fact that recycling is mandatory in these five communities should also be highlighted, but secondarily.
- The County might consider, perhaps in cooperation with a local Chamber of Commerce, developing a “Green Business” logo. Businesses could be provided with a sticker that they can place on their door or window, indicating that they recycle and/or conduct other green practices. A recent survey conducted by Grant Thornton LLP indicates that 77 percent of the businesses surveyed said they expected corporate responsibility initiatives to have a major impact on their business strategies over the next several years. A representative of

Grant Thornton indicates that “Companies are realizing that strong investment in corporate responsibility programs is both a civic obligation and a successful business strategy.” Stickers or plaques provided to businesses should have a year on them, so that they are encouraged to earn the standing each year.

- The County and municipalities should encourage businesses to track their progress, and consider some sort of contest to encourage businesses to compete against each other.
- The County and its mandated municipalities should work with haulers to develop a reporting program whereby the haulers report directly to the commercial entities. Although most ordinances place the reporting burden on the businesses directly, having the haulers provide this information could be considered an “added value” to the businesses and institutions being served. It removes the steps of the business having to request the report from the hauler, and the hauler providing the report to the business, before it is passed on to the Township, Borough, or City. Another plus would be that there would be far fewer reports to review.
- The County Recycling Coordinator and/or municipal staff should distribute recycling education materials, such as those developed as part of this Project, to businesses. Businesses may be more open to recycling when they feel they are being provided with resources, rather than simply reprimanded. Businesses and institutions should be reminded that it is important that they monitor their trash situation, simultaneously with their recycling. As the recycling program evolves, they may be able to decrease their trash container size(s) and/or frequency of collection, which will reduce collection costs.
- The County and/or DEP might consider working with local haulers and processors to ensure that there are adequate outlets and collection infrastructure for high-grade office paper. Most haulers contacted for this project indicate that they collect corrugated cardboard, and nothing else, from the business sector. Often one barrier to recycling high-grade office paper is the ability to accept shredded paper. This potential should also be addressed. If adequate markets are identified, an educational campaign should be implemented to make businesses aware of the haulers that accept high-grade office paper for recycling, as well as local document destruction companies that offer shredding services.
- After taking cooperative approaches with businesses and institutions, the municipalities should consider implementing fines in order to elicit compliance with Act 101.

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We hope the County finds this Report helpful. Please do not hesitate to contact me at 508-935-1807 or subush@rwbeck.com with any questions you may have about this project.

Sincerely,

R. W. BECK, INC.

A handwritten signature in cursive script that reads "Susan Bush". The signature is written in black ink and is positioned above the printed name and title.

Susan Bush
Senior Analyst



Do Your Part – Recycle!

Recycling is a great way to send a positive message about your business – one that is becoming increasingly important to consumers. Show that your business or institution cares about the environment!

Recycling **is also the law** in Mount Carmel Borough. Did you know that businesses and institutions that don't recycle and report their recycling tons to the Borough at the end of the year **can be fined?**

Ask your hauler about recycling! In Mount Carmel Borough, businesses and institutions are required to recycle the following, if generated on site:



- Corrugated cardboard
- High-grade office paper
- Leaf waste (including shrubbery and tree trimmings)

For more information, contact Mr. Joseph Bass, Borough Manager, at 570-339-4486



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For more information, contact Mr. Joseph Bass, Borough Manager, at 570-339-4486

Appendix A Post Card Template

**Borough of Mount Carmel
Office of the Borough Manager
137 West Fourth Street
Mount Carmel, PA 17851-2083**

PLACE
STAMP
HERE

Recycling makes good business
sense, **and it's the law!**



**[Title, first and last
name here]**

[Address 1]

[Address 2]

[City], [State] [Zip Code]

**Borough of Mount Carmel
Office of the Borough Manager
137 West Fourth Street
Mount Carmel, PA 17851-2083**

PLACE
STAMP
HERE

Recycling makes good business sense,
and it's the law!



**[Title, first and last
name here]**

[Address 1]

[Address 2]

[City], [State] [Zip Code]

Appendix B

Warning Letter Template

City of Shamokin
47 East Lincoln Street
P.O Box Q
Shamokin, PA 17872
Phone: 570-644-0876
Fax: 570-648-0948
Re: City Recycling Ordinance



Dear Business Owner/Manager:

Businesses, institutions, and households in Shamokin City are mandated to recycle certain materials under Pennsylvania's Act 101. In addition, businesses and institutions must report the amount of material they recycle to the City. The City was notified by the PA Department of Environmental Protection that we have not been complying with the recycling ordinance – we need to improve both our level of recycling activity, and our reporting.

The City of Shamokin has passed Ordinance #339, which requires commercial, institutional, and municipal establishments to recycle the following materials:

- High-grade office paper;
- Cardboard;
- Aluminum cans;
- Bi-metal cans;
- Glass containers; and
- Leaf waste (including leaves, brush, and trimmings).

Additionally, businesses and institutions must provide documentation from the receiver of the recyclables as to the type and weight of materials collected for the year, and submit them to Shamokin City Hall by January 31st of each calendar year, for the prior calendar year. Please note that businesses, institutions, and municipal buildings that do not comply with Ordinance #339 can be fined not less than \$100 and not more than \$1,000.

If you are already recycling and providing this documentation, we truly appreciate your cooperation. If you are not in compliance, please be advised that the City is committed to ensuring compliance with Act 101, and, to that end, takes enforcement of this Ordinance seriously. If you have any questions about how to recycle, or other concerns, please contact the City at the telephone number listed above.

Sincerely,

Dave Bohanick, City Manager
Lynn Dixon, Community Development Director

Appendix C
Fact Sheet #1
Recycling at Your Business or Institution



Fact Sheet # 1: RECYCLING AT YOUR BUSINESS OR INSTITUTION NORTHUMBERLAND COUNTY

No matter what type of operation you are, you can ensure that you are a good environmental neighbor by implementing and sustaining a workplace recycling program. Many customers prefer to support businesses that implement "green practices."

Get Involved - It's Good for the Environment and in Some Municipalities, It's the Law!

If your business or institution is located in **Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury**, you must recycle certain materials, if they are generated at the workplace, according to PA Act 101. You must also report tons recycled annually to the municipality. In the mandated communities, if a business or institution does not recycle and report their tons, they can be fined.

Items businesses and institutions MUST recycle, if generated:

- ✓ High-grade office paper,
- ✓ Aluminum, and
- ✓ Corrugated paper,
- ✓ Leaf waste
- In **Shamokin**, businesses and institutions must also recycle **bi-metal cans and glass containers**;
- In **Mount Carmel Borough**, businesses and institutions must also recycle **steel cans, bi-metal cans, and glass containers**; and
- In **Sunbury**, businesses and institutions must also recycle **glass and newspaper**.

Businesses and Institutions in Northumberland County have two options for recycling:

- 1) Arrange for the collection of recyclable materials with a private hauler of your choice, or
- 2) Deliver recyclables to a nearby Recycling Center or drop-off site. In Northumberland County, they include:
 - **Coal Township Recycling Center** (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, glass bottles and jars, office paper, newspaper)
 - **Jeff's Auto Body and Recycling Center**, Ellysburg (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, scrap metal)
 - **Modern Way Mobile Homes**, Montandon (Plastic bottles, glass bottles and jars, cardboard, newspaper, steel cans, aluminum cans)
 - **Sunbury Transfer Station** (Newspaper, steel cans, aluminum cans, magazines, corrugated cardboard, glass bottles & jars.)



Recycling Works

Northumberland County Department of Solid
Waste and Recycling

Dale Henry, Recycling Coordinator

Phone: 570-988-4278

Email: dhenry@norrycoppa.net

So What Can You Do?

- Adopt a policy that waste reduction, reuse and recycling are preferable to waste disposal.
- Set a positive tone for corporate or institutional waste reduction, reuse and recycling.
- Provide incentives for regular participation - like contests and rewards, until the program becomes a habit.

What Are the Benefits to your Business or Institution?

- You may be able to reduce the size and/or frequency of garbage collection, thus reducing costs.
- You are sending a positive message to your employees and customers.

For further information...

To obtain additional information about recycling in Northumberland County, contact:

Dale Henry, Recycling Coordinator

Phone: 570-988-4278

Email: dhenry@norrycoppa.net

For more detailed information about implementing a waste reduction and recycling program in your workplace:

Visit the Pennsylvania Department of Environmental Protection website at www.depweb.state.pa.us (Key word "Commercial Recycling").

The Professional Recyclers of Pennsylvania (PROP) has published "Developing a Waste Reduction and Recycling Program for Commercial, Institutional, Industrial and Municipal Establishments." To obtain a copy, contact PROP at:

P.O. Box 25

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Fax: (814) 742-8838

E-mail: prop@proprecycles.org

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Other web sites that may be helpful include:

U.S. EPA, WasteWise Program

<http://www.epa.gov/wastewise/>

California Integrated Waste Management Board

<http://www.ciwmb.ca.gov/BizWaste/>

Alameda County, CA

www.stopwaste.org



Appendix D
Fact Sheet #2
Recycling in Offices



Fact Sheet #2: **RECYCLING IN OFFICES** Northumberland County

To establish a successful recycling program in your office or office building, you need to determine what kind of program will work in your facility. You should first analyze your options. For example, do you have a way to collect a number of different recyclables and transport them to a nearby recycling drop-off center, or will it make more sense to have your commercial trash hauler provide recyclables collection services to your office? It might be possible to share a recycling container or containers with other businesses located on the same property. If your office is located in **Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury**, you **MUST** recycle the specific materials, per PA Act 101 AND local ordinances:

Recycling - It's Not Optional!

Not only is it necessary for businesses in the mandated communities to recycle certain items, but businesses must also **report their recycling tons to their municipality each year**, by the end of January for the previous calendar year.

Items Businesses Must Recycle:

- ✓ High-grade office paper,
- ✓ Corrugated paper,
- ✓ Leaf waste (including trimmings, brush, and branches).

In addition:

In **Shamokin**, businesses and institutions must also recycle **bi-metal cans and glass containers**;

In **Mount Carmel Borough**, businesses and institutions must also recycle **steel cans, bi-metal cans, and glass containers**; and

In **Sunbury**, businesses and institutions must also recycle **glass and newsprint**.

Offices and office buildings in Northumberland County have 2 options for recycling:

- Arrange through a private hauler for the collection and recycling of all designated materials; or
- Deliver recyclables at no charge to a nearby drop-off or Recycling Center.

Local drop-off options include:

Coal Township Recycling Center (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, glass bottles and jars, office paper, newspaper)

Jeff's Auto Body and Recycling Center, Ellysburg (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, scrap metal)

Modern Way Mobile Homes, Montandon (Plastic bottles, glass bottles and jars, cardboard, newspaper, steel cans, aluminum cans)

Sunbury Transfer Station (Newspaper, steel cans, aluminum cans, magazines, corrugated cardboard, glass bottles & jars.)

Facts about Office Paper

As much as 93% of all office waste is paper, most of it recyclable. As noted above, high-grade office paper and corrugated cardboard are mandatory recyclables in mandated communities.

- 77% of paper waste generated in offices is recyclable.
- Typical business offices generate about 1.5 pounds of waste paper per employee each day. Financial businesses generate more than two pounds per employee daily.



Recycling Works NORTHUMBERLAND COUNTY

Solid Waste and Recycling Dept.
Dale Henry, Recycling
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- Nearly half of typical office paper waste is high grade office paper.
- It is possible to achieve significant reduction in the cost of buying office paper by reducing paper use and reusing paper where possible.
- **Eliminating office paper from your waste may reduce your waste bill by as much as 50%.**
- Recycling one ton of paper typically saves about 6.7 cubic yards of landfill space. A cubic yard of stacked office paper weighs about 380 pounds. Cost savings may be estimated by multiplying the tons recycled by 6.7 times the cost per cubic yard for waste disposal (if by volume) or by cost per ton (if by weight).



Commercial and residential paper waste accounts for more than 40% of waste being landfilled. Eliminating this paper from our waste would nearly double the lives of current landfills.

Steps for Successful Recycling in Offices and Office Buildings



Almost all types of paper used in the office can be recycled. High-grade papers generally include but are not limited to white computer paper, bond, letterhead, and ledger. Lower grades may include mixed grades, file stock, ground wood papers, newsprint, and colored paper. Corrugated cardboard may also be recycled, but it is nearly always managed separately from all other paper.

Mixed paper is generally considered low grade even if it contains high-grade paper. The County may request that easily identifiable high-grade papers (such as computer printout) be kept separate if it's possible to take advantage of its higher market value.

While most of the recycling stream in offices will be paper, other recyclables generated on site may include newspaper, aluminum cans, and plastic bottles.

1. Perform a waste assessment. Walk through your office or office building noting what type of waste is discarded in each area. A walk-through will help you determine which types of containers are needed. Typical programs are likely to involve some of the following:

- **Administrative and office areas** - office paper, corrugated cardboard, other paper, cans, bottles, toner cartridges.
- **Food service areas** - glass, metal, cans, plastic containers, corrugated cardboard (make sure that food waste is separated from recyclables).
- **Public areas** - newspaper, magazines, bottles, cans.

2. Based on the results of the waste assessment, set up appropriate recycling programs in each area

- **Focus on materials for which there is a market, that are generated in abundance, and which have high value.**
- **Place containers carefully.** Good container placement is critical, and space is often an issue. Containers should be close enough to where the waste is discarded so that people will be convenient to use, but not so widespread that they cause clutter. It is a good idea to discuss with employees who work in a particular area where containers should be placed to facilitate their use.
- **Make sure that all containers are well-marked and visually consistent throughout the business.** For public areas, it is best to choose containers with specialized openings, such as a hole for cans or a slot for newspapers. It is also important to place containers where the materials are generated to make recycling convenient.

- **Ask your waste hauler for advice** about keeping recyclables and wet waste separate. Depending on the company's trucks and equipment, your hauler may want to give you separate containers for trash and recyclables.



3. **Inform employees about proper recycling procedures.** Issue a memo, throw a kick-off party and explain any separation procedures when you distribute containers. Make sure to follow up to ensure that procedures are being followed and further educate employees as necessary.
 - Include recycling information in your orientation for new employees.
 - Explain the recycling program to your custodial staff. Train them by showing them what to do with new containers, how to collect waste separately and where to take separated materials. For a 24-hour operation, plan pick-ups on appropriate shifts so that you do not have a problem with overflowing containers.
 - If appropriate, make sure that your grounds crew knows to keep yard waste separate from other waste.
 - Remind employees to keep food waste out of recycling containers and trash. Food waste should be handled separately from trash and recyclables
4. **Set up a log book or a receipt system to record the volume of recyclables leaving the premises.** This will enable you to receive proper compensation for your materials and to take appropriate action if volumes decrease.
5. **Monitor the Program.** Ask for assistance from your custodial staff Have them inform you of areas with major contamination problems or where employees are not participating, and follow up with improved recycling education in these areas. Be sure to submit annual reports to your municipal recycling contact, as required.
6. **Celebrate Success.** Be sure to congratulate employees on a job well done, and to occasionally recognize individuals who are recycling champions in the workplace. Holding contests from time to time can also be effective to invigorate the program with new energy.

For More Information...

For more detailed information about implementing a waste reduction and recycling program in your workplace:

Visit the Pennsylvania Department of Environmental Protection website at www.depweb.state.pa.us (Key Word "Commercial Recycling").

The Professional Recyclers of Pennsylvania (PROP) has published "Developing a Waste Reduction and Recycling Program for Commercial, Institutional, Industrial and Municipal Establishments." To obtain a copy, contact PROP at:

P.O. Box 25 Bellwood, PA 16617
Phone: (814) 742-7777
E-mail: prop@proprecycles.org

Fax: (814) 742-8838
www.proprecycles.org

Other helpful information can be obtained from the following organizations on the internet:

U.S. EPA, WasteWise Program
<http://www.epa.gov/wastewise/>

Alameda County, CA
www.stopwaste.org

California Integrated Waste Management Board
<http://www.ciwmb.ca.gov/BizWaste/>

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Department of Solid Waste
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Sunbury, PA 17801



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Appendix E
Fact Sheet #3
Developing a Recycling Program at Work



Fact Sheet #3: DEVELOPING A RECYCLING PROGRAM AT WORK NORTHUMBERLAND COUNTY

Recycling - It's Your Business!

Certain municipalities are mandated to recycle by Pennsylvania's Act 101. This means residents, businesses, institutions, and municipal buildings must recycle certain materials. In Northumberland County, this means:

All businesses in Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury, MUST recycle:

- ✓ High-grade office paper,
- ✓ Corrugated cardboard,
- ✓ Aluminum cans, and
- ✓ Leaf waste (including leaves, trimmings, and brush).

Certain communities also mandate the recycling of additional materials, for example:

- In Shamokin, businesses and institutions must also recycle bi-metal cans and glass containers;
- In Mount Carmel Borough, businesses and institutions must also recycle steel cans, bi-metal cans, and glass containers; and
- In Sunbury, businesses and institutions must also recycle glass and newsprint.

Business establishments have two options for recycling:

- 1) Arrange through a private licensed hauler for the collection of recyclable materials; or
- 2) Deliver recyclables at no charge to a local Recycling Center, such as:

- **Coal Township Recycling Center** (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, glass bottles and jars, office paper, newspaper)
- **Jeff's Auto Body and Recycling Center**, Ellysburg (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, scrap metal)
- **Modern Way Mobile Homes**, Montandon (Plastic bottles, glass bottles and jars, cardboard, newspaper, steel cans, aluminum cans)
- **Sunbury Transfer Station** (Newspaper, steel cans, aluminum cans, magazines, corrugated cardboard, glass bottles & jars.)



Recycling Works

Northumberland County Department of Solid
Waste and Recycling

Dale Henry, Recycling Coordinator

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A well-designed recycling program requires careful planning and attention to details. While looking at how others have implemented programs can help, your program needs to be specific to your business. Elements of a successful recycling program include:

1. Obtain Top-Level Support

Senior management support is essential to the success of your recycling program. Management will foster a positive attitude about the program, and ensure it remains a priority. Also, recycling programs can require an initial capital outlay, and management buy-in helps secure needed funds.

2. Designate a Recycling Coordinator

Select a coordinator to manage the recycling program. The person selected should be genuinely interested in recycling and able to interface with personnel at all organization levels. To ensure that attention is given to the program, it is advisable to incorporate recycling responsibilities into the employee's overall job description.

3. Establish a Recycling Task Force

If the facility is large enough and has a significant number of employees, a task force should be formed to help the coordinator plan and initiate the program. This group may remain in force as a permanent advisory body to ensure continued program success. Task force representatives should be assigned from all departments that will be affected by your recycling program. It is also a good idea to include a spokesperson for employees.

4. Assess the Waste Stream

The coordinator should assess the amount of recyclables in your organization's waste stream, and where they originate. This process is known as a waste assessment. The waste assessment should focus on offices, cafeterias, lounges, restrooms, vending machine areas, boiler rooms, maintenance areas, storage areas, and other locations where trash originates. If the audit reveals that yard debris composes a large percentage of the waste stream, the task force should consider the feasibility of including on-site composting as part of the recycling program.



5. Identify/Develop Markets for Recyclables

Your recycling program will generate materials that can be used to manufacture new products. The companies that do this are known as end users or end markets. One of the more significant tasks of the recycling coordinator is to determine how to get recyclables to these markets. Recyclables may be marketed directly to an end user if agreement can be reached on the amount, quality and regularity of the shipments. Otherwise, it will be necessary to negotiate with intermediaries - such as waste haulers, processors or brokers -- to collect, process, and/or market recyclables. The coordinator should discuss recycling strategies with waste haulers, processors/brokers and end users to determine the preferred management option before adopting a final plan for the recycling program.

6. Develop an Internal Collection System



Whether your organization is housed in one room, one building, or a number of buildings, it will be necessary to design a system for collecting recyclables. The main issue to consider in developing an internal collection system should be **convenience** for both system users and collection staff.

Key elements are as follows:

- **Containers** - Recycling container options range from reused corrugated boxes to a wide variety of commercially available trays and bins. Consider space availability, container placement, the quantity needed, size, shape, color, labels that identify the containers as recycling containers,
- **Education/Signage** - Educational materials need to be developed that inform the employees and customers about acceptable materials and how to use the system. It is helpful to do a hands-on demonstration, to ensure that employees are comfortable with the program, and understand it fully.
- **Container Placement** - Consideration should be given to individual workstations and areas of high generation, such as copiers and lunchrooms. Check with your local fire marshal regarding fire code compliance. Remember, the idea is that recycling should be convenient for both generators and those who move the recyclables to the collection area.
- **Storage** - The central storage area should be clean, dry and free of fire hazards. Containers should be clearly labeled. If storage containers must be located outside, consider using covered storage bins to preserve material quality and prevent litter and contamination.
- **Collection Personnel** - Collecting recyclables from workstations and high generation areas and taking them to a central storage area is usually the responsibility of custodial staff. If recyclables must be delivered to a market, delivery personnel must be designated. A printed operations schedule is helpful to collection and delivery personnel.
- **Materials Preparation** - Many end users require special preparation of materials for efficient transportation and/or incorporation into their manufacturing processes. Preparation techniques include crushing, bundling and baling. Unless your facility generates very large volumes of material (e.g. a grocery store that generates large volumes of corrugated cardboard), you should probably work with a hauler, processor or broker to determine how they wish to receive materials to facilitate further processing for end users.



7. Develop an Education and Promotion Campaign

A comprehensive and sustained program is imperative to: (1) tell employees and customers about your recycling policies, procedures and goals; (2) encourage participation; (3) stress that recyclables must be kept clean, dry and free of contaminants that can diminish their market value or cause them to be rejected; and (4) publicize program successes to maintain ongoing participation. Channels to consider for conveying this information include staff meetings, orientation meetings for new employees, newsletters, flyers and posters, and contests.

8. Evaluate Program Success



The coordinator should monitor the program to ensure its effectiveness and efficiency. Sources of information include: (1) maintenance staff, for input regarding improper handling and contamination of materials; (2) accounting staff, regarding waste management costs; (3) employees and customers, for suggestions concerning convenience; (4) safety staff regarding possible storage violations; and (5) waste haulers, processors, brokers or end users, as appropriate, for information on the amount of waste generated and materials recycled, and the percentage of waste reduced through recycling. Don't forget to submit annual reports to your municipality's recycling contact! This is part of the law, if you are in an Act 101-mandated community.

9. Procurement Policies - Buying Recycled

Purchasing products that are made from or packaged in recycled materials create a demand for the materials generated by your recycling program. Greater demand for these materials usually means greater market price, which helps to reduce the cost to operate a recycling program. One way to achieve this is through revising bid specifications to give a preference for items containing post-consumer materials.

For further information...

To obtain additional information about recycling in Northumberland County, contact:

Dale Henry, Recycling Coordinator

Phone: 570-988-4278

Email: dhenry@norrycoppa.net

For more detailed information about implementing a waste reduction and recycling program in your workplace:

Visit the Pennsylvania Department of Environmental Protection website at www.depweb.state.pa.us (Key word "Commercial Recycling").

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Alameda County, CA

www.stopwaste.org

California Integrated Waste Management Board

<http://www.ciwmb.ca.gov/BizWaste/>



Appendix F
Fact Sheet #4
Conducting a Waste Assessment



Fact Sheet #4: **CONDUCTING A WASTE ASSESSMENT** NORTHUMBERLAND COUNTY

Recycling - It's Your Business!

Businesses and institutions in some communities in Northumberland County (**Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury**) must recycle certain items, including:

- ✓ Corrugated cardboard
- ✓ Aluminum
- ✓ High-grade office paper; and
- ✓ Leaf waste (including leaves, brush, and trimmings)

In addition:

- In **Shamokin**, businesses and institutions must also recycle **bi-metal cans and glass containers**;
- In **Mount Carmel Borough**, businesses and institutions must also recycle **steel cans, bi-metal cans, and glass containers**; and
- In **Sunbury**, businesses and institutions must also recycle **glass and newsprint**.

Business establishments have two options for recycling:

- 1) Arrange through a private licensed hauler for the collection of recyclable materials; or
- 2) Deliver recyclables at no charge to a drop-off or Recycling Center, such as:
 - **Coal Township Recycling Center** (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, glass bottles and jars, office paper, newspaper)
 - **Jeff's Auto Body and Recycling Center**, Ellysburg (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, scrap metal)
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Recycling Works

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Waste and Recycling
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How to Assess Your Waste

The waste assessment is one of the first steps in developing a recycling program. Elements of a good waste assessment are as follows:

1. Examine the Waste Stream

The first step in the assessment process is to determine what materials are currently being disposed and the quantities. Your focus should be on mandated materials, as well as materials that are accepted through your private hauler or local drop-off programs, especially high volume and/or high-value materials. For example, in retail cardboard would be high-volume, and in offices office-paper would be high-volume. High value materials include toner cartridges and aluminum cans.

2. Determine Weight/Volume

Determine the weight and volume of the potentially recyclable materials that are currently being disposed.



Restaurants and bars generate large quantities of glass and are often charged a surcharge for collection due to the weight. Retailers generate large volumes of cardboard that can quickly fill dumpsters. If the establishment generates a high volume of cardboard it may pay to consider baling the material, which may help to increase the marketability of the cardboard. Reducing the weight and/or volume of waste may result in lower waste management costs due to "avoided costs" resulting from fewer pulls/collections and less waste delivered for disposal.

3. Brainstorm about Waste

Consider your entire operation and determine where waste is being generated and the extent to which this material can be:

- **Reduced** (e.g. two-sided copying, purchase of durable vs. disposal items)
- **Reused** (e.g. reuse packing material, boxes, paper for scratch pads or drafts, donate magazines and books)
- **Recycled** (e.g. collect and recycle required materials, high volume materials and high value materials for which there are markets)

4. Consider Collection System

Collection containers should be located where the recyclables are being generated. Convenience is the key to high participation. Clearly mark all collection containers and make it difficult to contaminate the recyclables. For example, use lids with only a hole in the top for the collection of aluminum cans or glass and plastic bottles. Locating the recycling containers near trash cans can cut down on contamination. Color-coding container types is also helpful (for example, gray for trash and blue for recycling).



5. Identify Current and Projected Costs

While businesses in mandated communities must recycle to be in compliance with Act 101 and local recycling ordinances, another reason for starting a recycling program is to reduce waste collection costs. After implementing your recycling program you should assess your waste periodically - probably at least semi-annually, to determine if your program has significantly reduced the amount of waste generated. If it has, you may want to reduce your waste collection schedule or size of your container(s), which will save you money. If it has not, you will need to determine why and make adjustments to improve the program.

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Appendix G
Fact Sheet #5
Recycling in Retail Operations



Fact Sheet # 5: **RECYCLING IN RETAIL OPERATIONS** NORTHUMBERLAND COUNTY

Recycling - It's good business... and in some municipalities, it's the law!

Recycling in your retail operation may be a tool to help you sell product. By implementing a recycling program--and showing it off--you will communicate to customers that you care about the environment and are cost-conscious.

Certain municipalities are mandated to recycle by Pennsylvania's Act 101. This means residents, businesses, institutions, and municipal buildings must recycle certain materials. In Northumberland County, this means:

All businesses in Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury, MUST recycle:

- ✓ High-grade office paper,
- ✓ Corrugated cardboard,
- ✓ Aluminum cans, and
- ✓ Leaf waste (including leaves, trimmings, and brush).

Certain communities also mandate the recycling of additional materials, for example:

- In Shamokin, businesses and institutions must also recycle bi-metal cans and glass containers;
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- In Sunbury, businesses and institutions must also recycle glass and newsprint.

Business establishments have 2 options for recycling:

- 1) Arrange through a private licensed hauler for the collection of recyclable materials; or
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Recycling Works

Northumberland County Department of Solid
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Steps for Successful Recycling in Retail Operations

Packaging materials, particularly corrugated cardboard, make up a large portion of any retail store's waste. Because much of this waste is generated outside the retail establishment, reduction efforts must be made in cooperation with vendors.

Incoming packaging such as bags and boxes can be reused as packaging for customers. However, while this reduces disposal requirements, it does not solve the problem of unnecessary packaging. If vendors ship products in unnecessary or non-recyclable packaging, you should consider asking them to reduce packaging or switch to materials that can be recycled or reused.

Here are some hints to help in planning:

- 1. Perform a waste assessment.** Walk through your operation noting what type of waste is discarded in each area. A walk-through will help you determine which types of containers are needed.
- 2. Based on the results of the waste assessment, set up appropriate recycling programs in all areas.** You will probably find that most of your waste will be corrugated cardboard. To reduce volume and make storage easier, you may wish to flatten and/or bale or compact the cardboard. Ask your waste hauler for advice about keeping recyclables and wet waste separate. Depending on the company's trucks and equipment, your hauler may want to give you separate containers for trash and recyclables.
- 3. Make sure that managers of public areas in shopping complexes are provided with containers for recycling, and that all containers, but particularly those placed in public/retail areas, are well-marked.** For public areas, it is best to choose containers with specialized openings, such as a hole for cans or a slot for newspapers. It is also important to place containers where the materials are generated to make recycling convenient. Don't forget to post signs to tell customers that you recycle.
- 4. Inform employees about proper recycling procedures by issuing a memo and reviewing procedures at staff meetings or at the beginning of shifts.** It is very important to walk employees through the "system" - it is important to have a "visual connection" with containers, and what they are used for. Be sure to follow up to ensure that procedures are being followed and to further educate employees as necessary.
- 5. Set up a log book or a receipt system to record the volume of recyclables leaving the premises.** This will enable you to receive proper compensation for your materials and to take appropriate action if volumes decrease. Remember to keep proper records needed to be in compliance with Act 101, and submit to your municipal recycling contact annually as requested.
- 6. Include recycling information in your orientation for new employees.** It is important that new employees realize that all staff are expected to participate in the recycling program.
- 7. Ensure that custodial staff is familiar with the program.** Ideally a custodial manager should be involved in its development. Once the system is developed, train custodial staff by showing them what to do with new containers, how to collect waste separately and where to take separated materials. For a 24-hour operation, plan collections on appropriate shifts so that you do not have a problem with overflowing containers.



In a multiple retail facility such as a mall, there may be central staffing for waste/recycling collection. You will need to work with these personnel to ensure that materials are collected efficiently.

8. **Monitor the program on an ongoing basis.** Ask for assistance from custodial staff, as well as managers. Request feedback regarding major contamination problems or where employees are not participating, and follow up with improved recycling education in these areas.
9. **If appropriate, make sure that your grounds crew knows to keep yard waste separate from other waste.**

For further information...

To obtain additional information about recycling in Northumberland County, contact:

Dale Henry, Recycling Coordinator
Phone: 570-988-4278
Email: dehny@norrycopa.net

For more detailed information about implementing a waste reduction and recycling program in your workplace: Visit the Pennsylvania Department of Environmental Protection website at www.depweb.state.pa.us (Key word "Commercial Recycling").

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Alameda County, CA
www.stopwaste.org



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Appendix H
Fact Sheet #6
Recycling in Schools



Fact Sheet #6: RECYCLING IN SCHOOLS NORTHUMBERLAND COUNTY

Whether you are a school administrator concerned about increasing solid waste disposal costs or a recycling-conscious student, you need to initiate a recycling program at your institution. Many wastes generated at educational institutions can be recycled.

Recycling - It's Your Business...and in some municipalities, it's the law!

Certain municipalities are mandated to recycle by Pennsylvania's Act 101. This means residents, businesses, institutions, and municipal buildings must recycle certain materials. In Northumberland County, this means:

All businesses in Coal Township, Milton Borough, Mount Carmel Borough, Shamokin or Sunbury, **MUST** recycle:

- ✓ High-grade office paper,
- ✓ Corrugated cardboard,
- ✓ Aluminum cans, and
- ✓ Leaf waste (including leaves, trimmings, and brush).

Certain communities also mandate the recycling of additional materials, for example:

- In **Shamokin**, businesses and institutions must also recycle **bi-metal cans and glass containers**;
- In **Mount Carmel Borough**, businesses and institutions must also recycle **steel cans, bi-metal cans, and glass containers**; and
- In **Sunbury**, businesses and institutions must also recycle **glass and newsprint**.

Private Schools have 2 options for recycling:

- 1) Arrange through a private licensed hauler for the collection and recycling of all designated materials; or
- 2) Deliver recyclables at no charge to a local Recycling Center, such as:
 - **Coal Township Recycling Center** (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, glass bottles and jars, office paper, newspaper)
 - **Jeff's Auto Body and Recycling Center**, Ellysburg (Plastic bottles, corrugated cardboard, steel cans, aluminum cans, scrap metal)
 - **Modern Way Mobile Homes**, Montandon (Plastic bottles, glass bottles and jars, cardboard, newspaper, steel cans, aluminum cans)
 - **Sunbury Transfer Station** (Newspaper, steel cans, aluminum cans, magazines, corrugated cardboard, glass bottles & jars.)



Recycling Works

Northumberland County Department of Solid
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Steps for Successful Recycling in Schools

The challenge to good management is that unlike offices, restaurants, or other establishments that serve primarily a single purpose, these institutions must plan for a wide range of areas that encompass management of everything from office waste and cardboard to food waste and related materials. Schools may also have extensive grounds and must manage large volumes of organic materials generated in groundskeeping operations.

Here are some hints to help in planning:

1. **Perform a waste assessment.** Walk through the facility noting what type of waste is discarded in each area. A walk-through will help you determine which types of containers are needed. Typical programs are likely to involve some of the following:

- **Administrative and office areas** - office paper, corrugated cardboard, other paper, cans, bottles, toner cartridges
- **Classrooms** - mixed paper, newspaper, glass, metal and plastic containers
- **Library** - newspaper, magazines, mixed paper, books
- **Food service areas** - glass, metal, cans, plastic containers, corrugated cardboard (make sure that food waste is separated from recyclables), grease
- **Mail room/photocopying area** - mixed paper, corrugated cardboard
- **Student housing** - newspaper, magazines, glass, metal and plastic containers, corrugated cardboard
- **Public areas** - newspaper, magazines, bottles, cans



2. **Based on the results of the waste assessment, set up appropriate recycling programs in each area.** When setting up a program, concentrate most on areas that produce significant amounts of waste. Seek input and advice from your hauler, so that you are providing materials separated in a manner they can accept. Your hauler can also help you select appropriate collection containers.

3. **Find a recycling champion.** It is often helpful to have a teacher and perhaps a student group, such as an environmental group, champion the recycling program.

These individuals can help monitor the program and educate others about the importance of recycling.

4. **Make sure that containers in all areas are well-marked, particularly those in public areas.** For public areas, it is best to choose containers with specialized openings, such as a hole for cans or a slot for newspapers. It is also important to place containers where the materials are generated to make recycling convenient.
5. **Inform employees and students about proper recycling procedures.** Issue a memo, throw a kick-off party and explain any separation procedures when you distribute containers. Make sure to follow up to ensure that procedures are being followed and further educate employees and students as necessary. Initiating a contest with a prize (such as a pizza party, or an extra-long recess) when a certain goal is reached often helps a new program gain momentum.
6. **Set up a log book or a receipt system to record the volume of recyclables leaving the premises.** This will enable you to receive proper compensation for your materials and to take appropriate action if volumes decrease. Also, remember to provide recycling reports annually, as needed to comply with Act 101, to your municipal recycling contact.
7. **Include recycling information in your orientation for new employees and new students.** Publicize by posting recycling information in the newspaper, on a web page, through e-mail, in a school handbook, or during student orientation activities. It is important that students and staff see that the principal and/or other school leaders support the program, and expect participation.



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