

September 27, 2004



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City of Lebanon
400 S. 8th Street Rm#220
Lebanon, PA 17042

Subject: Optimizing Recycling Participation and Hauler Cooperation in the City of Lebanon

Dear Joy:

This letter summarizes R. W. Beck's suggestions for improving recycling participation among residents and hauler cooperation in the City of Lebanon. This effort was undertaken as part of the Recycling Technical Assistance program sponsored by the Pennsylvania Department of Environmental Protection (DEP) and the Solid Waste Association of North America (SWANA).

The report is divided into the following sections, which correspond with the Tasks provided in the scope. These sections are:

- Summary of Hauler Meeting
- Ordinance Review
- Review of Educational Materials

Each of these sections contains a summary, and recommendations that stem from the task.

Task 1 – Hauler Meeting

A meeting with licensed haulers collecting within the City was held on March 30, 2004 at the City of Lebanon Council Chambers. City staff, Mayor Robert Anspach, two DEP representatives, and R. W. Beck staff were present. Joy Peffley, City Recycling Coordinator, moderated the meeting. Mayor Robert Anspach kicked off the meeting by welcoming all stakeholders, and noting the importance of recycling for the City and the importance of working together (City and private-sector haulers) to increase the diversion rate. Ms. Peffley then described her position and duties, her goals and the current City solid waste and recycling ordinance. The City wishes to increase the current diversion rate of 11.9 percent (FY2002, as FY 2003 figures are not calculated yet) to meet the state mandated goal of 35 percent.

City officials noted that they are concerned that, based on numerous residents' complaints, it appears that recycling collectors are not always recycling the source-separated recyclable materials, and are instead, at times, placing recyclables in rearload packer trucks with the garbage, for disposal. The residents' most frequent complaint is that their recyclables are being disposed with their refuse. City officials have witnessed this occurring on several occasions.

Another challenge facing the recycling program is that some multi-family housing units (low-income apartments, in particular) only receive monthly collection of recyclables. Storage is

generally inadequate for monthly collection, therefore residents frequently end up placing recyclables in the same bags with their garbage. The City's ordinance requires that multi-family homes receive collection of recyclables at least twice per month, so this is in violation of the City's ordinance.

The haulers were provided an opportunity to list the challenges they encounter in collecting recyclables. The challenges identified include:

- Recyclables are put in clear plastic bags -- not in recycling bins, making handling more cumbersome and adding to contamination at the MRFs;
- Residents are recycling empty plastic oil containers;
- Plastic bottles take up too much room in the recycling bins;
- Contamination leads to increased processing costs (they are charged by the MRFs for the disposal of contamination) – Examples include glassware in with recyclable glass bottles and jars, aluminum foil and siding included with aluminum, etc.;
- Residents include magazines in the ONP (problem for some haulers but not all);
- Higher costs associated with collecting recyclables separately and delivering to MRF than delivering all materials to landfill. (Note: The tip fee at the Greater Lebanon Refuse Authority's Landfill is \$62.70 per ton, and the tip fee at the Recycle America MRF in Palmyra is \$30/ton for commingled containers and \$20/ton for single stream materials. The MRF is located approximately 8 miles from the City of Lebanon.)
- ONP is not a required material in the City ordinance;
- Businesses will not pay extra for OCC recycling containers;
- Every collector has a different method for collecting OCC;
- Haulers find the costs of purchasing recycling containers to be excessive, and the County's 902 grants would not be adequate to pay for all haulers' recycling containers;
- It is not cost-effective to collect from businesses that generate small volumes of OCC;
- Some businesses do not have room for OCC containers outside the building, nor the necessary storage space inside the building;
- Most contractors can collect recyclable office paper in clear plastic bags; and
- Businesses need to be educated about recycling.

Mark Votterro of DEP spoke about RecycleNet and TrashNet. RecycleNet is a DEP program where DEP, using undercover vehicles, travels around the state observing the collection of solid waste and recyclables. DEP is specifically watching for violations of the Solid Waste Management Act of July 7, 1980. In particular, they are looking for mixed source-separated recyclables with waste in a transportation vehicle.

TrashNet is performed by the same undercover crews but the crews are watching for violations of Act 90 signed into law on July 29, 2002, which established a Waste Transportation Safety Program (WTSP) related to the transportation of municipal and residual solid waste and recyclables. Some of the standards that DEP looks for include proper signage, fire extinguishers, proper record keeping, and covered loads. DEP issues citations for the absence of these standards, and if loads are leaking.

Recommendations

Recommendations that stem from the hauler meeting include the following:

- The largest potential impact on commercial and multi-family recycling would result if the City had a closer relationship with the hauler(s) operating the City. The City may therefore consider implementing a franchise agreement or contracting with one hauler for commercial recycling. This would standardize service (and containers) and improve the economics of commercial recycling. It would also provide the City with more responsiveness and control over the recycling program. Another option would be for the City to establish service districts, and have a hauler service each district.
- The City should revise the current City Solid Waste and Recycling Ordinance to include old newspaper (ONP) and plastic bottles (#1 PET and #2 HDPE). Details regarding these recommendations are described below, in the Ordinance Review portion of this report (Task 2).
- The City should continue the public education program geared toward both residential and commercial waste generators in the City. Details regarding recommendations for improving education and outreach are provided in the Education and Outreach portion of this report (Task 3).
- Pursue enforcement measures against managers of low-income housing projects that have only once monthly collection to change their contract with their hauler.
- The City is already trying to work with the low income apartment complexes and their hauler to have the frequency of recyclables collection increased. If they receive no satisfaction, they may consider working with the County, who could potentially terminate the hauler's license.
- The City might consider establishing a drop-off program for OCC for commercial entities. It might consider working jointly with the County to establish such a program.

Task 2 – Ordinance Review

R. W. Beck reviewed the City's recycling ordinance, Lebanon City Ordinance Article 930, as well as the City's Garbage and Refuse Ordinance, Article 929. In reviewing the ordinances, R. W. Beck considered current issues the City is facing, and drew on expertise gained from helping

communities nationwide execute effective ordinance language that supports the implementation of various types of successful recycling programs.

Note that R.W. Beck provides a technical, not a legal review. It is the City's responsibility to finalize the revised ordinance language and obtain appropriate legal review before implementing any changes.

Recommended Changes to Garbage Ordinance

Although R. W. Beck focused on reviewing the City's Recycling Ordinance, Article 930, we also conducted a review of the City's Garbage Ordinance. Table 1 provides suggested changes to Article 929 – the City's Garbage Ordinance.

Table 1
General Garbage Ordinance Recommendations

Article/Section	Sub Section	Suggested Change	Benefits of Change
929.02 Preparation of Refuse:		Consider adding a subsection that states: "Separated recyclable materials included in the City's recycling programs shall not be commingled with refuse."	<ul style="list-style-type: none">▪ Increase tonnage diverted;▪ Clarify expectations

Article/Section	Sub Section	Suggested Change	Benefits of Change
929.06 Licensing of Refuse Collectors		<p>The amended Title 27 (Environmental Resources) of the Pennsylvania Consolidated Statutes, Chapter 62 (Waste Transportation Safety Act) states:</p> <p>"...no county and no municipality may implement a municipal waste or residual waste transportation authorization or licensing program after the effective date of this chapter."</p> <p>This statement reads as though implementing a new licensing program is prohibited. However, based upon work we have done for other communities in Pennsylvania, it is our understanding that counties and municipalities no longer have the authority to license waste haulers, regardless of when they started their licensing programs. We recommend seeking legal counsel in this matter to clarify the Act, and its potential implications on the City's licensing program.</p>	<ul style="list-style-type: none"> ▪ Ensure program and ordinance are permissible and consistent with Commonwealth law.
929.08 Place and Method of Disposal		<p>This section may be in violation of the U.S. Constitution's Commerce Clause. By designating the disposal facility, the City <i>may</i> be in violation of the Commerce Clause. We recommend seeking legal counsel in this matter to clarify the City's legal rights to designate disposal.</p>	<ul style="list-style-type: none"> ▪ Ensure ordinance and program are consistent with federal law.
929.09 Violation Notification and Remedy	(a)	<p>Consider adding language to address the issue of refuse containers that do not meet the standards set forth in Section 929.03 (Refuse Containers).</p>	<ul style="list-style-type: none"> ▪ Improve aesthetics and sanitation ▪ Clarify expectations

Recommendations Addressing Hauler-Related Issues

Per R. W. Beck's review, the recommended changes to the City's Recycling Ordinance detailed in Table 2 would improve the issues that were discussed in the hauler meeting.

Table 2
Recycling Ordinance Recommendations Addressing Hauler-Related Issues

Article/Section	Sub Section	Suggested Change	Benefits of Change
930.01 Title; Purpose; Community Objectives:	(c)(3)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the list of mandatory materials	<ul style="list-style-type: none"> ▪ Increase tonnage recycled ▪ Clarify what can be recycled – resulting in decreased contamination
	(c)(4)	Delete newspapers from this section, as it is now included in the mandatory materials;	<ul style="list-style-type: none"> ▪ Clarify ordinance ▪ Consistency among different sections of the ordinance
930.02 Definitions:	(23)	Modify the definition of "public recycling drop-off" to include plastic bottles -- PET (#1) and HDPE (#2)	<ul style="list-style-type: none"> ▪ Clarify ordinance ▪ Consistency among different sections of ordinance
930.03 Establishment of Residential Recycling:	(a)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the list of mandatory materials;	<ul style="list-style-type: none"> ▪ Increase tonnage diverted ▪ Clarify what is included in residential program, thereby reducing contamination
	(b)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the list of mandatory materials	<ul style="list-style-type: none"> ▪ Increase tonnage diverted ▪ Clarify what is included in residential program, thereby reducing contamination
	(b)	Modify the last sentence of this subsection to read: "Such recyclables shall be stored in a safe and sanitary manner in accordance with local zoning, fire prevention and health codes. Such recyclables shall be collected a minimum of every-other-week, and as frequently as necessary to prevent any illegal accumulations."	<ul style="list-style-type: none"> ▪ Lessen the need for using plastic bags to store recyclables ▪ Clarify expectations

Article/Section	Sub Section	Suggested Change	Benefits of Change
	(c)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the list of mandatory materials	<ul style="list-style-type: none"> ▪ Increase tonnage diverted; ▪ Clarify what is included in residential program, thereby reducing contamination ▪ Provide for consistency among different sub-sections of ordinance
930.04 Source Separation and Preparation for Residential Collection	(a) (1)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the materials discussed in this section, including the materials to be recycled, and the materials that shall not be placed in plastic bags;	<ul style="list-style-type: none"> ▪ Increase tonnage diverted ▪ Clarify what is included in residential program, thereby reducing contamination ▪ Decrease incidence of plastic bags
	(a)	Add a new subsection to address the rinsing and lid removal for plastic bottles; and any set out requirements for newspaper (if applicable);	<ul style="list-style-type: none"> ▪ Reduce contamination ▪ Improve processing efficiency at MRF ▪ Clarify expectations regarding preparation of recyclables
930.05 Establishment of Drop-off Program for Multi-Family Dwellings	(a)	Add newspapers and plastic bottles marked with PET (#1) and HDPE (#2) to the list of mandatory materials	<ul style="list-style-type: none"> ▪ Increase tonnage diverted ▪ Clarify what is included in residential program, thereby reducing contamination
	(b)	Add the following sentence to the end of this subsection: "The respective owner, manager, or condominium association shall be responsible for: 1) ensuring that such recyclables are stored in a safe and sanitary manner in accordance with local zoning, fire prevention and health codes, and 2) providing for the collection of such recyclables a minimum of every-other-week, and as frequently as necessary to prevent any illegal accumulations."	<ul style="list-style-type: none"> ▪ Improve aesthetics and sanitation ▪ Clarify what is included in residential program, thereby reducing contamination ▪ Lessen the likelihood of recyclables being disposed rather than recycled ▪ Clarify expectations

Article/Section	Sub Section	Suggested Change	Benefits of Change
930.06 Source Separation and Recyclables Placement at Drop-off Centers:	(a)	Add a new subsection to address the rinsing and lid removal for plastic bottle; and any set out requirement for newspaper (if applicable);	<ul style="list-style-type: none"> ▪ Improve aesthetics and sanitation ▪ Clarify what is included in residential program, thereby reducing contamination ▪ Reduce processing costs

General Recycling Ordinance Recommendations

Besides addressing hauler concerns, R. W. Beck reviewed the City's Recycling Ordinance for other potential revisions that would improve the City's recycling success. These general recommendations are detailed in Table 3.

Table 3
General Recycling Ordinance Recommendations

Article/Section	Sub Section	Suggested Change	Benefits of Change
930.02 Definitions:	(a)	Addition of the following language: "For the purposes of this Ordinance, the definitions contained in this Section shall apply unless otherwise specifically stated. When not inconsistent with the context, words used in the present tense include the future tense, words in the plural number include the singular, words in the singular number include the plural, and use of the masculine gender include the feminine gender. The word "shall" is always mandatory and not merely discretionary."	<ul style="list-style-type: none"> ▪ Clarify ordinance

Article/Section	Sub Section	Suggested Change	Benefits of Change
	(a) (3) and (a) (27):	There is a discrepancy in the definitions of "commercial establishment" and "residential dwelling". "Commercial establishment" includes multi-family dwellings of four or more dwelling units; "residential dwelling" includes up to four dwellings per structure. We recommend changing "commercial establishments" to include more than four dwelling units, though this is ultimately a policy decision.	<ul style="list-style-type: none"> ▪ Clarify program expectations for those living in four-unit buildings
930.03 Establishment of Residential Recycling Program	(a)	Consider adding the word "mandatory" (or, "universal") to the first sentence of this section in order to clarify that it is a mandatory recycling program;	<ul style="list-style-type: none"> ▪ Clarify expectations
930.04 Source Separation Plan and Preparation for Residential Collection		Consider adding a subsection to cover educational programs for residential recycling collection which would explain to residential customers that, per the ordinance, plastic bags shall not be used to store recyclables, and any other set out requirements that may apply. The City will need to consider the administrative burden and added cost of adding such a program.	<ul style="list-style-type: none"> ▪ Reduction in contamination ▪ Easier processing at MRF
930.10 Licensing		See recommendations for Section 929.06, in Table 1.	<ul style="list-style-type: none"> ▪ Ensure program and ordinance are consistent with Commonwealth law.

Task 3 – Recycling Education Program Review

Summary of City Recycling Education Program

R. W. Beck was provided with samples of the City's recycling outreach and education materials, and followed up with the City's recycling coordinator to gain a clear understanding of how outreach and education materials are distributed and how education programs are implemented. The City does not have a specific budgeted amount for education and outreach materials, as they rely strictly upon Section 902 grants for their revenues. Staff consists of the recycling coordinator and one part-time employee who staffs the recycling center. Last year the City spent \$2,500 on paid advertising. The City performs the following outreach and education activities:

- **Participates in Healthy Kids Day at the YMCA**
 - Event is held in March, and is attended by approximately 800 youths;
 - Recycling coordinator provides brochures about recycling opportunities, and literature describing how and where to recycle, and promotes the fact that recycling is mandatory; and
 - Ink jet recycling is promoted.
- **Provides giveaways at Healthy Kids Day These giveaways include:**
 - Balloons that say "City of Lebanon Recycles;"
 - Drink "huggies" that say: "Recycle Me" and provide information about the recycling center (hours and materials accepted);
 - Pencils that say: "City of Lebanon Recycles 273-6711"; and
 - This year the drink huggies for Fourth of July will be used as an incentive for donating to the Fourth of July Fireworks Fund.
- **Has a brochure that provides information about recycling, waste reduction, HHW, and how to handle difficult to manage items.**
 - Several thousand of these brochures were printed; and
 - Brochures are delivered door-to-door during the City's fall and spring cleanup events.
- **Press releases in the Lebanon Daily News**
 - Advertise monthly newspaper drop-off events; and
 - Notify residents and businesses that recycling is mandatory.
- **Public service announcements (Radio Omega (Spanish Radio Station)); WLBR (radio) and Comcast (local cable television)**
 - For monthly newspaper drop-off events;

- Notice that recycling is mandatory (Radio Omega –Spanish radio station) – several times per year; and
- Holiday season gift wrap recycling events (Comcast).
- **Notice for Violators**
 - Notice on letterhead mailed to residents/businesses/landlords when garbage violations are found
- **Stickers on Recycling and Solid Waste Containers at Drop-Off Center**
 - Stickers are in English and Spanish, and say “Trash Only – Solo Basura” and “Recyclables Only – Solo Recyclables)
- **Flyer Describing How to Prepare Recyclables**
 - Available in English and Spanish;
 - Brochure has illustrations, and provides detailed yet succinct information on how to prepare recyclables, and what materials cannot be recycled;
 - Not widely distributed, but is given to residents upon request.
- **Distributing Educational Materials at the Playground**
 - The City’s recycling coordinator is working on a new initiative to educate children at the playgrounds about recycling. She is educating playground staff about recycling, and giving children educational materials about recycling; and
 - Children are provided with pictures about recycling to color, in place of traditional coloring books.

County Education and Outreach Activities

In addition to the City-sponsored education and outreach activities, the County also makes efforts to educate the citizens in the municipalities about the benefits of recycling. County programs include:

- Hosting field trips to the Lebanon Greater Refuse Authority Facility;
- Making visits to area classrooms;
- Mailing a newsletter twice per year to all County residents;
- Hiring theater groups/entertainers to go to schools to present educational and entertaining presentations about recycling;
- Airing radio advertisements about recycling; and
- Placing newspaper ads about recycling.

Ideally, the City and County coordinators should work cooperatively, so that each knows what the other is doing to use advertising and outreach opportunities most effectively.

Specific Recommendations to Enhance Current City Education/ Outreach Materials

The following recommendations specific to currently used programs and materials are made, in hopes of improving their effectiveness. Additional recommendations for education/outreach program enhancement are provided below.

Violation Notice

The notice that is mailed to residents that violate the recycling ordinance states that recycling is mandatory in the City per City ordinance and Act 101. It also tells residents to “please begin to place the following items curbside for recycling: Clear & colored glass, aluminum cans and steel/bimetal cans. Recycling of plastics is requested of residents. Recycling cardboard and office paper is mandatory for businesses...”

Suggestion: This notice could be clarified by indicating that clear and colored glass containers are recyclable. Further clarification could include “(no Pyrex, china, or pottery please)” or showing pictures of non –bottle/jar items with an “x” over them.)

Suggestion: Reduce the number of words on this notice, or use bullets to convey the message. Most individuals will not take the time to read paragraphs of information.

Suggestion: Change “recycling of plastics is also requested” to “recycling of plastic bottles #1 (PET) and #2 (HDPE) is also requested. This may reduce the contaminants currently being collected.

Press Releases

The press releases that say recycling is mandatory read...”According to the City Ordinance (Section 903) residents are required to recycle clear and colored glass, aluminum cans and steel cans. In addition to these items businesses are required to recycle mixed office paper, and cardboard. It is requested that plastic #1 and #2 are also recycled.”

Suggestion: Consider releasing separate press releases geared for residents and businesses. This allows press release to be more brief, and more direct.

Suggestion: Consider changing wording of press releases periodically, so that listeners do not “tune out.” Example: “Do you live in the City of Lebanon? Then you are required by law to recycle. It’s easy – and it’s good for the environment! Recycling saves energy, and extends the life of landfills. Separate your glass bottles and jars, aluminum cans, and plastic bottles, and recycle them at the curb or at the nearest drop-off site. Then feel good knowing you’re making a difference!”

“City of Lebanon Recycles” Brochure

This brochure is well done, and informative. It provides contact information for various programs, and describes the recycling drop-off center’s hours, location, and materials accepted.

Suggestion: Decrease the number of words in the brochure. Use bullet-points when possible.

Suggestion: Change “clear and colored glass” to “Clear and colored glass containers.”

Suggestion: Consider removing the boat recyclers’ information from this brochure, and printing a separate one-page flyer for boaters that could be available at boat stores and marinas.

Flyer Describing How to Prepare Recyclables

This flyer is excellent, in that it provides pictures, and is succinct.

Suggestion: Flyer could be re-designed such that what is NOT allowed to be recycled is indicated under the appropriate category. For example, under glass, there might be two columns, one reading DO RECYCLE and one reading DO NOT RECYCLE, with the non-recyclable items listed (with pictures). This provides a more “at a glance” guide for residents.

Suggestion: Distribute this brochure during spring and fall cleanup events.

Stickers at Drop-Off Site

The stickers at the drop off site read “Trash Only” and “Recyclables Only” in Spanish and English.

Suggestion: Stickers or signs with illustrations showing the types of recyclables that should go in each bin are recommended. In addition, illustrations of some of the more commonly delivered non-recyclable items could be provided with an “x” over them, to indicate that they can not be recycled.

Other Suggestions for Promoting Recycling

There is no specific “recipe” for public education that is guaranteed to work for every municipality. The variety of education programs is just about as numerous as the number of recycling programs. Factors to consider include, but are not limited to: community size, demographics, geographic location, whether the area is urban, suburban or rural, type of program, mix of housing (single/multi-family, permanent vs. transient) proportion of residences to businesses/institutions. Available resources, of course, must also be considered. What works for a given area is a function of matching the type and size of effort to the target audiences in that area.

The City of Lebanon is of moderate size – about 10,266 households and many businesses, located within a 6.5 mile radius, however it is faced with the following challenges:

- Multi-cultural community;
- Large low-income population;

- Many transient residents; and
- Staffing and budget constraints in City.

Despite these challenges, R. W. Beck believes that the City can build enthusiasm that will boost participation in the recycling program. To accomplish this, R. W. Beck researched a variety of educational, promotional, and advertising alternatives and recommends the following approach.

Highlight Businesses and Institutions that Recycle with Success

There is nearly always greater potential to recover more materials from commercial and institutional establishments than from residential. The City may want to look into ways to do more promotion among these types of entities. One example that might draw further attention is to develop a “Recycling Business (Institution) of the Month” program or something similar. Criteria could be established to qualify, as well as a selection process. These businesses and institutions might get some small award (a plaque, certificate, etc.) and recognition in the local paper and at City Council meetings.

Another idea is to identify particularly enthusiastic local businesses and institutions that might act as “champions” to promote recycling and good waste management practices.

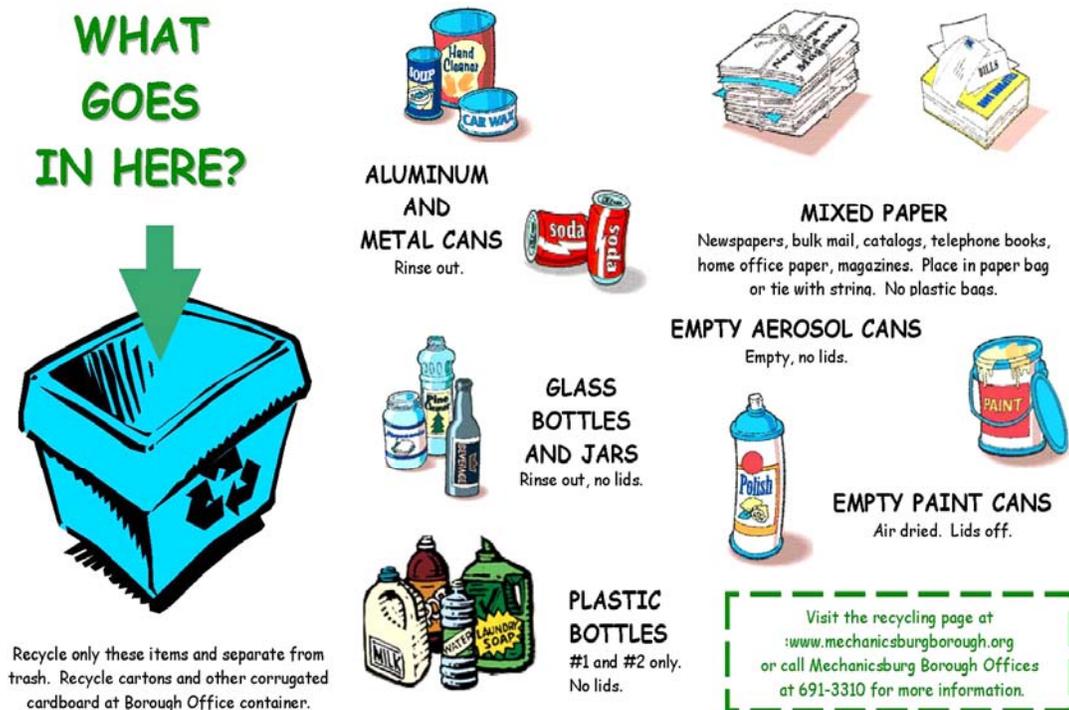
Develop and Distribute Refrigerator Magnets

Refrigerator magnets are a frequently used educational tool because they are:

- 1) Durable;
- 2) Large enough to provide material and preparation information (3”x5”); and
- 3) Regularly seen by the intended target audience, in the location where they generally make the decision whether (and how) to recycle.

R .W. Beck estimates the cost for two-color 3”x 5” refrigerator magnets to be approximately \$2,500 for 2,000 magnets. This might be done in conjunction with the County, and included in their bi-annual mailout. One design, which was developed by Mechanicsburg Borough using some graphics designed for the City of Philadelphia (with permission) was the magnet in Figure 1 below. This magnet uses pictures, which can help overcome the language barrier. Mechanicsburg Borough’s Magnets measured 5.5”x 4.25” (quarter-fold of 8.5 x 11.5”), and were mailed out in an 8.5” x 11” newsletter.

Figure 1
Mechanicsburg Borough Magnet



Distribution of All Outreach Materials

The City might consider working with the City utility department to send literature about recycling or refrigerator magnets in residents' and businesses water bills.

The City might consider having brochures and giveaways (such as refrigerator magnets) available to new residents when they sign up for water service at the utility department.

Further promotion of the Drop-off Center

Residents and businesses might be encouraged to use (or make further use of) the center through some other promotional efforts. Some examples include:

- Developing a "Recycling Family of the Month" program, similar to the idea presented above for businesses and institutions.

- Encouraging more drop-offs by offering prizes to every 1,000th (or other number to be determined) customer who comes through the center as an incentive to get people to come. This could be promoted through newspapers, radio, schools, businesses/Chamber of Commerce, institutions, etc.
- Drawing attention through a visible goal program, possibly by developing a visual method of showing progress. Something like a thermometer, a recycling vehicle traveling along a road to the MRF, etc. that shows progress toward the goal would be useful. It would be nice to have it in a location that is highly visible (such as is done with United Way).

Consider Implementing an “All Bottles” Program for Plastics

Some communities have had great success with promoting the recycling of “all bottles,” rather than having citizens focus on the confusing number system. Using the all bottles message, it is understood that only plastic bottles (containers with necks) can be recycled. It is estimated that 95 percent of plastic bottles are HDPE and PET. The five percent of the other bottles are insignificant, when compared to the large amount of other plastic non-recyclable materials (such as plastic toys, clam shells, etc.) that are left at drop-off centers and collected at the curb. If an all bottles message could be adopted regionally, and potentially statewide, residents would be hearing a consistent, clear, simple message, and would hopefully be less confused about what to recycle. More information on this approach, along with sample educational materials, can be found at www.allplasticbottles.org.

Obtain Commitments

Research has shown that individuals who make either a written or oral commitment to recycle will recycle more frequently and in larger quantities than those who were merely informed of the recycling program¹. To illustrate, one study asked individuals to sign a pledge to recycle newspapers during a two-week period. Not only did the majority of individuals who signed the commitment recycle their newspapers during that time frame; but these same individuals continued their recycling behavior after the two-week period.

It may not be possible for the City to individually solicit written commitments to recycle from every household. Therefore, the City may want to target venues where large numbers of residents gather, such as the Healthy Kids Day Event. The City might also consider obtaining commitments from children at the parks.

Link to City Website in the Future

The City does not currently have an official web site, although a web site about Lebanon exists at www.lebanon.nbn.net. This site is very basic. Once the City has a web site, the City could establish a recycling page on this web site that could serve as a cost-effective mechanism for

¹ Pardini and Katzev, (1983-84)

informing large numbers of City residents about its programs and events. For the recycling page to be effective, it should be professional in appearance and easy to locate. The City might consider developing a web page specific to their community that could be accessed through the Greater Lebanon Refuse Authority.

Conduct Slogan/Logo/Mascot Contests

The City may want to have a contest to create a slogan, logo or mascot to be associated with its recycling program. Having one or more of these things that identify the program would help to increase program visibility. The City may want to consider a contest to ask residents to submit a slogan, a logo, and/or a mascot to be considered for use by the City, with the winning entry incorporated into future educational materials used by the City. If the City is unsure of which vehicle might be preferred, it could solicit entries in all three categories and choose a single winner from one category, or one from each category. This way, there is an option of using any of the winners' submissions, such that the most appropriate one can be selected for a given situation. The winner or winners would be recognized by the City in some way, and given some type of reward for their effort. Prizes could be donated by local businesses.

Establish Block Leader Programs

The City could establish a "block leader program" to enlist community support to promote recycling throughout the City and to engage in friendly competition designed to boost recycling. In this program, individuals could be identified either by block or within established zones. These individuals could be responsible for setting an example for the rest of their area, visiting neighbors to personally encourage recycling and other waste reduction activities, and to distribute materials on behalf of the City. The City may find that reaching those of various cultures and income levels may be less challenging if an "insider" that is interested in recycling promotes the program among his or her own neighbors. This method has been used with success in multi-family apartment buildings as well as neighborhoods.

Establish a Youth Recycling Club

The City might want to work with individual public housing developments to establish a youth recycling club where youths are educated about recycling, as well as other environmental issues, through workshops and art-related activities. The municipality may want to allocate a portion of the performance grant dollars to take the youths on tours of the environmental facilities (such as the Recycle America MRF in Palmyra) and the Greater Lebanon Recycling Authority's composting facility and landfill. It might be possible to obtain sponsors to fund these activities.

Establish a Poster Contest

The City might consider sponsoring a poster contest for the children in public housing units. All entries could be displayed at a prominent municipal building. Participants would be invited to a ceremony where their efforts would be recognized by municipal leaders. Participants would

receive some type of award, such as a gift certificate to a local restaurant or store (which would presumably be donated by local businesses). The posters could be judged to select the top twelve, and these posters could be incorporated into a calendar. The calendar would include information on what to recycle and why recycling is important. This calendar would be distributed to all public housing units. The City might consider instituting this program in cooperation with the playground program already underway.

Consider Implementing Mobile Unit

The City may want to consider implementing a program similar to Chicago's mobile unit. To encourage recycling in Chicago's public housing authorities, mobile buy-back units are sent through public housing complexes, offering residents vouchers that can be redeemed for cash in exchange for their source-separated recyclables. The mobile buyback units are staffed by individuals who are hired from public housing neighborhoods, offering residents incentives to recycle through job development opportunities. "The public housing recycling program evolved from the confidence that all people will recycle if given reasons relative to their experiences," says Ken Dunn, president of the Resource Center. He notes that two of the motivators that work well are creating public housing units and offering small change for recyclables.

Promote Goals

The City could bring attention to recycling goals by developing a visual method of showing progress. The City could create a sign that could be placed in a highly visible location (similar to United Way). The sign would show progress toward the goal (a thermometer, a recycling truck traveling to a materials recovery facility, etc.) will help residents see where they are in relation to the goal and encourage them to recycle more to meet the goal.

Education in the Schools

Educating students in grades K-12 may be a very effective way of reaching City residents both now and for the future. Students often become the strongest advocates of recycling, and will ensure that recycling is happening in their homes. The County coordinator notes that she gives presentations at the schools from time to time. The City recycling coordinator has had difficulty in generating interest in the schools. It is recommended that the two coordinators meet to brainstorm about how to most effectively generate interest among the schools.

Because other communities in Lebanon County also provide curbside recycling programs, the City may want to work cooperatively with other communities to educate students and promote recycling. Of course, teachers often struggle just to teach their traditional curriculum, so the City must be sensitive to this and be willing to assist in school-based efforts. Activities that have been used in other areas include:

- A Community sponsored art show and/or "inventions" using recycled materials. This could also take a seasonal form, such as recycled Christmas ornaments. Student creations could be displayed at a local shopping center or other heavily traveled

location. It would be particularly helpful to have a local sponsor or sponsors—including a media outlet—to provide funding, awards, and publicity. A jury of art teachers and community leaders could be used to judge the entries, and could determine what is actually shown to the public if there are too many entries. The City and County recycling coordinators might consider a contest against neighboring municipalities' schools to generate interest in recycling.

- Several performing groups have delivered the recycling message very successfully to schools throughout the Commonwealth. These groups include The Illusion Maker and Timothy Wenk (who performs “The Magic of Recycling”). These groups will come into the schools and perform at student assemblies. These programs are eligible for funding through the Section 902 Recycling Program Grants. Application must be made through a municipality or county. In past years the County has hired such entertainers. This has not taken place for the past two years, however.
- If the schools are not recycling or if the in-school recycling programs have been struggling, school recycling programs are also eligible for Section 902 grants for containers and educational materials. Some districts have benefited from establishing student committees to promote recycling and help manage the programs. Some have used revenue from materials as incentive for students to participate. The Millcreek School District in Erie County, for example, has used revenue to purchase materials that support class projects. Some schools have used recycling as an opportunity to promote exchanges between older and younger students. In Plum Borough (Allegheny County), high school students were trained to teach primary school students about recycling and waste reduction. The County recycling coordinator notes that some education is done at the County level.

Finally, because the City has such limited staff and resources, it might consider options for eliciting support to develop and implement programs, as well as develop and distribute educational and outreach materials. Suggestions include:

- Providing internships for students attending area universities;
- Working with scouting groups;
- Working with school environmental groups;
- Gaining support from youths that must serve community hours for honor society programs;
- Approaching local churches that need community projects for their youth groups.

The best strategy for promoting recycling is to engage a variety of approaches, particularly making use of creative promotions that capture the imagination and recognize businesses, institutions and individuals, as these are approaches that will probably lead to greater media coverage as well. Because there are multiple cultures in the City of Lebanon, educational materials with more illustrations and fewer words are recommended.

Ms. Joy Peffley
City of Lebanon
9/27/2004
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We appreciate the opportunity to work with the City on this project, and hope the suggestions provided in this report are helpful. Please do not hesitate to contact me at (401) 782-6710 if you have any questions.

Very truly yours,

R. W. BECK, INC.

Susan Bush
Project Manager