

Recommendations for a Recycling Drop-Off Bin

Borough of Cheswick
Cheswick, Pennsylvania



Rachel Carson, Born in Springdale, PA (1907-1964)

June 2000



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Background

The Pennsylvania Department of Environmental Protection (PA DEP), the Governor's Center for Local Government Services, the Pennsylvania State Association of Township Supervisors (PSATS) and the Solid Waste Association of North America (SWANA) formed a training partnership for Pennsylvania local governments interested in achieving higher recycling rates. Through this partnership, Cheswick Borough was awarded a \$5,000 grant to receive recycling technical assistance from Gannett Fleming, Inc.

Introduction

In August 1994, Cheswick Borough received an Act 101, Section 902 grant from the Pennsylvania Department of Environmental Resources (now the Department of Environmental Protection, DEP) to initiate a voluntary curbside recycling program. Since the population of the Borough is less than the Act 101 threshold, the State does not require the Borough to recycle. Rather, the Borough chose to mandate recycling with Ordinance 696-C, which was passed despite Mayor Accorsi's veto in January 1995. The Ordinance mandated the collection and separation of recyclables from residential, commercial, and institutional establishments, and setup a biweekly municipal curbside pickup program. Recycled materials included newspaper, glass, plastics, aluminum, steel, and bimetallic cans. For a summary of events related to the Borough recycling program from 1992 to present, please refer to Table 1, which is located at the end of the report.

In January 1998, the curbside program was disbanded due to cost, and a drop-off program was implemented in its place. The drop-off program consisted of a dumpster for collecting commingled recycling products, such as glass, plastics, and aluminum cans. The dumpster was provided by Waste Management, and located on the lot of Duquesne Power Company for a time before it was moved to Rachel Carson Park in 1999. In May 2000, Council voted to remove the recycling dumpster for a number of reasons. The Borough incurred a fee of \$1,500 a year (\$375 per haul, 4 times a year) for a service that was not effective. Three of four hauls to the recycling center were rejected due to refuse contamination.

Purpose

Cheswick Borough is interested in reestablishing a recycling program. In order for a drop-off program to be implemented again, the Borough would like recommendations on the best possible methods to prevent refuse contamination, and the most cost effective means of providing a recycling program.

Scope of Work

The original scope of work that was submitted to SWANA was modified slightly as a result of a meeting on May 31, 2000 between Ray Regan of Gannett Fleming and Carol Hanna, Richard Polcsak, and Dom Pizoli. The modified scope includes the following tasks:

1. Contact Peter Previte, the Allegheny County Recycling Coordinator, about the possibility of placing a County drop-off bin at Rachel Carson park.
2. Contact Brian Chizeck, a recycling coordinator for Waste Management, about returning a recycling bin to Rachel Carson park with labeling stickers that describe what can be placed in the bin.
3. Contact recycling vendors regarding other methods of collecting recyclables that will encourage participation and minimize the potential for refuse contamination.
4. Provide cost estimates and funding sources for each alternative.
5. Suggest methods of public education on recycling.
6. Provide information on the status of recycling in Pennsylvania and a list of markets for recyclable materials to educate the Borough.

Task 1: Potential for a County Drop-off Bin at Rachel Carson Park

Peter Previte, the Recycling Coordinator for Allegheny County, has selected 9 county parks to furnish with drop-off bins. The parks were selected on the basis of accessibility to Allegheny County residents. At least one of the selected parks is within a half-hour driving distance from each town within the County. According to Mr. Previte, Hartwood Acres is the closest of the selected parks to Cheswick, which is a 13-mile (26-minute) drive for Borough residents. Mr. Previte is not looking to add parks to the list at this time.

Task 2: Potential for a New and Improved Recycling Bin from Waste Management

Brian Chizeck of Waste Management located a 20 cubic yard "A" Frame recycling container for use by the Borough. The "A" Frame container is labeled with "For Bottles and Cans Only." A photograph of the "A" Frame container is provided in Appendix A.

Currently, Waste Management has only one recycling container available. So, a container cannot be dropped off at the same time as one is picked up. For the return service of a container, Waste Management has a \$50 additional charge. The pickup and return of a recycling bin would cost the Borough \$425 rather than \$375 if two containers were available.

Task 3: Other Recycling Bin Possibilities

One alternative for the Borough is to purchase a bin, and take responsibility for hauling the materials directly to a buyer. The best equipment alternative for hauling the materials is a recycling trailer. Roll-off bins and recycling dumpsters require specialized trucks for hauling. Recycling trailers, however, can be hauled with either a pick-up or one-ton truck. Several manufacturers offer recycling trailers. A list of three of them is provided below:

- **Pro-Trainer, Inc.;** P.O. Box 427; Alexandria, Minnesota 56308
 - Contact Marilyn Fraber at 800-248-7761
- **Dempster Industries, Inc.;** P.O. Box 848; Beatrice, Nebraska 68310
 - Contact Bob Hemphill at 800-777-0212
- **GS Products,** Summerset, Pennsylvania
 - Contact Gerry Martin at 814-445-5866

Additional vendor and product information is provided in Appendix A. It should be noted that Gannett Fleming does not endorse any particular vendor. For additional information regarding these products, Peter Previte can be contacted at 412-578-8390.

The advantages of a recycling trailer over roll-off bins and recycling dumpsters are the following:

- Less of chance of refuse contamination due to compartmentalization and appearance.
- Easy to relocate if site becomes problematic.
- Can be hauled to a recycling center with trucks that the Borough currently owns.

Task 4: Cost Estimates and Funding Sources

A list of unit costs and freight charges are provided in Table 2. Pro-Trainer provides two units, which appear to be ideal for Cheswick Borough: the 9 cubic yard ProTrailer II Junior with 2 compartments, and the 16 cubic yard ProTrailer II Junior with 4 compartments. Dempster offers two recycling trailers, which are called the AlleyCat models. The RSWT-1500 AlleyCat model is 6 cubic yards and has 6 compartments. The RSWT-3000 model AlleyCat is 10 cubic yards and has 10 compartments. Additional information on these models is provided in Appendix A.

Table 2: Capital Cost Estimates for Recycling Trailers

| Model Name | Specifications | Unit Cost | Freight | Capital Cost |
|------------------------|----------------------------|------------------|----------------|---------------------|
| ProTrailer II Jr. | 9 CY with 2 compartments | \$5,500 | \$600 | \$6,100 |
| ProTrailer II Jr. | 16 CY with 4 compartments | \$7,500 | \$600 | \$8,100 |
| AlleyCat RSWT-1500 | 6 CY with 6 compartments | \$8,745 | \$700 | \$9,445 |
| AlleyCat RSWT-3000 | 10 CY with 10 compartments | \$10,846 | \$700 | \$11,546 |
| GS 2323 Model Aluminum | 18 CY with 1 compartment | \$15,200 | \$100 | \$15,300 |
| GS 2323 Model Steel | 18 CY with 1 compartment | \$14,200 | \$100 | \$14,300 |

Annual operating costs will depend either on the volume of the bin or the established pick-up schedule as well as the traveling distance to the recycling facility. The 16 cubic yard ProTrailer II Jr. with 4 compartments offers the most volume, and the lowest cost per cubic yard.

Allegheny County provided a list of 80 recycling facilities that either buy or accept recycled materials. This list was reviewed with respect to which facilities would be most appropriate for the Borough. The review considered types of materials accepted, the number of different materials accepted, and the traveling distance from Cheswick. A full list of Allegheny County recyclers is provided in Appendix B; the short list is shown in Table 3.

Table 3: Short List of Recycling Facilities

| Recycling Facility | Aluminum | Glass | Plastics | Bimetal cans | Newspaper |
|-------------------------------|----------|-------|----------|--------------|-----------|
| Allegheny Recycling Corp | ✓ | ✓ | | ✓ | ✓ |
| Browning Ferris Industries | ✓ | ✓ | ✓ | ✓ | ✓ |
| Metalife Resources | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pittsburgh Recycling Services | ✓ | ✓ | ✓ | ✓ | ✓ |

Directions to each short-listed recycling facility are provided in Appendix C. These directions include traveling distances and driving time as estimated by MapQuest. The contact information for the four facilities listed in Table 3 is provided on Table 4.

Table 4: Contact Information for Short List of Recycling Facilities

| | |
|--|--|
| Allegheny Recycling Corp | Browning Ferris Industries (BFI) |
| 1101 William Flynn Highway, Route 8 Glenshaw, PA 15116 Phone: 412-486-3369 | West Noblestown Road Carnegie, PA 15103 Phone: 412-429-2600 |
| 13 miles from Cheswick 21 minute drive | 23 miles from Cheswick 40 minute drive |
| Metalife Resources | Pittsburgh Recycling Services |
| Mida Industrial Park Donora, PA 15033 Phone: 724-379-9535 | 103 32 nd Street Pittsburgh, PA 15201 Phone: 412-391-3100 |
| 48 miles from Cheswick 55 minute drive | 15 miles from Cheswick 25 minute drive |

On the basis of time and distance, Allegheny Recycling Corporation and Pittsburgh Recycling Services appear to be the two best alternatives for the Borough. Annual operating costs for hauling a Borough-owned recycling trailer to one of these recycling centers assumes the following: (1) a Borough employee works for \$18 an hour, (2) a half-hour is needed to mobilize, (3) a half-hour is needed to unload the bin at the recycling center and exchange paper work (4) a half-hour is needed to demobilize, (5) cost of gasoline is a \$1.50 per gallon (6) a hauling truck gets 10 miles to the gallon. The bin that was previously at Rachel Carson park was 30 cubic yards.

With a 15% contingency, the estimated per haul is \$75. For eight hauls per year, the annual operating cost for hauling to either the Allegheny Recycling Corporation or Pittsburgh Recycling Services is \$600. Hauling will require three to four hours of Borough employee time eight times a year if a 16 cubic yard bin is selected. Smaller bins will require more frequent hauling.

Section 902 grant money is available through the DEP for the purchase of recycling equipment. The grant money covers the cost of equipment, freight, and taxes. As you know, annual operating costs are not covered by 902 grant money. Additionally, the Borough is responsible for

a 10% match on all equipment purchases. The 902 grant money that became available to the Borough in 1994 was liquidated two years after the agreement, and is therefore no longer available. The Borough can reapply for 902 grant starting on July 15. Applications will be accepted until October. As part of a new DEP policy for providing 902 grant money, the Department requests a pre-application meeting with all applicants. Bob Emmert would be the DEP primary contact for the Borough. Mr. Emmert can be contacted at 421-442-4000. Table 5 summarizes the out-of-pocket costs for purchasing a recycling trailer with 902 grant money. Since each alternative has a different hauling cost, the best way to compare out-of-pocket costs is to determine the present worth. The present worth value for annual hauling costs assumes a 7.5% interest rate for 5 years.

The DEP also awards performance grant money to municipalities with recycling programs. The grant is performance based and calculated using the type and weight of materials recycled, and the percentage of recyclables that are diverted from landfills.

Table 5: Out-of-Pocket Costs for Purchasing a Recycling Trailer with 902 Grant Money

| Unit | Specifications | Borough Cost w/a 902 Grant | Annual Cost Estimate* | Present Worth [^] |
|-------------------|----------------------------|----------------------------|-----------------------|----------------------------|
| ProTrailer II Jr. | 9 CY with 2 compartments | \$610 | \$1,000 | \$4,655 |
| ProTrailer II Jr. | 16 CY with 4 compartments | \$810 | \$600 | \$3,237 |
| AlleyCat 1500 | 6 CY with 6 compartments | \$945 | \$1,500 | \$7,013 |
| AlleyCat 3000 | 10 CY with 10 compartments | \$1,155 | \$900 | \$4,796 |
| GS Model 2323 S | 18 CY with 1 compartment | \$1,410 | \$650 | \$4,039 |
| GS Model 2323 A | 18 CY with 1 compartment | \$1,510 | \$500 | \$3,532 |

* Annual cost is based on the number of hauls to the recycling facility per year.

[^] Present worth is based on 7.5% interest rate for 5 years in addition to the values shown.

The steel GS Model 2323 will cost more 30% more to haul than the aluminum GS Model 2323 because of the difference in weight. On the basis of present worth, the aluminum GS Model 2323 and the ProTrailer II Jr. with 16 cubic yards of storage and 4 compartments are the best alternatives for a recycling trailer.

Task 5: Public Education on Recycling

Gannett Fleming suggests five methods to educate Borough residents on recycling.

- **Classroom Education** : The DEP has a number of publications for use in the classroom. “Erth Moore Worm” is an educational story to teach children about composting, ecology and the environment. “I’m a Blue Ribbon Recycler” is a book of activities that help children to understand the concepts of recycling. Both of these publications are attached to this report. Additional copies can be ordered from the DEP at <http://www.dep.state.pa.us>. Click on the Recycling Works logo.
- **Newspaper articles** : As you know and have done in the past, newspaper articles are an effective means to inform Borough residents of recycling activities. Two representativ

newspaper articles for the Valley News Dispatcher are provided in the Recommendations section of this report.

- **Presentations:** The DEP waste minimization and planning staff is ready and willing to speak to any group about recycling and composting. They have given presentations to all grad levels, civic groups, municipal officials and professional organizations over the past 10 years. If a presentation is of interest to the Borough, call Sharon Svitek of the DEP Southwest Regional office at 412-442-4130.
- **Flyers:** In the past, the Borough distributed flyers to each resident for the curbside recycling program. If refuse contamination of the recycling bin reemerges, consider distributing flyers about proper usage of the recycling bin. An example flyer is attached to this report.
- **Proper Labeling of Recycling Bin:** As discussed at the May 31st meeting, the main reason for refuse contamination of the recycling bin was that it looked like a dumpster, and it did not have recycling stickers. A sign at the park entrance that lists the acceptable materials for recycling and proper labels on the bin should help to reduce bin contamination.

Task 6: Status of Recycling in Allegheny County and the State of Pennsylvania

The following are excerpts from the most recent Allegheny County HealthBeat publication, which is dated October 1998, and can be found at:

<http://www.county.allegheny.pa.us/achd/hbeat/9810/hb9810.asp>

In 1997, Allegheny County generated 1,852,865 tons of refuse from residences, commercial and institutional establishments, and community events. Through municipal recycling programs, 417,431 tons of this waste was recycled (22% of the total volume). The above tonnage translates into 7.8 pounds of refuse created per person per day. Allegheny County recycled 1.8 pounds, and the remaining 6.1 pounds is landfilled. The statewide goal is to increase the recycling rate to 35% by the year 2003. This goal translates to recycling about one additional pound per person each day.

Act 101 requires all municipalities with 5,000 or more residents to have curbside recycling programs. It also requires commercial, municipal and institutional establishments within these municipalities to participate. Of the 130 municipalities in Allegheny County, 68 municipalities have mandated curbside recycling programs. Ten municipalities were not required to set up curbside recycling programs, but have done so voluntarily. The remaining 52 municipalities do not have municipal recycling programs.

Act 101 targeted the most prevalent waste materials: clear and colored glass, aluminum and steel cans, plastic bottles, and paper (office, newsprint and corrugated). Mandated communities are required to recycle at least three of these materials. In addition, leaves and yard waste must be separated from the trash. Waste disposal facilities do not accept shipments comprised primarily

of leaf waste unless a separate composting facility has been provided. Figure 1 shows the Act 101 materials recycled in Allegheny County in 1996.

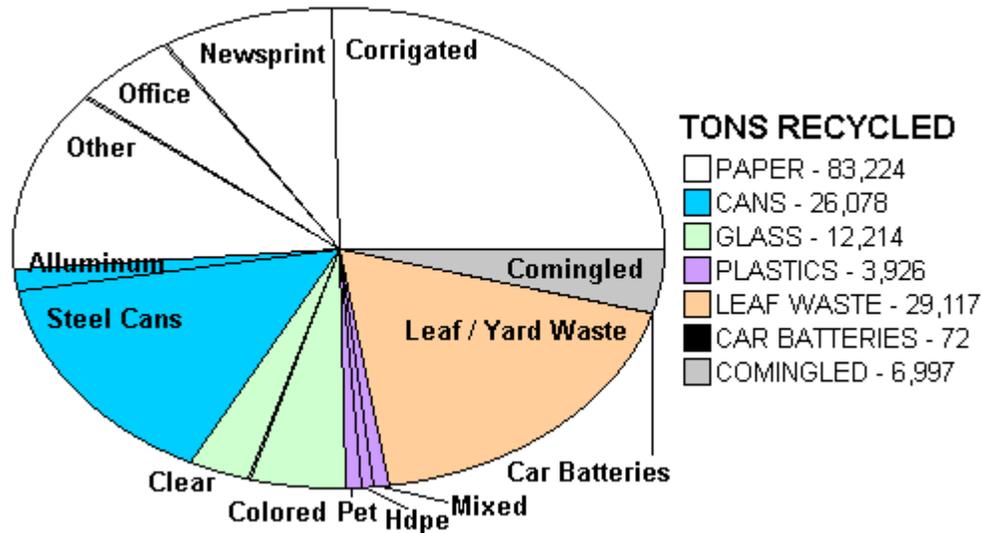


Figure 1: Act 101 Materials Recycled in Allegheny County in 1996

Before Act 101, some individuals chose to recycle but recycling of municipal waste was almost nonexistent. When the program first began, Allegheny County recycled only 515 tons of municipal waste. Today 417,431 tons of materials are recycled, which is more than 800 times greater than the amount in 1988. As shown in Figure 2, the DEP goal for 2003 is a 35% increase in recycling base the 1996 tonnage.



Figure 2: Recycling Trends

Recycling rates in Allegheny County are average relative to other Pennsylvania counties. In 1996, the County ranked 28th out of 67 counties. During 1996, the County recycled 22.5% of the municipal waste. Across Pennsylvania, recycling rates ranged from 1.0% in Fulton County to 61.6% in Lebanon County. Figure 3 shows the percent of materials recycled by county for 1996.

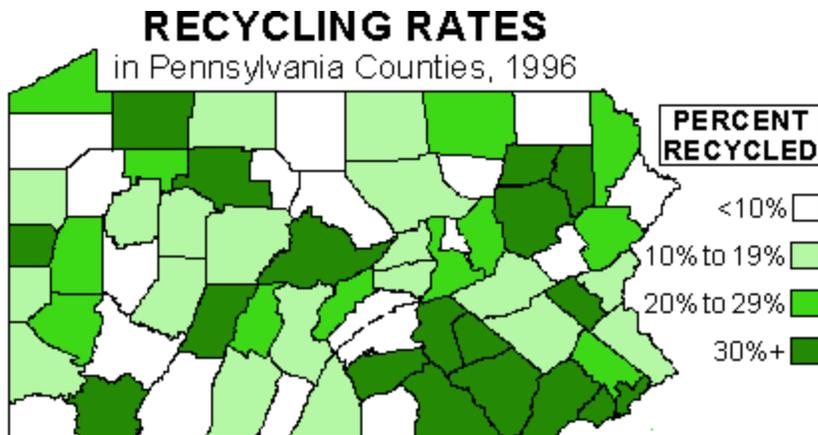


Figure 3: Recycling Rates in Pennsylvania Counties in 1996

Recommendations

- 1. Contact Waste Management about locating the “A” Frame recycling bin at Rachel Carson Park.**

Brian Chizeck
Waste Management
412-997-5854

- 2. Arrange for a 902 grant pre-application meeting with Bob Emmert of the DEP to discuss the purchase of a recycling trailer.**

Bob Emmert
DEP, Bureau of Land Recycling and Waste Management
400 Waterfront Drive
Pittsburgh, PA 15222-4745
412-442-4000

- 3. Apply for a 902 grant for either the ProTrailer II Jr. 16 cubic yard, 4 compartment recycling trailer or the aluminum GS Model 2300 before the DEP October deadline.**

- 4. Publish the following two advertisements in the Valley News Dispatch:**

Stop Junk Mail

Borough Council would like to reduce the amount of trash generated in Cheswick. One way to accomplish this task is to reduce paper waste. If you would like to stop receiving junk mail delivery, please write to:

Mail Preference Service
c/o DMA
P.O. Box 9008
Farmingdale, NY 11735

Your name will be taken off nationally distributed mailing lists within 3 to 4 weeks.

Recycling Bin Returns to Rachel Carson Park

Borough Council has returned the recycling bin to Rachel Carson Park. In the past, we have had problems with people dumping garbage into the recycling bins. When this

happens, recycling centers reject the bin, and the contents of the bin end up in a landfill.

The new bin looks more like a recycling bin than the old one, and has labels that will tell you what can be placed into it. Please place only aluminum cans, bimetal cans, #1 and #2 plastic bottles, and glass bottles (all colors) into the recycling bin. We thank you for your cooperation.

5. Institute other methods of public education such as classroom education and public presentations.

Conclusions

There are several alternatives available to Cheswick Borough for providing an effective recycling program to the community at the current cost of \$1,500 a year or less. Waste Management will be glad to place a bin at Rachel Carson park with the appropriate stickers. The improved bin should help to minimize refuse contamination. Other public education tools such as newspaper articles, classroom education, public presentations, and flyers can be effective in reducing refuse contamination as well as increasing the tonnage of recycled materials.

If the Borough chooses to purchase a recycling trailer, 902 grant money is available to cover 90% of the equipment cost. The responsibility for hauling the bin to a recycling center becomes that of the Borough. Recycling trailers can be hauled with trucks that the Borough currently operates, and will require only 24 hours of Borough personnel time per year (for a trailer 16 cubic yards or larger). The annual cost of retaining a 16 cubic yard recycling trailer is estimated at \$600. summary of the advantages of a Borough owned recycling trailer are the following:

- Annual cost for recycling \$900 less than current expenditure.
- Borough keeps the proceeds from recycling rather than the refuse contractor.
- Direct interaction with the recycling buyer, and therefore certain to receive tonnage reports, and reasons for rejected loads.
- 902 grant money is available for the purchase, which will make even the initial cost of the equipment plus the freight charge less than the current recycling expenditure.