

**2003 SWANA
TECHNICAL ASSISTANCE PROJECT
MUNHALL BOROUGH RECYCLING
DATABASE**

FINAL REPORT



Conducted by

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**2003 SWANA
TECHNICAL ASSISTANCE PROJECT**

MUNHALL BOROUGH RECYCLING DATABASE

1.0 BACKGROUND

The Pennsylvania Department of Environmental Protection (PaDEP), 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, Munhall Borough was awarded \$6,000 in technical assistance services from Gannett Fleming, Inc.

2.0 INTRODUCTION

Munhall Borough has approximately 12,000 residents and is mandated to recycle under Act 101 requirements. The Borough of Munhall currently provides curbside recycling collection services to its residents. The Borough collects commingled recyclables including glass, aluminum cans, and plastics on a monthly collection schedule. The Borough, however, does not have a recycling program in place for commercial establishments and many businesses are not in compliance with Act 101 recycling requirements.

The Borough is requesting the technical assistance from Gannett Fleming to develop a recycling database to assist with tracking recycling efforts and to be used as a tool for improving recycling participation. The front end of the database will include a mail merge that will be used to assist the Borough in the distribution of recycling surveys, recycling educational materials, etc. The database will also be designed to input and track annual recycling data (tonnages) from Borough residents and businesses.

3.0 SCOPE OF WORK

The following tasks were identified for the project:

Task #1 Gannett Fleming staff will work with the Borough staff to gather pertinent background information necessary for the completion of this study. Specific Borough needs and/or problems will be considered as they are identified.

Task #2 GF staff will create a mail merge for commercial establishments to be used for the distribution of surveys and or educational materials and related information.

Task #3 GF will develop a functional database that will allow the Borough to input annual recycling tonnages reported by local business and for residential recyclables collected by the Borough. The database recyclables data entry screen will be

designed in a format consistent with the 904 Recycling Performance Grant in order to facilitate the Borough's completion and submittal of the 904 grant.

GF notes that the database development for this project is scaled to meet the \$6,000 budget available through the SWANA Recycling Technical Assistance Grant. As discussed with Munhall Borough and the Pennsylvania Department of Environmental protection (PADEP), the proposed database will be a preliminary database that may be further developed to include additional features and/or be distributed to other municipalities.

Task #4 GF will provide a very brief summary report outlining the development and functions of the database.

4.0 TASK COMPLETION

Task #1 Gannett Fleming staff will work with the Borough staff to gather pertinent background information necessary for the completion of this study. Specific Borough needs and/or problems will be considered as they are identified.

Gannett Fleming personal worked closely with Munhall Borough (specifically Larry Oleksa) in understanding Borough recycling operations and identifying the needs and challenges of the recycling program. Communication with the Borough took place through teleconferences and email.

Task #2 GF staff will create a mail merge for commercial establishments to be used for the distribution of surveys and or educational materials and related information.

Gannett Fleming obtained relevant commercial information from Munhall Borough. This information included business names and addresses. The information was obtained in the form of a Microsoft Excel spreadsheet. The information was imported into an Access database (described in detail under Task #3 below). The Access database is able to output the data in the form of mailing labels to assist the Borough in distributing surveys and other relevant recycling program information to local businesses (see Appendix A).

Task #3 GF will develop a functional database that will allow the Borough to input annual recycling tonnages reported by local business and for residential recyclables collected by the Borough. The database recyclables data entry screen will be designed in a format consistent with the 904 Recycling Performance Grant in order to facilitate the Borough's completion and submittal of the 904 grant.

GF notes that the database development for this project is scaled to meet the \$6,000 budget available through the SWANA Recycling Technical Assistance Grant. As discussed with Munhall Borough and the Pennsylvania Department of Environmental Protection (PADEP), the proposed database will be a preliminary database that may be further developed to include additional features and/or be distributed to other municipalities.

To complete task 3, a database application was developed in Microsoft Access using Visual Basic for Application (VBA). The application is described in some detail below.

The Main Menu for the application is shown in Figure 1.

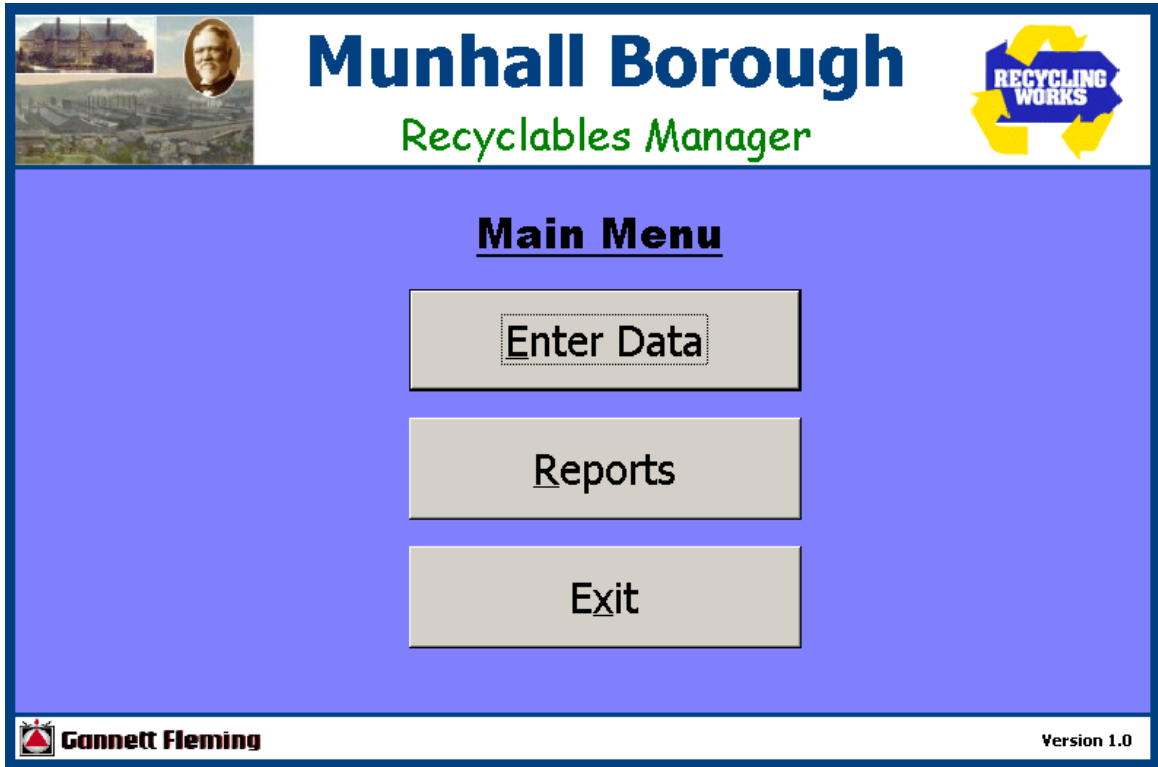


Figure 1 – Main Menu

The application allows for various types data entry and reporting.

Data Entry

The application allows for the tracking of the following information:

- Residential Recycling Tonnages
- Commercial Recycling Tonnages
- Address and contact information for local businesses
- Address and contact information for recyclables brokers

The Data Entry Menu is shown in Figure 2.

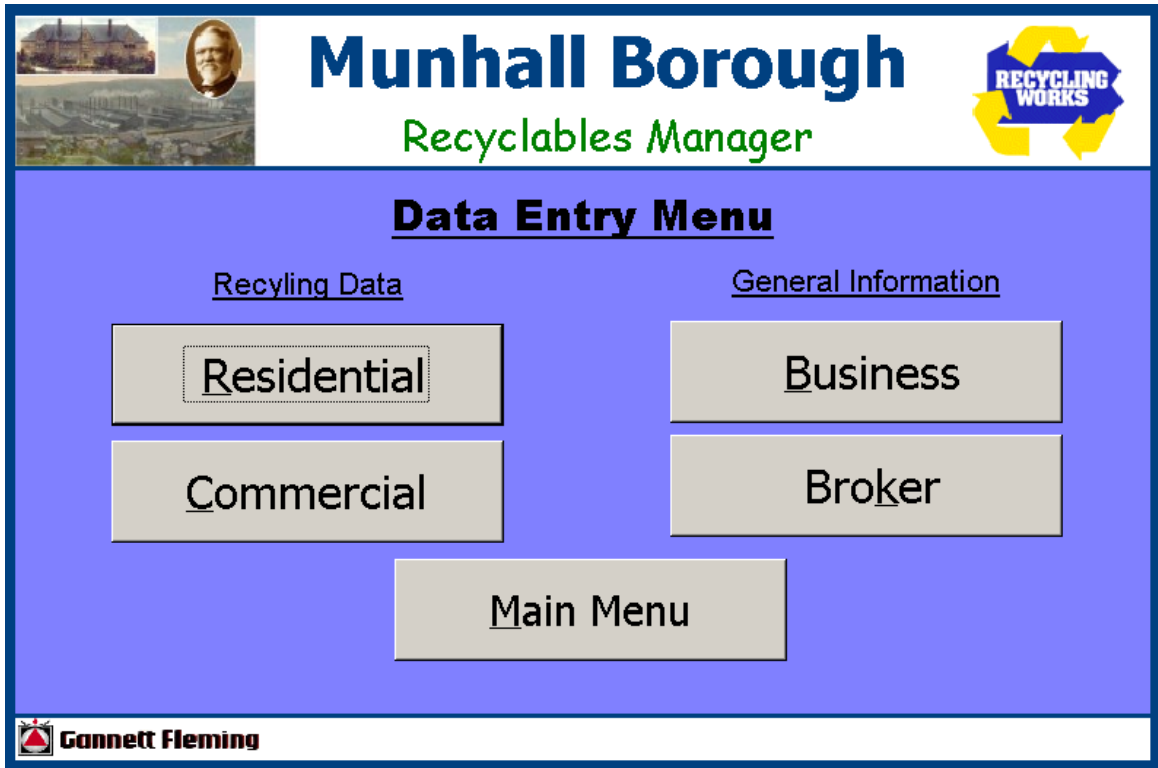


Figure 2 – Data Entry Menu

Residential Recycling Tonnages

To enter residential recycling information or edit existing data, the user clicks the Residential button on the Data Entry Menu and is presented with a dialog box (See Figure 3). At this point, the user indicates whether a new record is to be added or whether existing data is to be viewed and potentially edited. If the user wants to view and potentially edit an existing record they must select the broker of interest, the date the recyclables were processed and the tracking number for the batch.

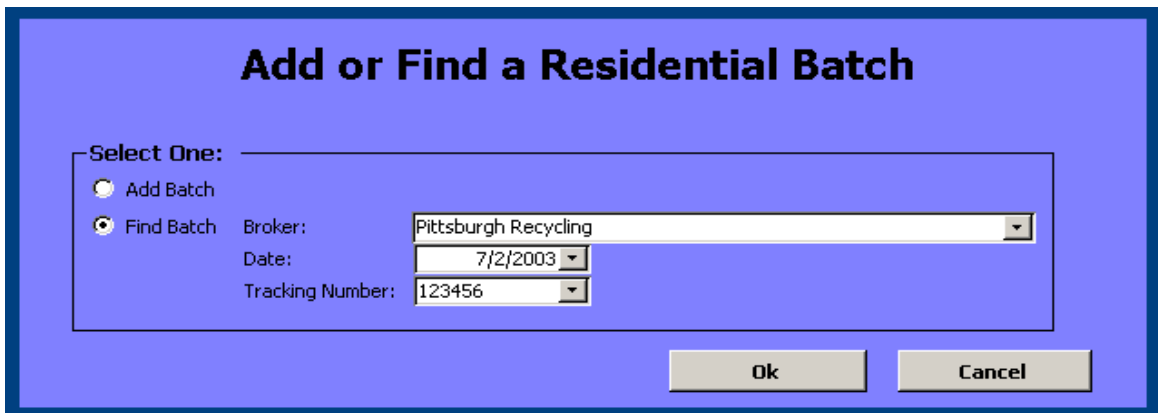


Figure 3 – Dialog box used to add a new residential recycling record or to edit an existing record

Once this information is entered, the detailed tonnages can be viewed on the Residential Recycling Form (Figure 4).

Material	Tons	Material	Tons
Old Newsprint:	34	Amber Glass:	67.9
High Grade Office Paper:	67	Clear Glass:	45
Corrugated:	12	Green Glass:	34.9
Other Marketable Grades of Paper: (i.e. magazines, phone books)	45.7	Mixed Glass:	3.6
Mixed Paper:	23.4	PET Plastics:	8.3
Aluminum Cans:	123	HDPE Plastics:	34.9
Steel / Bimetallic Cans:	56	Other Plastics:	23.5
Mixed Cans:	12	Mixed Plastics:	8.5
		Commingled:	3.2

Figure 4 – Residential Recycling Data Entry Form

Commercial Recycling Tonnages

To enter commercial recycling information or edit existing data, the user clicks the Commercial button on the Data Entry Menu (Figure 2) and is presented with a dialog box (Figure 5).

Figure 5 – Dialog box asking user to specify the business and reporting year of interest.

The user selects the business and reporting year of interest. If a record already exists, the Commercial Recyclables Data Entry Form is displayed (Figures 6a and 6b) otherwise the user is asked whether a new record should be added.

Figure 6a – Commercial Recyclables Data Entry Form (904 Eligible Materials)

The Commercial Recyclables Data Entry Form is a two part form. The first part (Figure 6a) is for entering 904 eligible recyclables. The second part (Figure 6b) is for entering all other recyclables.

Munhall Borough		Recycle Manager	
Commercial Tonnage Entry			
904 Eligible Materials		Other Materials	
Business: A & B Donuts 514 East Eighth Avenue Munhall, PA 17120 <input type="button" value="Edit"/>		Reporting Year: 2003	
Material	Tons	Material	Tons
14. Food Wastes:	<input type="text"/>	Grass:	<input type="text"/>
15. Other Glass:	<input type="text"/>	Leaves:	<input type="text"/>
16. Major Appliances:	<input type="text"/>	Tree Stumps:	<input type="text"/>
17. Other Ferrous:	<input type="text"/>	23. Automotive:	<input type="text"/>
18. Other Non-Ferrous:	<input type="text"/>	Antifreeze:	<input type="text"/>
19. Textiles:	<input type="text"/>	Lead Acid Batteries:	<input type="text"/>
20. Mattresses:	<input type="text"/>	Oil Filters:	<input type="text"/>
21. Wood:	<input type="text"/>	Tires:	<input type="text"/>
Wood Packaging:	<input type="text"/>	Used Motor Oil:	<input type="text"/>
Other: <input type="text"/>	<input type="text"/>	24. Electronics:	<input type="text"/>
22. Yard Trimmings:	<input type="text"/>	Circuit Boards:	<input type="text"/>
Brush and Branches:	<input type="text"/>	Computer Monitors and TVs:	<input type="text"/>
		Consumer Electronics:	<input type="text"/>
		Fluorescent Tubes:	<input type="text"/>
		25. Household Hazardous Waste:	<input type="text"/>
		26. Other Recyclables:	<input type="text"/>
			<input type="text"/>
			<input type="text"/>




Figure 6b – Commercial Recyclables Data Entry Form (Other Materials)

Contact and Address Information for Businesses

To enter contact and address information for businesses or to edit existing data, the user clicks the Business button on the Data Entry Menu (Figure 2) and is presented with a dialog box (Figure 7).

Add or Find a Business

Select One: _____

Add
 Find

Figure 7 – Dialog box used to add a new business or to edit an existing record

If the user wants to view or edit information for an existing business, the Find radio button is selected and the business is entered or selected from the dropdown box. When the Ok button is clicked, the Business Data Entry Form is displayed (Figure 8).

Munhall Borough Recycle Manager

Business Data Entry

Name:

Owner: Phone:

Address:

City: State: PA Zip Code: 15120

Figure 8 – Business Data Entry Form

Contact and Address Information for Brokers

To enter contact and address information for brokers or to edit existing data, the user clicks the Broker button on the Data Entry Menu (Figure 2) and is presented with a dialog box (Figure 9).

Add or Find a Broker

Select One:

Add

Find

Figure 9 – Dialog Box to Add or Find a Broker

If the user wants to view or edit information for an existing broker, the Find radio button is selected and the broker is entered or selected from the dropdown box. When the Ok button is clicked, the Broker Data Entry Form is displayed (Figure 8).


Munhall Borough		Recycle Manager	
Broker Data Entry			
Name:	<input type="text" value="Pittsburgh Recycling"/>		
Contact:	<input type="text"/>	Phone:	<input type="text"/>
Address:	<input type="text"/>		
	<input type="text"/>		
City:	<input type="text"/>	State:	<input type="text"/>
		Zip Code:	<input type="text"/>
 Gannett Fleming		<input type="button" value="Add"/>	<input type="button" value="Delete"/>
<input type="button" value="Data Entry Menu"/>			

Figure 10 – Broker Data Entry Form

Reports

In addition to the data entry and editing features described above, the application provides reporting capabilities. From the Reports Menu (Figure 11) the user can select from four reports.

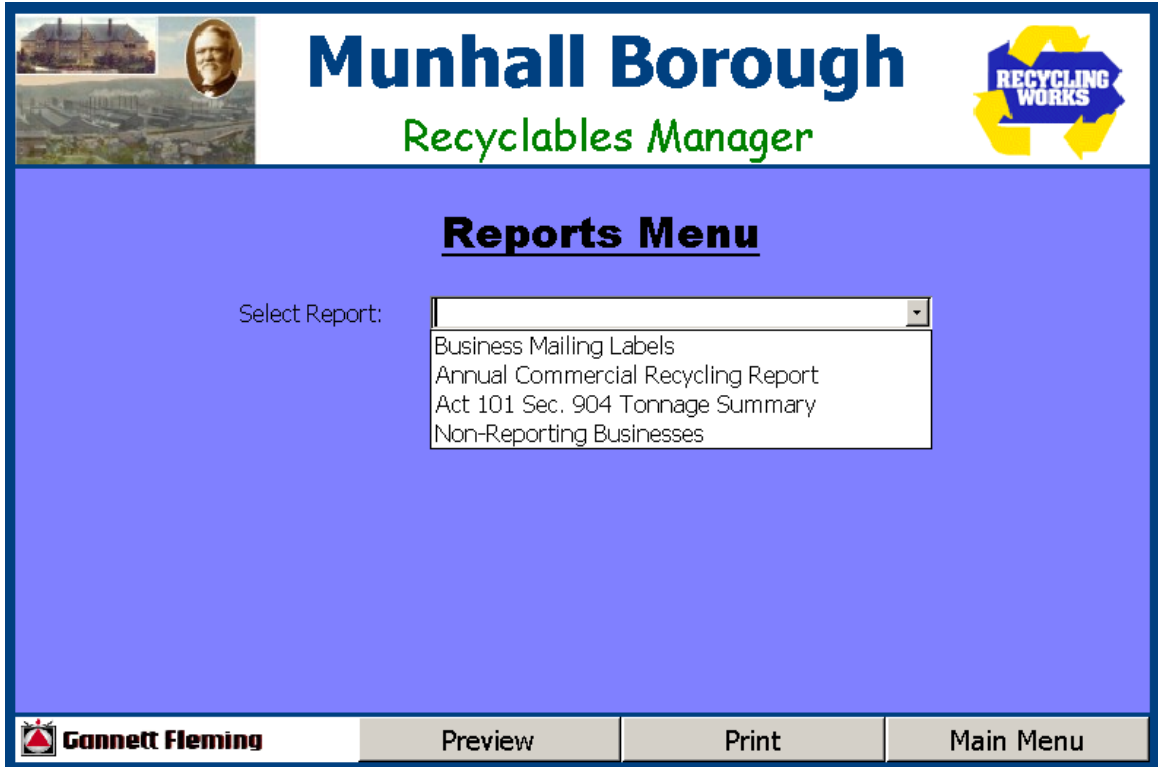


Figure 11 – Reports Menu

Commercial Mailing Labels

The first report is the Commercial Mailing Labels Report. It generates mailing labels for each of the businesses in the database. An example of the report is shown in Appendix 1. Note that some of the businesses shown on this example report are listed as “Business Occupant.” Apparently the Borough’s records are somewhat incomplete for these businesses and can be updated as new information becomes available through the use of the Business Data Entry Form (see Figure 8).

Annual Commercial Recycling Report

The second report option on the Reports Menu is the Annual Commercial Recycling Report. This report generates DEP’s standard form intended to be used by businesses to report annual recyclables information. The Recyclables Manager will automatically complete basic information on this form, thereby reducing the data entry required by the businesses. These forms can be distributed to each business in order to obtain annual recyclables information. An example of this form is shown in Appendix B.

Act 101 Sec. 904 Tonnage Summary

The third report option on the Reports Menu is the 904 Tonnage Summary. This report will summarize the data that has been entered on Part III of DEP’s 904 Application. An example of this report is shown in Appendix C.

Non-Reporting Businesses

The fourth report option on the Reports Menu is the Non-Reporting Businesses listing. This report lists all of the businesses for a given year for which no recyclables information has been entered. This report can be used by the township to quickly identify that businesses are still outstanding and may need to be contacted again. An example of this report is shown in Appendix D.

Task #4 GF will provide a very brief summary report outlining the development and functions of the database.

This report serves to meet the requirements of task 4.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Munhall Borough SWANA technical assistance project has resulted in a database application that will allow the Borough to better manage its recycling program. The application captures both residential and commercial recycling tonnages. The material categories allow for a high degree of specificity and correspond to those listed in the DEP Annual Commercial Recycling Report (2500-FM-LRWM0013.3 Rev. 2/2002) for commercial data and the DEP 904 Grant Application (2500-FM-LRWM0013.3 Rev. 3/2003) for residential data. In addition to recycling data, the application also maintains address and contact information for businesses in the Borough and waste brokers utilized for recyclable materials.

The reporting features provided by the database will assist the Borough in performing specific tasks associated with implementing their recyclables program. For example, the application generates mailing labels for all of the businesses in the system. These will be utilized for various mailings the Borough may conduct associated with the program. The application also generates and partially completes the Annual Commercial Recycling Report. This DEP designed form can be distributed to Borough businesses to obtain their annual recycling tonnages. The database also has a Non-Reporting Businesses report that allows for the rapid identification of businesses that are delinquent in reporting annual recycling tonnages to the Borough. This information will help the Borough to ensure that annual reporting is complete as possible. To assist the Borough in submitting the 904 Grant Application, the database automatically summarizes and totals the residential and commercial recycling information in the system and completes Part III of the 904 Application.

The database application developed for Munhall Borough will be a valuable tool in managing and improving the Borough's recycling program. We recommend that Borough staff become familiar with all features of the database. If requested by the Borough, GF will work with the Borough to enhance and improve the database based on the Borough's needs. While the application has been developed specifically for Munhall Borough, it could be modified for use by other municipal entities around the State.