

Recycling Technical Assistance Project # 587
Plainfield Township, Northampton County
Curbside Recycling Program Enhancement



*Sponsored by the Pennsylvania Department of Environmental Protection
through the Pennsylvania State Association of Township Supervisors*

REPORT

April 18, 2016



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RECYCLING TECHNICAL ASSISTANCE PROJECT #587

PLAINFIELD TOWNSHIP, NORTHAMPTON COUNTY

CURBSIDE RECYCLING PROGRAM ENHANCEMENT

1. STATEMENT OF THE PROBLEM

Plainfield Township is a 24.8 square mile rural municipality located 17 miles north of the City of Bethlehem in the Lehigh Valley. As of 2010, the Township population was 6,183, an increase of 515 persons from 2000, as determined by the U.S. Census Bureau. Approximately, 2,350 households are serviced by the Township's current contracted solid waste and recycling hauler, J.P. Mascaro & Sons of Audobon, Montgomery County. J.P. Mascaro & Sons collects single-stream recycling manually, every other week from Township residents. The current contract terminates June 30, 2016. The Township seeks a professional assessment of shifting the future recycling contract to an automated collection system using roll carts, including an evaluation of a volume based program, enhanced outreach, and municipal ordinance revisions.

2. SUMMARY OF WORK COMPLETED

MSW Consultants reviewed and provided comments on Plainfield Township's ordinances and amendments governing solid waste and recycling collection, storage, transportation, processing, and disposal of municipal waste, and outdoor burning, to identify any problem areas or opportunities for additional program requirements. MSW Consultants interviewed Township officials and conducted web-based research regarding the features of the Township's single-hauler municipal waste and recycling hauling contract and collection program. Additionally, MSW Consultants completed a draft application for an Act 101, Section 902 Recycling Development and Implementation Grant, including a pre-application meeting with the Pennsylvania Department of Environmental Protection (PA DEP) to potentially apply for recycling roll cart funding. With this report, MSW Consultants is providing recommendations to increase recycling participation and diversion by residents, which may lead to reduced collection costs.

2.1 REVIEW OF PLAINFIELD TOWNSHIP SOLID WASTE, RECYCLING AND OPEN BURNING ORDINANCES

Although, Plainfield Township is not legally required to enact a mandatory recycling ordinance due to its small population size, the Township enacted Ordinance #300 on December 14, 2005, which requires licensed municipal waste haulers operating in the Township to collect recyclables. Ordinance #300 was amended by Ordinance #364, enacted March 12, 2014, primarily to establish the authorization of a single hauler for the Township's curbside municipal waste and recycling programs. Ordinance #372, enacted May 13, 2015, eliminated authorized hauler licensing fees. Township Ordinance #291, the Plainfield Township Burning Ordinance, enacted April 13, 2005, regulates open burning in the Township. Draft Ordinance #373 establishes the Slate Belt Regional Police Department as the enforcement entity for the burning ordinance.

Plainfield Township desires to modify its curbside municipal waste and recycling program to include automated collection of an expanded list of single stream recyclables through a competitive bid for services in 2016. Additionally, the Township intends to seek an Act 101, Section 902 Recycling Development and Implementation Grant from the PA DEP to assist with funding residential recycling roll carts and educating residents about the new collection program.

Based on the ordinance review to identify opportunities for efficiencies and increase the authority of Township ordinances, MSW Consultants recommends the following:

- ◆ Ordinances #300, #364 and #372 should be consolidated into a single ordinance that:
 - adds, deletes, and updates several definitions,
 - provides for Township ownership of automated collection roll carts (if included in new collection contract),
 - eliminates all references to hauler licensing by the Township and County, and
 - provides that materials to be recycled be established by Township Resolution.
- ◆ Develop a Township Resolution listing materials to be accepted in the curbside recycling program. A Township Resolution allows any changes to be made to the list of recyclables simpler than by amending a recycling ordinance. Changes are typically a result of changing market conditions or contracting with a different hauler/processor.
- ◆ Burning Ordinance #291 and Proposed Burning Ordinance #373 should define and prohibit the burning of recyclables established by Township Resolution.

Specific ordinance recommendations for language changes are provided in Appendix A. A sample municipal recycling resolution is provided in Appendix B.

2.2 AUTOMATED SOLID WASTE AND RECYCLING COLLECTION SYSTEMS

A growing trend in collection systems to increase the recoverability of recyclables is transitioning from manual to automated curbside collection with roll carts. Carts allow for a larger volume of materials to be collected as roll cart sizes typically range from 30 to 96 gallons compared to traditional 18 gallon bins used in manual collection. Automated systems improve efficiency and reduce operation costs as the number of laborers, pick up time, fleet vehicles, and worker injury are decreased. Additional cost savings may be realized in decreased tipping fees as roll carts with lids prevent excess rain water, ice, or snow from entering carts, which would add to the weight of the carts. Residents are able to recycle more efficiently with the increased collection container capacity and elimination of recyclable material separation and bundling. These benefits can be presented to the public to encourage program participation along with the additional benefits of improved environmental and safety impacts from fewer trucks on roadways, closed containers that prevent odors, vectors (that is animals or insects), and litter.

When implementing an automated collection program, municipalities have the option of selecting a variable cart size program versus one size (typically 96 gallon). Offering multiple size carts (typically 35, 64, 96 gallon) allows for residents to make choices to meet their waste collection needs. When residents generate less waste and more recyclables they can opt for a smaller waste cart at a savings. Providing variable cart sizes for waste can allow for increased diversion and recoverability of

recyclables as residents are typically provided a 96 gallon cart for recycling and are incentivized to recycle more and generate less waste in order utilize a smaller waste cart at a reduced rate.

Examples of variable roll cart programs include the following:

Cranberry Township, Butler County, PA offers a three-cart option of waste containers at the following pricing:

Table 1 - Cranberry Township Rates

Service	Per Month Rate	Additional Cart
35 Gallon Waste Cart	\$17.64	\$1.85 extra per month
64 Gallon Waste Cart	\$19.16	\$2.55 extra per month
96 Gallon Waste Cart	\$19.82	\$3.12 extra per month
No cart (bag service only)	\$15.77 (plus \$0.65 tag for each 32-gallon trash bag)	
Additional 32 gallon waste bag tags	\$0.65 per bag	
35, 64, 96 Gallon Recycling Cart	Included in service	
96 Gallon Yard Waste Cart (or bagged yard waste)	Included in service	
Bulky Item	\$4-\$15 per item	

The introduction of automated roll carts, a single-hauler contract for automated collection, and the Collection Connection™ educational program has significantly improved Cranberry Township’s recycling program. Prior to the current program, residents could select from four haulers. Following an almost year-long study and public comment phase, the Township sought competitive bids for the program that includes: volume based waste disposal, weekly unlimited single-stream recycling collection, and unlimited yard waste collection from April to December. Waste, recycling, and yard waste collection all use roll carts, with pricing dependent on the size selected for the waste cart. Vogel Disposal Inc. secured the hauler contract from November 1, 2014 to October 31, 2019. Program funding is provided by the residential service rates, grants and performance incentives for recycling. The larger recycling roll cart volumes from the previous curbside bins allow for a greater quantity and type of materials to be collected. With the conversion to an automated system using a single-hauler contract, Cranberry Township has increased its recycling rate (including yard waste recycling) from less than 9 percent in 2005 to 40 percent in 2016.

Abington Township, Montgomery County, PA has implemented a variable rate automated collection program that has increased collection efficiencies. As a result, the Township has demonstrated cost savings, increased recycling, and decreased waste disposal tonnages as well as the added benefits of cleaner neighborhoods and fewer trucks on the roadways. Residents also appreciate the easy to maneuver carts. Abington has achieved a 57 percent waste diversion rate and a 32 percent reduction in collection costs. The Township provides 35, 65, or 95 gallon waste carts as well as a cart for paper recycling and a separate cart for commingled recyclables.

Table 2 - Abington Township Rates

Service	Per Month Rate
35 Gallon Waste Cart	\$19.00
65 Gallon Waste Cart	\$20.67
95 Gallon Waste Cart	\$22.92
35, 65, or 96 Gallon Paper and Commingled Recycling Carts	Included in service
Yard Waste	Included in service (biodegradable bags must be purchased)
Bulky Item	Fee per item

San Jose, California implemented its Recycle Plus automated waste collection program in 1993 that allows residents to select a 32, 64, or 96 gallon waste cart. Thirty-two gallon carts are provided at the lowest rate; approximately 86 percent of residents subscribe to this container size. After the first year of San Jose's Pay As You Throw (PAYT) program, recycling collection increased by 149 percent and yard waste collection by 45 percent.

Table 3 - City of San Jose, California Rates

Service	Per Month Rate
32 Gallon Waste Cart	\$32.07
64 Gallon Waste Cart	\$64.14
96 Gallon Waste Cart	\$96.21
32, 64, or 96 Gallon Recycling Cart	Included in service
Yard Waste (loose in street)	Included in service
Yard Waste Cart (optional)	\$4.76
Extra Garbage Sticker	\$6.25 each
Bulky Item	\$4-\$15 per item

When deciding to implement a variable rate collection program there are both pros and cons that must be considered as shown in Table 4 - Advantages and Disadvantages of a Variable Rate Cart Program.

Table 4 - Advantages and Disadvantages of a Variable Rate Cart Program

Advantages	Disadvantages
Lower rate options for residents.	Contamination if residents place waste in recycling cart due to lack of space in waste cart.
Increased recoverability of recyclables.	Overflowing waste carts if residents opt for smallest and lowest price cart that is not representative of their waste generation.
Reduced disposal tonnages and costs when residents decrease waste by increasing recycling.	High start-up costs to purchase new equipment (carts of varying sizes).
	On-going operational costs and time spent to distribute and maintain roll carts of varying sizes.
	Possible increase in illegal dumping.

2.3 ROLL CART RECYCLING DEVELOPMENT AND IMPLEMENTATION GRANT FUNDING

In the fall of 2015, MSW Consultants worked with Plainfield Township and the PA DEP, including an in-person meeting, to review the Township’s draft Act 101, Section 902 Recycling Development and Implementation Grant application. The draft application for recycling roll cart funding for automated collection received positive review from the PA DEP and by all indicators would have been approved for funding in the 2015 cycle. Plainfield Township should consider applying for PA DEP grant funding in upcoming funding cycles, particularly if the cost of roll carts is not covered in the upcoming collection contract. Cranberry Township was able to recover 90 percent of the cost of the recycling and yard waste carts with DEP grants.

2.4 EDUCATIONAL OUTREACH STRATEGIES FOR INCREASED RECYCLING PARTICIPATION

In order for a recycling program to be successful, whether using an automated collection system or not, it should be paired with a robust education and outreach program. Outreach sources should include: newsletters (mailed or emailed to reduce waste); a page on the Township website with links to the hauler website; newspaper articles; social media; direct mailers; radio and television promotions; flyers and events. The more frequently residents have access to the recycling messaging, the more they will participate. The PA DEP recommends for Act 101, Section 902 Recycling

Development and Implementation Grant funding consideration, there should be at least four outreach attempts to residents per year, which can include a combination of sources: for example, an annual website update, two newsletter articles, and one direct mailer. Messaging should provide clear graphics, instructions, and benefits of recycling and reducing waste, and should be consistent across all outreach sources.

Cranberry Township's Collection Connection™ automated collection program has developed clear, concise, and consistent messaging for the residential waste and recycling program. It is available online here: <http://www.cranberrytownship.org/DocumentCenter/Home/View/903>. The Township's Collection Connection™ received the Governor's Award for Environmental Excellence in 2005 and the Township's Act 101, Section 904 Recycling Performance Grant funds have tripled due to increased recycling. Residents are pleased with the new automated roll carts as they find the carts easy to maneuver and they no longer have to haul materials, yard waste in particular, to deposit sites.

Plainfield Township should facilitate the conversion to automated carts to encourage positive residential feedback by demonstrating the benefits of the roll carts: easy maneuverability, container overflow and litter prevention, decreased wear and tear from collection vehicle on roadways, and efficiency that results in cost savings to residents. Plainfield Township may consider a pilot automated roll cart program in a select neighborhood(s) to serve as a measurement tool for a Township-wide program and an educational tool to showcase the program to residents.

3. POSSIBLE SOLUTIONS

Based on the research performed, Plainfield Township is presented with the following options to select from for the upcoming collection contract:

- ◆ Conversion to an automated roll cart collection program versus maintaining existing manual collection of curbside bins.
- ◆ If automated collection is selected, implement a program with one waste cart size versus variable waste cart sizes (35, 64, or 96 gallon).
- ◆ Apply for roll cart funding through Act 101, Section 902 Recycling Development and Implementation Grant from the PA DEP.

4. RECOMMENDATIONS

As a result of the research performed and in-house expertise, MSW Consultants recommends Plainfield Township implement the following:

- ◆ Combine Ordinances #300, #364, and #372 into a single ordinance that adds, deletes and updates several definitions, provides for Township ownership of automated collection roll carts (if included in new collection contract), eliminates all references to hauler licensing by the Township and County, and provides that materials to be recycled be established by Township Resolution. (See Appendices A and B)

- ◆ Establish a Township Resolution that identifies the list of accepted curbside recyclable materials to be collected by a contracted hauler.
- ◆ Burning Ordinance #291 and Proposed Burning Ordinance #373 should define and prohibit the burning of recyclables established by Township Resolution.
- ◆ Transition to an automated roll cart collection program with the new hauler collection contract expected to begin on July 1, 2016.
 - MSW Consultants is aware that at a fall 2015 Council Meeting, residents expressed concerned with switching to roll carts. Therefore, a pilot study is recommended to be performed at the initial start of the new hauler contract to gain feedback on the roll cart program, before implementing Township-wide.
- ◆ Include in the new hauler contract bid requests for pricing on variable versus one-size roll cart pricing to compare costs. It is the recommendation by MSW Consultants that a variable cart program be implemented to benefit residents both in pricing and in alleviating concerns of using larger roll carts. Additionally, if future applications are submitted to the PA DEP variable rate programs are favored due to their contribution in increasing the recoverability of recyclables and decreasing waste disposal.
- ◆ Pair any new collection program with a robust education and outreach campaign that provides clear and consistent messaging across a variety of sources: newsletters, Township website, newspaper articles, social media, direct mailers, radio and television promotions, flyers and events.
- ◆ Apply for future cycle(s) of the Act 101, Section 902 Recycling Development and Implementation Grants from the PA DEP for recycling roll cart funding or other funding to support the recycling program.
- ◆ Apply for Act 101, Section 904 Recycling Performance Grants in the fall of each year. The grants are based on the weight of source separated recyclables recycled during the previous year and the population of the municipality.

APPENDIX A

**RECOMMENDATIONS FOR AMENDING
PLAINFIELD TOWNSHIP ORDINANCES**

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APPENDIX A

RECOMMENDATIONS FOR AMENDING PLAINFIELD TOWNSHIP ORDINANCES

The following recommendations are listed by Ordinance and Section:

1. ORDINANCE #300

1.1 ADD THE FOLLOWING DEFINITIONS:

Section III. Definitions

“Bulky Items” are furniture (indoor and outdoor), white goods, bicycles, water heaters and any other large items that may be the result of ordinary housekeeping.

“Leaf Waste” (as defined by Pennsylvania’s Municipal Waste Regulations, Chapter 271) includes leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings.

“White Goods” are household appliances such as washers, dryers, stoves and refrigerators.

1.2 MODIFY THE FOLLOWING DEFINITIONS:

D. “Authorized Collector”: Replace “authorized and licensed” with “contracted”.

K. “Community Activity”: Pennsylvania’s Municipal Waste Regulations specify that community activities are those attended by 200 or more persons. The definition reads: “Events sponsored in whole or in part by a municipality, or conducted within a municipality and sponsored privately, which include, but are not limited to, fairs, bazaars, socials, picnics and organized sporting events that will be attended by 200 or more individuals per day.”

Q. “Garbage” (2): remove “paper” from the list of combustible rubbish. If paper is designated by the Township as a recyclable material, it is not legal to allow the burning of a recyclable material.

Q. “Garbage” (4): delete the first word in the definition, “a”.

V. “Multi-Family Housing Property”: The specification “five or more dwelling units” should be changed to “six (6) or more dwelling units” to be consistent with Ordinance #364 Section IV.

Y. “Newspaper”: The exclusion “glossy advertising inserts” from the definition is no longer a recycling market requirement and may be deleted.

DD. “Recyclables” shall mean those materials designated from time to time by Resolution of Plainfield Township.

EE. “Recycling containers”: Replace “a licensed authorized collector” with “the Township’s contractor”.

HH. “Residential Properties”: Replace “consisting of two (2) or less dwelling units” with “consisting of five (5) or less dwelling units” to be consistent with Ordinance #364 Section IV.

MM: “Transportation”: Add “or recyclables” after “municipal waste”.

NN: “Waste”: Replace “Resources” with “Protection”.

1.3 DELETE THE FOLLOWING DEFINITIONS:

T. “Licensed Authorized Collector”: “Authorized Collector” is defined.

II. “Riffraff”: The term is replaced by “Bulky Items”.

Section IV. Establishment of Curbside Collection Program: Replace “three (3) or more units” with “six (6) or more units” consistent with Ordinance #364.

Section IV. Dumping/Litter follows Section IV Establishment of Curbside Collection Program and should be labeled “Section V.” **This affects the section numbering sequence in the remainder of this Ordinance and Ordinance #364.** The word “authorize” in the third paragraph should be “authorized”. The reference to Section VII in the 5th paragraph should reference Section VIII.

Section V. Preparation and Storage of Municipal Waste: This section should be labeled Section VI consistent with the above. The reference to Section VII in paragraph E. should reference Section VIII.

Section VIII. Transportation of Municipal Waste should be labeled Section IX.

Section IX. Dumpster Permits should be labeled Section X.

Section X. Public Litter Baskets should be labeled Section XI.

Section XI. Property Owners to Furnish Name and Address to Collector should be labeled Section XII.

Section XII. Disposal of Leaf Waste should be labeled Section XIII.

Section XIII. Refuse Packaging should be labeled Section XIV. The sentence “Each garbage can and/or bag shall not exceed fifty (50) pounds.” can be deleted if the Township adopts an automated collection program. The Section could then be labeled Section XIV. Brush Packaging.

Section XIV. Presumption of Ownership of Municipal Waste or Recyclables should be labeled Section XV.

Section XVI. Licensed Authorized Collectors to Provide White Goods Removal Service, as amended by Ordinance #372, should be labeled Section XVII. The term “Licensed” should be deleted from the title and within the section.

Section XVII. Service Fees and Billings should be labeled Section XVIII. The term “licensed” should be deleted from each appearance within the section.

Sections XVIII through XXII. Each section should be renumbered as Sections XIX through XXIII accordingly.

2. ORDINANCE #364

Section VI. Preparation and Storage of Recyclables should be labeled as Section VII. If the Township adopts an automated single stream collection program, it should expect that all residential recyclables must be placed within a roll cart for collection. With is in mind, the requirements for

bundling newspaper and corrugated cardboard specified in this section will be moot. The language amending Ordinance #300 regarding Township ownership of recycling containers and the requirement for each resident to have a recycling container should be returned to the new recycling ordinance and be expanded to include the solid waste container if automated solid waste collection is part of the new collection program.

Section VII. Required Collection and Hours of Collection should be labeled as Section VIII. The Township should consult with the contractor whether residents may, in the vent of no curbing, may set out containers “no more than ten (10) feet from the edge of the pavement” as stated in the third paragraph. The 5th paragraph in the section, beginning with “Every owner...” appears to be incomplete. The term “licensed” appears in five locations within paragraph (B) and should be deleted in each instance.

Section XV. Authorization of Collectors should be labeled as Section XVI. Paragraph (D)(2)(a) needs to be revised to eliminate the use of the terms “license” and “licensee.” Paragraph E was removed with the enactment of Ordinance #372.

3. BURNING ORDINANCE #291 AND PROPOSED BURNING ORDINANCE #373

3.1 ADD THE FOLLOWING

ARTICLE 2: DEFINITIONS:

“Recyclables” shall mean those materials designated from time to time by Resolution of Plainfield Township.

3.2 MODIFY THE FOLLOWING:

ARTICLE 3: GENERAL LIMITATIONS ON BURNING:

Paragraph G. Unlawful Substances, c): Insert “recyclables” into the list of prohibitive items so it reads, “No garbage, recyclables, refuse or rubbish may be burned at any time either indoors or out-of-doors.”

APPENDIX B

**SAMPLE RECYCLABLE MATERIALS
RESOLUTION, DOVER TOWNSHIP**

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DOVER TOWNSHIP
YORK COUNTY, PENNSYLVANIA
RESOLUTION 2008-19

A RESOLUTION OF THE BOARD OF SUPERVISORS, DOVER, TOWNSHIP, YORK COUNTY, PENNSYLVANIA, DESIGNATING ITEMS TO BE RECYCLED IN DOVER TOWNSHIP, PURSUANT TO CHAPTER 20 OF THE CODE OF ORDINANCES

WHEREAS, the Code of Ordinances of the Township of Dover recognizes Chapter 20 "Solid Waste", Part 2 "Recyclable Materials", Section 203 "Establishment of Curbside Program";

WHEREAS, Section 20-203.5.A. designates the recyclables for this curbside program to be established by resolution;

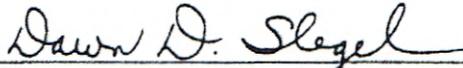
NOW THEREFORE BE IT RESOLVED, that the Board of Supervisors of Dover Township resolves that the following items be deemed as designated "Recyclable Materials":

1. Aluminum food and beverage containers with food debris removed.
2. Glass food and beverage containers with lids and food debris removed: Clear, Brown, and Green.
3. Natural and pigmented plastic narrow-neck containers with symbols 1, 2, 3, 4, 5, 6, 7 (milk bottles, water bottles, detergent bottles, shampoo bottles, bleach bottles, etc.). Lids and food debris removed.
4. Ferrous (iron, steel, tin) with food debris removed.
5. Newsprint - black and white or pigmented.
6. Printer paper, computer paper, copy paper.
7. Junk mail.
8. Magazine and catalogs.
9. Corrugated cardboard cut down small enough to fit into the bin/toter.
10. Phone books.

WHEREAS, Dover Township has assigned an employee as the Recycling Coordinator to implement and administer the provisions of the Recycling Ordinance as adopted by Dover Township.

ADOPTED this 23rd day of June, 2008.

ATTEST:


Dawn D. Slegel, Township Secretary

DOVER TOWNSHIP
BOARD OF SUPERVISORS


Curtis E. Kann, Chairman