ENTRANT ORGANIZATION: Baltimore City Department of Public Works (DPW)

PROGRAM ENTRY: Baltimore Citywide Municipal Trash Can Program

Application Category: Solid Waste Association of North America (SWANA) Excellence Award - Collection System

Jurisdiction: City of Baltimore, Maryland

Population: 624,000

Cost per household for the project: $51.97

Approximate budget: $8.9 million

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About DPW
The Baltimore City Department of Public Works (DPW) provides services that are vital to supporting human life and protecting the environment. We produce and distribute high-quality drinking water, and process the resulting wastewater. We also collect and dispose of solid waste in accordance with government and industry standards. In addition to collecting trash and recycling from close to 200,000 city households in Baltimore City, DPW also provides services that include bulk trash pickup, household hazardous waste collection, lot and alley cleaning, and rat eradication. DPW collects 750 tons of trash a day, four days each week. Visit our website at publicworks.baltimorecity.gov to learn more.
EXECUTIVE SUMMARY:

DPW implemented a pilot project in 2014. The success of the program led to the implementation of the Municipal Trash Can in 2016.

The pilot project was done in two city neighborhoods, Belair-Edison on the east side of Baltimore and Greater Mondawmin on the west side. It was hoped that results would show reductions in debris and rat infestation. For the study, DPW purchased new Municipal Trash Cans and distributed them free of charge to residents in the targeted communities. The cans are large and durable, with wheels and handles for ease of transport, and attached, hinged lids. Keeping lids on the cans would help keep trash secure and thus eliminate a food source for the rodent population.

The Municipal Trash Can Program is an innovation for Baltimore and part of the agency’s overall effort to keep our neighborhoods and waterways cleaner and healthier. Implementation of the municipal can program affects every residential address that receives trash collection by the City. This new program creates operational efficiency by allowing workers to use a new automatic lift feature that mechanically empties the cans into the trucks, meaning that the collection crews don’t need to manually lift the cans.

Results
In summary, the Bureau of Solid Waste tracked certain indicators throughout the one-year term of the pilot program. They found that rat service requests decreased about 26 percent during the pilot as compared to the year prior to the program in the same neighborhoods, which may indicate a decrease in the rat populations. Service requests for dirty streets and dirty alleys increased somewhat, although this does not necessarily reflect an increase in dirty conditions.
The increased engagement of residents during this time may have been a factor in the increase. Tonnages for recycling were also tracked and it was found that the amount of recycling increased during the pilot program. The Department retrofitted vehicles with the mechanical lift arm for use in the pilot areas. No crew injuries were reported in the pilot neighborhoods.

The residents involved in the pilot embraced the program. Support for expanding the program was voiced by community leaders in other neighborhoods, non-profit partners, and other stakeholders. The success of the pilot program demonstrated the feasibility and benefits of expanding the program citywide.

The outstanding leadership, commitment, public awareness, and outreach performed throughout the pilot and implementation of this project are deserving of the SWANA Excellence award. The Municipal Trash Can Program has already been named “2017 Project of the Year” in the category of environmental projects in the $5 million to $25 million range by the American Public Works Association (APWA) Mid-Atlantic Chapter. APWA is the largest organization of its kind in the world.

Environmental Controls and Regulatory Compliance/Performance, Economics and Cost Effectiveness

Baltimore City has long-standing challenges with trash in our neighborhoods and waterways, as well as major issues with rat infestations. These problems are detrimental to quality of life and create public health issues and environmental hazards. Every year the City expends many millions of dollars and thousands of hours on rat abatement and cleaning of dirty alleys and streets.

Unfortunately, not every resident engages in proper trash management. Some residents use flimsy trash cans or cans without lids while others use no can at all. The lack of proper sanitation habits leads to trash spillage, illegal dumping, increased rodent populations, and the overall perception of a dirty city. Education
and enforcement have been useful tools in this struggle, but are not enough to combat the problem. Over the years, there had been many discussions of distributing trash cans to every City resident. This recommendation has been formalized in several reports: the Baltimore City Sustainability Plan, “The Harris Creek Small Watershed Action Plan,” the Baltimore City Sustainability Commission’s recommendations for trash reduction, and the Baltimore City “Implementation Plan for the Middle Branch/Northwest Branch Trash TMDL in Baltimore City.” It was not until the spring of 2014 when this recommendation came to fruition in the form of the Municipal Trash Can pilot program.

The department moved forward in 2015 with a proposal to expand the Municipal Trash Can program, and in March of 2016 DPW was able to begin delivery of cans across the City. The cans were made available in 65-gallon or 35-gallon sizes. Cans are free to residents, one per household, but they belong to and remain the property of the City of Baltimore. Each can has a serial number and a radio frequency identification (RFID) tag embedded in the can to identify it with the assigned address.

The city purchased 172,000 cans from Schaefer Systems International, Inc., of Charlotte, N.C. for $8.94 million. Maintenance of the cans is included in the contract for the cans.

As with the cans used in the pilot program, the Schaefer cans are equipped with wheels and a handle for easy mobility, and attached, hinged lids to prevent the loss of lids.
Can Distribution

DPW conducted a massive distribution to provide Municipal Trash Cans to every Baltimore household that receives trash collection service from DPW. Rollout began in March 2016, working out from the pilot neighborhoods to increase operating efficiency. A distribution map and expected delivery dates were posted on the city’s website and updated regularly with bi-weekly updates.

This schedule, along with frequently asked questions (FAQ’s) and fact sheets and other collateral material on the cans was made available online and through community meetings.

Close to 2,000 cans were delivered to City neighborhoods every day, Monday through Saturday, until distribution was completed in June.
The RFID tag embedded in each can, was linked to each address using a hand-held scanner; serial numbers, written on the can, were also recorded during distribution. Distribution was done in phases by the vendor with troubleshooting assistance from DPW staff. At that point the program moved into the maintenance phase, which includes managing requests for damaged or stolen cans.

**Outreach**

The City’s 311 One Call System was used for citizen intake and tracking to address any missed deliveries or other can concerns.

Community outreach included press releases, media interviews, psa’s, robocalls, hangtags and social media in addition to the presentations at dozens of community meetings to help bring awareness of the program. DPW Community Liaisons scheduled special community meetings dedicated to discussing the new cans, where they displayed a sample Municipal Trash Can, gave a PowerPoint presentation and answered any questions citizens might have. Brochures and other collateral were provided to help educate the public about the distribution as well as guidelines, and care of the cans. DPW has long had a recycling program in place, and messaging encouraged residents to re-purpose their existing trash cans for use as recycling containers. Recycling stickers were printed and distributed to support this effort.

**Public Acceptance, Appearance and Aesthetics**

Municipal Trash Cans are an important innovation for Baltimore. It is designed to make our trash collection more effective and efficient, and keep our neighborhoods cleaner. Cans provided by the City help keep trash properly stored and provide the best waste management tool we have to combat rats and keep our communities clean. No longer can a resident complain that they don’t have the means or the tools to properly dispose of their trash. Assigning a municipal can per address provides all residents with a container regardless of economic
constraints, reduces the frequency of stolen cans and eliminates claims of damaged or lost cans and lids by Solid Waste crews.

Aesthetically, all Municipal Trash cans have the same shape and same green color to provide a uniform look. Each has a unique serial number printed on it for identification along with the city seal. The RFID tag can be used by city staff to match each can to its property address.

Damaged, lost or stolen containers are reported to 311, the City’s one-call system, and replaced free of charge unless due to vandalism or abuse. Stolen containers are replaced without charge if the resident files a police report. Containers replaced more than twice become the responsibility of the resident.

Residents are always encouraged to reduce their amount of trash by recycling. Messaging to residents informed them that recycling labels were available so that they could repurpose their existing unwanted trash cans to use as recycle bins rather than discard them. Baltimore has single stream recycling, which means that recyclables can all be put in one container.

Citizens have complimented the Municipal Trash Can Program on social media and through emails and letters. After only a few months into the program, anecdotal evidence indicated that rat populations were being brought under control. DPW is continuing to help make Baltimore a cleaner, healthier city for everyone.

**Future**

Sanitation enforcement has been provided under the City’s Housing Department. DPW is moving to relocate this enforcement arm under its responsibility. DPW continues to proactively encourage and engage citizens in recycling. We hold community bin sales, shredding events, and promote awareness through social media, with press releases and collateral material and through community liaisons who meet regularly with citizen community groups.
Additional Information
In 2015, prior to implementation of the trash can program, DPW began a proactive rat rubout program to inspect every City alley and treat for rodents on a 20-day cycle. We had to double the number of technicians who perform this work. The 20-day cycle is designed to interrupt the three-week gestation period of Norway rats, which had become a nuisance in and around the City. The Rat Rubout program had previously operated with a staff of eight technicians and completed a cycle of the City every 40 days. The City had already implemented a citywide mechanical street sweeping program and an alley sweeping program in 2014. All of these anti-grime initiatives set the stage for the new Municipal Trash Cans.

Other solid waste services that DPW provides include:

- Bulk trash removals, available for free once each month to each household
- The Mayor’s Spring and Fall Cleanups are popular and successful neighborhood cleanup efforts. DPW provides debris removal, dumpsters and bags for these events
- BMORE Beautiful is a city led, peer-to-peer pilot beautification program that recently launched in 22 diverse Baltimore neighborhoods.
- The Community Pitch-In Program is another neighborhood cleaning program that provides City containers and trucks to remove large amounts of refuse, and is available throughout the year.
- The annual DPW calendar and the Clean City Guide are publications made available to help citizens keep our city clean. DPW mails out the calendar to all city households; it provides useful information on DPW trash and recycling drop-off locations, recycling bin sales, the city-wide mechanical street sweeping schedule, collection holiday schedules, and much more. The Clean City Guide contains thirteen sections and includes information on everything citizens would need to know about cleaning, including trash removal, rat prevention and recycling.
Municipal Trash Can Pilot Program
Frequently Asked Questions

What is the Municipal Trash Can Pilot Program?
A pilot program is a "test." Studies have shown that the use of municipally provided trash cans is the most effective way to control rats. When trash is not put in plastic bags, it can easily be affected by rodents and provide food for rats. Trash cans make it harder for rats to get food and if they can't find it, they won't leave. Trash cans also improve efficiency, reduce back and roll down the worker injuries, saving taxpayer money.

Why did you pick these two areas of the city?
Belmar-Eldon has the type of properties and wide streets where a municipal trash container program might work very well. The Navalnarea-by contrast presents more difficult challenges and will be a good test of whether the program can be adapted to every area of the city or only neighborhoods like Belmar-Eldon.

How will this work?
The City has provided one 55-gallon municipal trash can on wheels for each address and it will have an RFID chip to identify the can with the address. The lids will be attached so there will be no more missing lids.

When should I start using the can?
Please start using the can as soon as you receive it.

Can I just dump trash into the can?
No, please put your trash into trash bags and then inside the can.

What should I do with my old trash can?
If you want to recycle your old plastic or metal trash can, please take it to a Citizen's Convenience Center. You may also reuse them for recycling.

Can I get more than one municipal trash can?
No, each household receives one municipal trash can. However, you can reduce your amount of trash by recycling more. You will also be given a 35-gallon recycling can to use.
My municipal trash can is broken or was stolen. What do I do?
Call 311 to report a repair or replacement. You are responsible for the cost of repair or replacement, unless the damage was caused by the City. Torn or damaged trash cans may be replaced for free at a cost of $20. For customers on a subscription plan, a $100 fee per trash delivery will be charged, and you will be responsible for the cost of repair or replacement of the damaged trash can. Proper storage and care of municipal trash cans is the responsibility of the resident. Anyone caught with a damaged trash can will be billed for the cost of repair or replacement.

I am physically unable to take the municipal trash can to the curb for collection. What can I do?
The municipal trash can is designed for easy use and can be emptied and pushed with minimal effort. If you still feel unable to manage the municipal trash can, please call 311 to a Bureau of Solid Waste supervisor may make an assessment.

I will be moving soon. What do I do with the municipal trash can?
The city is not responsible for the removal of the municipal trash can. Please leave the municipal trash can at the curb when you move out and notify 311.

I just had one extra bag of garbage so I set it next to the municipal trash can but it wasn’t collected, why not?
Do NOT place extra bags so that the lid does not close or on top of the lid as it will likely fall off and litter your neighborhood or be ripped open by critters. You may wait until the next collection day to take it to one of our Citizen Convenience Centers for drop off at no charge.

What is RFID?
RFID stands for Radio Frequency Identification.

Does the municipal trash can have an RFID chip?
Yes. The chip identifies the municipal trash can with the residence it is assigned to. If it is stolen, we can identify which household it belongs to.

What does the RFID chip transmit?
It does not transmit any information; at this time, it only identifies the address.

Where will the pickup location be for the municipal trash can?
We will collect from the same location and at the same time that we collect your trash now.

Can I put bulk trash in my municipal trash can?
No. Please do not overload your municipal trash can. For items larger than will fit in the municipal trash can, you can call for Bulk Trash Service at 311.
Municipal Trash Can Distribution Schedule; not shown, but also included in the posting was the full list of all Baltimore neighborhoods with the anticipated delivery month.
Baltimore City
Municipal Trash Can Distribution

Legend
- Neighborhood Boundary
- Upcoming Neighborhood
- Completed Neighborhood

Stephanie Rawlings-Blake
Mayor, City of Baltimore

Rudolph S. Glowe, P.E.
Director of Public Works
Baltimore City is providing one free 65-gallon trash can to every residential address that currently receives trash collection service by the City. Using these cans will help keep our neighborhoods and waterways clean, reduce the rodent population, reduce strain on our workers and make trash collection more efficient.

Property owners who own a row home that is part of a block-long group, have front collection and no exterior storage space have the option to call 311 by February 19, 2016 to request a smaller 35-gallon can.

Distribution of the cans will begin in early 2016. Hang tags will be posted at each property approximately 10 days before delivery.

A neighborhood delivery schedule will be posted at http://publicworks.baltimorecity.gov and updated regularly. Please begin using your can as soon as it arrives.

Your collection day and pickup location will remain the same.
What Else Should I know

1. The cans are for trash only.

2. The cans are assigned specifically to each address, remain the property of the City, and should not be altered or defaced with letters, names, stickers, numbers, or symbols.

3. Failure to properly dispose of trash in a durable can with a tight fitting lid is subject to a City fine.

4. If your can is damaged through normal wear and tear, call 311 to have it repaired or replaced. If the can is stolen, a police report must be provided for a one time free replacement.

5. To keep the can clean, please put your trash into trash bags and then into the can.

6. Once the Municipal Can is delivered, you may drop off your old can at one of the City's drop-off facilities or use it for your weekly recycling collection.

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For more information about the City’s Municipal Trash Can program or for answers to frequently asked questions, please visit our website: http://publicworks.baltimorecity.gov.
Baltimore City Municipal Trash Cans
From: membership@swana.org
Sent: Wednesday, April 05, 2017 9:01 AM
To: Murrow, Robert
Subject: [Download Manager] Purchase Information

Dear Mr. Robert H. Murrow,

Purchase Information

Date of Purchase: Apr 5 2017 9:01AM
Mr. Robert H. Murrow
SWANA member ID: 843272
Purchase Number: 21011
Payment method: Credit card
Order Number: 21280
Transaction Numbers:

Your order includes 1 downloadable product(s).
You must use the following link in order to access them: [Download Manager]

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Code   Type  Description                   Quantity | Unit Price | Total
AWARD 1TD  SALES  Excellence Award Application - Single w/ TD  1  $105.00  $105.00

Tax: $0.00
Shipping Method(s): $0.00
Total: $105.00
Total Payments: $105.00
Balance: $0.00
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