



Prepared for:
Baltimore City
Department of
Public Works



City of Baltimore

RECYCLING AND SOLID WASTE MANAGEMENT MASTER PLAN

Task 1 – First Report

Summary of Ideas Shared at Community
Meetings on 28 February and 11 March
and via Online Media

29 March 2019

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Background

In response to the need for long-term solid waste and recycling management for Baltimore City, the Department of Public Works (DPW) launched an initiative to identify viable options for improving solid waste diversion, recycling, and disposal in the City. This master planning effort, referred to as the [Less Waste, Better Baltimore](#) Plan, will inform the development of a long-term waste management and recycling strategy to maximize waste reduction, reuse/repair, recycling, and sustainable materials management through 2040 and beyond. Residents were also invited to submit questions and feedback via a dedicated email address as well as via various online social media platforms, including Facebook, Twitter, and Nextdoor. Ideas shared online through 18 March are included in this report – ideas shared after this date will be included in subsequent reports.

To involve City residents in developing this strategy, DPW is soliciting community input through facilitated community meetings. The first two of these community meetings were held on 28 February and 11 March 2019. The community meetings aimed to provide Baltimore City residents, organization, businesses, and other stakeholders with the opportunity to identify challenges to improving waste management and diversion in the City and to suggest solid waste management and diversion options for consideration.

The dates and locations of these first two meetings were as follows:

Date	Time	Location
Thursday, February 28, 2019	6:30 p.m. – 8:30 p.m.	Edmondson-Westside High School 501 N. Athol Avenue Baltimore, MD 21229
Monday, March 11, 2019	9:30 a.m. – 12 p.m.	Shake and Bake Family Fun Center 1601 Pennsylvania Avenue Baltimore, MD 21217

Challenges to Reducing and Managing Solid Waste in Baltimore City

During open discussions, attendees at both community meetings addressed two main questions. The first was to identify challenges to reducing solid waste and increasing the use of solid waste diversion approaches in Baltimore City. The full list of challenges identified by meeting attendees are categorized in the bulleted list below. Ideas suggested by residents at the first meeting are indicated by an orange dot (•), ideas suggested at the second meeting are indicated by a blue cross (+), and ideas shared via email or the online social media platforms publicizing the meetings are indicated by a grey star (*). For ease of review, ideas are collated around central themes.

Source Reduction

- Trash must be bagged before being placed in trash bins for curbside collection. +
- Lack of incentive to reuse plastic or to use alternative packaging materials (e.g., glass) because plastic production is cheap. •
- Reducing waste requires major political action and behavioral and systems change to reduce waste from consumers, manufacturers, restaurants, grocery stores, and online vendors (e.g., reduce packaging on food and non-food purchases; eliminate single-use plastic containers, plastic bags, and food service items; buy less and waste less). •
- Residents in “food deserts” may only have access to foods with a lot of packaging, which generates a lot of waste and litter near stores and take-outs in these neighborhoods. •
- Residents may not be able to afford reusable bags or reusable water bottles. •
- Large development projects (e.g., Port Covington) and manufacturers generate a lot of waste and new high-density housing doesn’t always build enough infrastructure to manage residents’ waste. +
- Lack of data is not an issue, so the City should focus more on investing and implementing source reduction and diversion programs. +

Waste Collection

- Lack of DPW staff and/or other administrative issues within DPW means scheduled trash/recycling pick-up dates aren’t always honored and there’s no back-up plan in place when this happens. •+*
- Residents and businesses illegally dump excessive street litter and bulk trash (e.g., sofas, TVs) because, for example, there’s no working mechanism to prevent illegal dumping and enforce penalties. Imposing dumping fees on small haulers

incentivizes illegal dumping, fines are not being enforced, and landscapers frequently blow debris into the gutter or leave it on the sidewalk. ●+

- Illegal street litter and bulk trash isn't reliably collected by the city or local residents (e.g., DPW doesn't always sweep streets on schedule or if cars have not been moved, street litter is disproportionately collected from affluent neighborhoods, citizens aren't engaged in cleaning their own streets). ●+
- Trash cans do not meet residents' needs (e.g., are too small) and they are very difficult to order using the City's website or 311 app. Trash cans provided by the City are the wrong color – green – which is more common for recycling or composting cans). +
- Landlords often don't provide trash cans for all their units, even though they are legally obliged to. +
- Technical and design issues with the City's new 311 app. make it difficult to use (e.g., geolocation errors, inability to track claim status, etc.). The old 311 app. was better than the new one (e.g., the new app. freezes a lot and doesn't upload pictures). +

Recycling

- Recycling bins aren't affordable for everyone and are difficult to order. ●+
- Schools need to pay for recycling services so many don't recycle even though there's a legal mandate for them to do so. ●
- There are no/few public recycling bins in many neighborhoods. +
- Many recycling bins don't have lids, which means recycling can be blown into the street and collected as trash. ●
- Decreased Chinese demand for U.S. plastic waste combined with insufficient domestic infrastructure for plastic recycling increases domestic waste, including paper waste if the streams are comingled. ●+
- Many City waste streams aren't sorted into recycling and waste (e.g., apartment complexes often don't offer recycling or it's hard to access, trash from city parks is not recycled, street cleaning doesn't sort litter into waste and recycling). ●
- Need to overcome social and cultural barriers to recycling (i.e., perception that recycling is something "other" people do). ●
- Many city residents don't separate recyclables from waste because they don't know how or why it is important. ●+

Composting

- Composting is only available through local collectives or personal backyard composting. +

- DPW is creating a pumping station in what is now the Filbert St. Community Garden, which will potentially cause the garden to close. The garden also offers residential compost collection services in south Baltimore. •

Managing What's Left

- The recent Air Quality Act could threaten the operation of BRESCO, which would potentially cause the City's landfill to fill more quickly and/or leave no options for where to send waste for disposal. The City seems to have no plans for where the waste will be sent. Exporting waste could be expensive and may result in job losses and tens of thousands of extra truckloads of garbage leaving the City. •+
- Robust waste management infrastructure (e.g. a new incinerator) and implementation strategies are hugely expensive and have led some cities to the brink of bankruptcy (e.g., Harrisburg, PA). •+

Education

- Waste management is a complex topic with far-reaching implications, which makes education difficult. +
- It is difficult to share appropriate, accessible, and relevant information to people in diverse contexts. •+
- Existing solid waste diversion campaigns in the City lack awareness and support. •

Health and Environmental Needs

- Long-term waste management plans must consider the potential impacts of sea level rise and be aggressive enough to help curb climate change. +
- Current waste management strategies must support quality of life for the city's children. •
- Storm drain collection systems are quickly filled with litter, which then pollutes the Bay. •
- Uncollected waste (e.g., tires) on abandoned properties can collect water, which is a breeding site for mosquitoes that make residents more vulnerable to mosquito-borne illnesses. +
- Landfill chemical leaching contaminates local water. •
- Need better rat abatement programs. Excessive waste (e.g., overflowing cans or waste placed out in plastic bags) increases the rat population, which the city only engages in on a house-by-house basis when it should be neighborhood-wide. •

Enforcement

- Residents are sometimes ticketed because street signs haven't been updated to reflect current street cleaning days. •
- Anti-littering laws and the requirement to move cars for street-sweeping are not enforced, which reduces residents' confidence in the City's ability to enforce all laws. *
- The City's Police and Health Departments need to work together to enforce the animal leash law. *

Solid Waste Management and Diversion Options for Consideration

The second question posed to meeting attendees was to identify solid waste management and diversion options that could be included in the Less Waste, Better Baltimore Plan. Ideas suggested by residents at the first meeting are indicated by an orange dot (•), ideas suggested at the second meeting are indicated by a blue cross (+), and ideas shared via email or the online social media platforms publicizing the meetings are indicated by a grey star (*). For ease of review, ideas are again collated around themes. In many categories, it was suggested that implementing pilot programs would be the best way to start. For completeness, recommendations to consider specific technology vendors are listed here. These will be investigated by the consultant team under Task 5 of the project; however, their inclusion in this interim report for Task 1 does not in any way indicate acceptance that such technologies offer a solution that will ultimately be recommended for implementation in the City.

Source Reduction

- Tax the use of single-use materials to incentivize manufacturer/distributors to decrease packaging waste (i.e., by offering discounts or rebates to people or businesses for using reusable materials like glass, using less material, or collecting their own packaging for reuse/recycling). •
- Ban plastic grocery bags and/or Styrofoam or require that customers buy these if they want them. •+*
- Incentivize customers to bring reusable bags to grocery stores and other retail outlets (e.g., offer a credit on their bill). *
- Subsidize the cost of reusable materials. •
- Remove the requirement to use plastic bags in waste bins. •+
- Launch urban farming and community garden initiatives to increase access to fresh foods without packaging and to support composting (e.g., turn empty lots into parks and gardens). •+
- Coordinate the donation of food from grocery stores to non-profits or organizations for those in need. *
- Set up a Pay-As-You-Throw program with different schedules for collection of trash, recycling, and organics (e.g., recycling and organics every week, trash every other week). •
- Require restaurants to accept clean, reusable containers to package customers' leftover food. •
- Build personal ownership of waste diversion (e.g., using reusable water bottles, purchasing lids for bins). +
- DPW should transition to electronic billing for water, thus eliminating paper mailing. *

- Less waste must start at the source. Making a reduction in packaging will require implementing extended producer responsibility (EPR) rules. Require manufacturers and retailers – including online retailers such as Amazon that ship products into the City – to use truly recyclable products/packaging that is easy for consumers to recycle and make manufacturers fiscally responsible for their recycling. ✱
- Tax the sale of plastic water bottles or set up a filtered water system for refilling bottles in more public places. ✱
- Coordinate/advertise the donation of building materials to a facility such as Second Chance or the Loading Dock where they will be repurposed. It may help to incentivize donations with a tax credit linked to promoting job growth in Baltimore. ✱

Waste Collection

Improve Access to Appropriate Waste Locations

- Provide free recycling cans to all households. Convert existing green trash cans to recycling and provide smaller trash cans. •
- Create a way for residents to donate money towards others' recycling bins (similar to BGE utility donations). +
- Provide more public trash cans. +
- Organize days where an extra dumpster is placed in each neighborhood and then collected. Hold set schedule for regular pickups. •
- Remove fees for small haulers and residents using commercial vehicles (e.g., U-Haul vans) at the dump. •+
- Use compacting trash cans to increase capacity of public trash cans. +
- Contract City residents and/or small haulers to transport waste to the dump in their private vehicles. •
- Increase DPW staff capacity to improve reliability of waste collection services and information and to provide better response to illegal dumping. Need to follow up more promptly on complaints from 311 calls/website. •
- Deploy automated waste collection trucks to decrease staff needs and avoid the need for plastic trash bags. +

Improve Enforcement around Littering

- Enforce the use of nets on waste collection trucks to prevent debris from falling off. Provide lids for public trash cans. •
- Enforce fines for littering (e.g., set up surveillance cameras at areas with a lot of illegal dumping, publicize where buildings are going to be demolished to fine illegal waste). •+

- Ensure fines are charged to the responsible party (e.g., landlords should be fined if they fail to provide sufficient trash and recycling cans to apartment residents; residents should not be fined). +
- Empower community surveillance of waste laws (e.g., post warning signs about laws including littering and landlord trash can requirements, launch a “see something, say something, do something” campaign, organize monthly walks with residents to identify and report dumping areas). •+

Collect Litter from the Street and Illegal Dump Sites

- Create jobs for those who need them by hiring squads to collect litter and bulk trash from the streets (e.g., youth and homeless people, connecting and organizing them with additional support services). Communities are less likely to tolerate littering and dumping in an area if they cleaned it. See Albuquerque, NM as an example. •+
- Provide more litter cleanup crews within DPW, separate from collection crews, or contract private organizations for street litter collection. Have “on calls” for rapid cleanup of illegal dumping by registered small hauling contractors. •
- Organize litter collection initiatives with local schools or communities, and sign certificates for community service hours and offer awards for groups that clean and recycle the most. •+
- Require businesses to collect litter in front of their buildings. •
- Identify common illegal dumping sites, place a dumpster there, and schedule regular collections (e.g., in Carrollton Ridge, Shipley Hill, and Edmondson Village). •
- Get input from local haulers who could help identify the culprits of illegal dumping. The City should have a list of registered demolition contractors to help track and identify where illegally dumped material is coming from. •

Recycling

Incentivize or Mandate Recycling

- Fine residents and businesses who don’t recycle. •
- Require a bottle deposit on all disposable containers with collection sites to return bottles. In other communities with a bottle bill, some people live off this type of scavenging, which would incentivize recycling and help low income people with an additional source of revenue. •+
- Organize recycling competitions between schools with a reward for the winning school. •
- Make sure existing recycling trucks are doing routes in Franklin Square. ✨

- In some European countries (e.g., Germany), citizens are required to separate their trash into three categories: recyclables, dirty trash and clean trash, with trash that is improperly sorted not picked up. We need to learn from this. ✱
- We should move the task of improving recycling back to the residents' level. For example, some communities in Japan require intensive sorting by residents into 30+ categories before recycling is collected or taken to drop-off centers. +

Expand Access to Recycling

- Create a large, accessible recycling center in Baltimore that's open weekly with clear hours. +✱
- Provide free recycling bins to households and/or schools. •+
- Provide public recycling bins or sort recycling from public trash cans. Many public areas have no recycling bins. •+

Recycle More Materials

- Provide recycling bins/sites for old electronics, batteries, and lightbulbs. Provide curbside collection of electronics every so often. •✱
- Recycle bulk items collected from dump sites (e.g., TVs, mattresses, tires). •
- Set up tire collection points at Transfer Stations for recycling, separating rims for scrap steel recycling. •
- Work with companies like TerraCycle to expand the types of products that can be recycled. •✱
- Although it's good that the City banned foam food containers, we need to provide an alternative to the service that Dart Container used to provide, which used to allow businesses and residents the convenience of delivering bulk quantities of Styrofoam (e.g., clean food packaging, packing peanuts) for recycling at Sisson St. ✱

Provide More Recycling Information

- Identify all public and private recycling locations/resources and list them on the DPW webpage with sites' hours. ✱
- Include up-to-date recycling requirements, opportunities, and resources in all city mailing (e.g., tax and water bills, jury duty summons). •
- Distribute annual refrigerator magnets that lists city recyclables and recycling instructions. •
- Provide better data on waste that is collected from schools so they can assess and improve their practices. +

Improve Waste Sorting

- Increase transfer station and collection staff capacity to remove recyclable goods discarded in trash. •
- Repurpose existing green waste bins as recycling cans to reduce confusion and provide new cans for trash. •
- Separate plastic from paper recycling. •
- Create a facility that sorts city waste to avoid relying on households. Invest in better sorting technology. +

Composting

- Engage the state to equip and permit composting facilities or set up a large-scale composting facility for the City. •+
- Provide households with composting bins and compostable bags. •
- Coordinate local composting programs for food as well as yard waste (e.g., centralized locations for households to drop off compost). •
- Coordinate a designated day for yard waste collection and ask households to call the day before to indicate their address and number of bags. •
- Set up school composting services for food waste in the kitchen and after food is served. City schools serve several thousand meals a day but there is currently no facility that could take that material. +
- Reduce trash collection frequency to compel households to compost. •
- Ban disposal of organic materials in waste streams going to landfills, especially for large producers such as restaurants and grocery stores. •
- Mandate curbside collection of organics (yard waste and food scraps) in a separate bin. •
- Support existing gardens, programs already in place that produce and/or use compost. •
- Utilize an “adopt a lot” program to reduce littering and illegal dumping, or even better transform vacant lots into green spaces that produce/accept composting and provide urban farming opportunities. •
- Offer incentives to businesses to compost and for more food to be grown locally. •
- Sell compost to farmers. +
- A private company, Mundeia, is launching a new waste management program in Fells Point offering recycling, composting and residual waste pick-up for businesses. *

Reuse

- Invest in programs that turn waste into artwork (e.g., give abandoned buildings or materials to artists/sculptors and recycling innovators, organize shows and contests to create jobs for artists that reuse waste or repurpose plastic garbage). •*
- Promote fix-it shops, freecycling, and/or swaps for clothing and other materials between neighborhoods. •
- Offer curbside collection of donated clothes and household items. *
- Spur innovation on new ways to use waste (e.g., host a “shark tank”-style event for innovative ideas to reuse plastic, study other cultures to find creative ways of using materials we consider waste, engage students in finding new ways to use waste products). •
- Offer incentives for NGOs/community organizations to collaborate with the city on efforts to promote reuse. •
- Fine households that throw away items greater than a certain value (e.g., \$20 or \$200) to encourage re-use, re-purposing, and resale. •

Managing What's Left

- Help BRESKO upgrade its facilities to ensure it can continue serving Baltimore. •
- Ensure City incinerator infrastructure requirements and emission limits are feasible and meet industry norms. •
- Build an additional/replacement state-of-the-art incinerator to avoid sending waste to landfills. The Coast Guard has issues in Baltimore with landfill contamination, so landfilling is not a solution. •
- Do not consider privatizing, closing, or rapidly filling the landfill if BRESKO stops operating. •
- Do not consider mixed-waste processing. •
- Consider the company ReEngineered Feedstock, who make a customizable solid fuel product from non-recyclable polymers and plastics. The fuel product is designed for co-firing integration in electric generating units, industrial boilers, and cement kilns as a direct coal substitute. *
- Consider the company Synova, who provides a technology that converts plastic and other waste into electricity. *
- Build waste-to-liquid fuel infrastructure (e.g., similar to that of Fulcrum Bioenergy in Nevada). •
- Provide information about where households can safely dispose of products such as hazardous household items, paints, and solvents. *

Education

Topics to Engage

- Conduct educational campaigns about recycling and sorting practices to increase awareness and participation. ●+*
- Conduct educational campaigns about putting trash in trash cans. ●
- Conduct an educational campaign about composting, including in schools. ●*
- Educate residents on the difference between “Sell By,” “Use By,” and “Best By” to reduce food waste. ●
- Educate residents about purchasing food more sustainably. +
- Educate restaurants on decreasing waste (e.g., food, paper napkins, plastic utensils, takeout containers). +
- Hold an educational campaign about the environmental impact of waste and the impact of waste on children’s futures. ●+
- The public should know how much services cost and how services in Baltimore to other jurisdictions. +
- Implement and publicize a “Baltimore’s Environmental Best” program praising businesses and other organizations who are working to reduce waste in Baltimore to inspire residents, businesses, and community organizations to start or continue their work. ●

Engagement and Outreach Strategies

- Invest in outreach platforms that will reach everyone in the city (e.g., on buses and at bus shelters). ●
- Educate the public through art shows using recovered materials. ●
- Target students in education campaigns and competitions to reduce littering and improve their consumer habits and recycling practices (e.g., build/support student mentorship programs, equip schools with books about reuse and recycling, coordinate trips to recycling centers). Offer gift cards or other rewards for participation. ●+
- Train and hire youth or unemployed adults to conduct door-to-door campaigns every year to educate households on recycling. ●
- In addition to big campaigns, set up consistent and constant messaging around the city about recycling, source reduction, and composting. ●
- Engage schools, churches, businesses, organizations, and government in educational campaigns, including those aimed at addressing climate change such as Drawdown Buy-In. ●+*
- Engage celebrities, athletes, and local stadiums to support and promote recycling. ●+

- Get stadiums to promote matchdays as zero waste events. Look for examples of what other stadiums have done. •
- Support existing waste reduction and recycling education campaigns in the City. •
- Empower community/neighborhood associations and block captains as waste management experts so that they can lead their communities in waste reduction, recycling, and composting. •+
- Provide education on recycling to seniors so they are more likely to participate. •
- Improve messaging and generate memorable slogans. For example, the slogan “Don’t mess with Texas” was originally an anti-littering message. +
- Improve DPW communications and publicity, and train DPW staff to better support and inspire residents (e.g., improve online information dashboard, train office and field/truck staff on customer engagement and how to sort waste and why it matters). +

Crosscutting

- Orient the City’s waste management plan toward Zero Waste and engage other institutions who have committed to Zero Waste. •+
- Gather more stakeholder input (e.g., local waste haulers and recyclers, youth, students, residents in more parts of Baltimore). •+
- Increase project transparency, including information on how money is being spent and input is being used. Post information online so people can avoid FOIA requests. •
- Build community oversight into the solutions and their implementation to maintain accountability. +
- Connect DPW with local associations to offer mutual support on waste diversion and management strategies. +
- Ensure alignment between Baltimore City departments’ plans and improve coordination between departments (e.g., align waste management and sustainability plans, run composting through city parks). •+
- Fund programs by increasing sales taxes and/or applying fees on retailers to share the cost burden. •
- Consider that overdevelopment in certain parts of the City creates overpopulation and rat problems with the increased trash, and also a loss of green space. +
- Waste management – especially cleanup of litter and illegal dumping – and crime are linked; for example, a study in Philadelphia showed that cleaning up blighted communities reduced crime by 20-30%. +

Next Steps

The results summarized in this report will be used by the consultant team as inputs in its analysis of options in Task 5, along with inputs from the online survey and additional research. Prior to completing Task 5, the consultant team will capture preliminary analysis and initial findings in a presentation, at which point the public will have the opportunity to review and respond at two additional community meetings (feedback workshops), tentatively scheduled for June 2019. Details regarding the feedback workshops and mechanism for report review and comment will be communicated via the Less Waste, Better Baltimore website.

Based on comments received at the feedback workshops, a Final Report outlining options recommended for consideration in the Master Plan will be prepared by the consultant team and submitted to DPW. A mechanism for public review and submission of comments on the Final Report will again be provided, details of which will be communicated via the Less Waste, Better Baltimore website.

Appendix A: Structure and Scope of Community Meetings

Nexight's team of professional facilitators led the meetings to focus discussions, optimize the use of time, and permit the lively exchange of ideas among participants. Each meeting lasted approximately two hours. Participants were encouraged to provide both verbal and written input to brainstorming and critical analysis discussions to envision the future strategy for Baltimore City solid waste management. The meetings included the following sessions:

- Opening Session, including introductory remarks by the Director of Public Works Rudolph Chow and a review of current Baltimore City solid waste management practices by Geosyntec.
- Brainstorm challenges to reducing solid waste in Baltimore City.
- Brainstorm solid waste management and diversion options for consideration.

The scope and boundaries of the meetings, which were introduced in a PowerPoint presentation at the beginning of each meeting, included the following:

- This strategic planning effort is focused on the City's **long-term planning** and decision making through 2040 and beyond. The City recognized that many City residents face immediate waste management needs, but participants were encouraged to focus on solutions that can improve the City's waste management and recycling performance into the long term.
- The community meetings were designed to **look forward** at the best options for the future of the City, not back at past successes or failures. Accordingly, participants were asked to avoid lengthy speeches about what may have occurred in years past without also offering positive contributions for improving the future.
- The community meetings were intended to **inform** the solid waste management options that are considered in the strategic planning effort. It was emphasized that **no final decisions** regarding solid waste management options would be made during the meetings.

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