



AUTHORITY WELCOMES CARROLL COUNTY'S CLIFF ENGLE TO BOARD OF MEMBER REPRESENTATIVES



Cliff Engle, Solid Waste Bureau Chief for Carroll County Maryland, has been appointed by

Governor Larry Hogan to represent Carroll County on the Authority's Board of Member Representatives.

"The addition of Cliff's vast solid waste management expertise on the Authority Board will be not only be an asset to Carroll County but to our entire group of Member Jurisdictions," said Authority Executive Director Andrew Kays.

As Bureau Chief for Carroll County, Mr. Engle is charged with long-term strategic planning and servant-leadership support to the teams and programs of the County's Solid Waste Enterprise Fund. Mr. Engle, who held the same position with Carroll County in 2008-2009, returned to the county in 2019 with the primary goal of identifying and implementing opportunities to ensure the long-term fiscal and environmental sustainability of Carroll County's solid waste and recycling programs. To this end, in 2021 the county acquired 326 acres adjoining the Northern Landfill and will pursue a landfill expansion and replacement infrastructure including

a transfer station, a consolidated homeowner use area, a yard waste area, a maintenance shop, a scale house and office facilities. Additional initiatives will likely include composting/organics recycling, alternative material recovery and diversion options and other programs to help Carroll County meet or be ahead of the curve in Maryland's ever-changing regulatory and market landscape.

After earning his BS degree in Environmental Engineering from Temple University, Mr. Engle held various engineering and compliance positions in the private sector solid waste industry, including with Waste Management Inc., Sanifill, USA Waste and others. He supported operations throughout Pennsylvania, Ohio, Maryland, Delaware and Virginia at varying times, ultimately assuming a Landfill General Manager role with Northeast Waste Services in Pennsylvania. Mr. Engle then brought his 21 years of private sector experience to the public sector in 2008 and has since held department level leadership roles with several Maryland counties. He has experience working in various cultures and situations including Enterprise Funds,



Cliff Engle

unionized and outsourced workforces, and organization-performed operations.

Mr. Engle has also served on multiple company-resident and county-resident committees, task forces and work groups, leading efforts to improve the public's understanding of the County's operations and nurture organizational relationships with local stakeholders. He is a member of the Solid Waste Association of North America (SWANA) national and Mid-Atlantic chapter, along with the Maryland Recycling Network, and holds multiple SWANA industry specific certifications.

2

"Recovery 2022" this Year's Highly Successful and Substantive MRN/Mid-Atlantic SWANA Conference

3

Update on Rollout of City of Baltimore Recyclables Bins Program

4

Baltimore County Completes Summer Waste Audit



“RECOVERY 2022” COVERED MUCH NEW GROUND AT THIS YEAR’S HIGHLY SUCCESSFUL AND SUBSTANTIVE MRN/MID-ATLANTIC SWANA CONFERENCE

The 14th joint MRN/SWANA Mid-Atlantic Conference, titled *Recovery 2022*, took place in person for the first time in three years on Thursday, June 23 after interruption due to the COVID-19 pandemic. The resulting shifts in the landscape and trajectory of both solid waste and recycling management made the conference theme of “Recovery 2022” especially relevant.

To start off the conference, Swarupa Ganguli from the Environmental Protection Agency (EPA) discussed the National Recycling Strategy (LINK) and federal grants available for solid waste infrastructure and recycling education. These grants will be available to local and state governments, and some public-private partnerships, to provide funding for improvements in recycling infrastructure and furthering education and outreach. Following this keynote address were a series of concurrent sessions – one presentation on solid waste and one on recycling per time block. Between presentations, there were many exhibitors showcasing solid waste and recycling products, innovations and services, as well as

providing numerous opportunities for networking.

Solid waste presenters discussed topics such as regional waste-to-energy initiatives, techniques for measuring methane at landfills, and integrated solid waste management system disruption planning. There also was a presentation on potential environmental legislation that would heavily restrict perfluoroalkyl and polyfluoroalkyl substances (PFAS) levels in landfills, and the Total Oxidizable Precursors (TOPS) Assay, which provides a comprehensive snapshot of PFAS end product and precursor levels.

Recycling presenters discussed national and regional recycling market trends, legislation that promotes Maryland recycling market development and extending producer responsibility. Crystal Dreisbach of Don’t Waste Durham delivered a presentation on opportunities to add a fourth “R”, for recirculation, to the traditional 3-R approach of recycle, reuse, and reduce. Her organization created a system that washes and recirculates reusable take-out containers at local restaurants in Durham, NC. To close out the day, Craig Wittig, Senior Director of



Community Development at The Recycling Partnership, shared case studies in effective public communication that offer practical strategies to increase residential participation while decreasing contamination.

More than 125 conference attendees from government, private industry and the non-profit sector gained new insights into solid waste management and recycling trends, all while the industry is working hard to recover from the pandemic and the global supply chain challenges of 2022.

More information on the conference can be found at: [2022 MRN/SWANA-MA Conference Recap - Maryland Recycling Network](#). The Authority is a long-time sponsor of the conference.



Swarupa Ganguli of the EPA speaks from the podium about the National Recycling Strategy.



Attendees from various sectors of the solid waste and recycling industries came together in-person for the MRN/SWANA Conference this year.

UPDATE ON ROLLOUT OF CITY OF BALTIMORE RECYCLABLES BINS PROGRAM

As reported in the Fall 2021 edition of *WasteWatch*, City of Baltimore staff had been working for months to bring the distribution of carts for recyclables collection to fruition. One of the Authority's on-call engineering firms, Geosyntec Consultants, assisted in the tracking of data related to the cart rollout. The goal of the data monitoring effort is to support the City's tracking and reporting efforts in order to provide timely information to residents and elected officials. This includes the tracking of cart program calls to the City's 311 Center to verify closeout of the requests.

Distribution of approximately 189,000 65-gallon carts and roughly 15,000 35-gallon bins started in the fall of 2021 and continued through the fall and winter in an intentional manner, proceeding through the weather, the COVID surge and planned City closures to distribute. Delivery of the 65-gallon carts started in September of 2021. Rollout of the 35-gallon carts began in January of 2022. Through data management,

the City was able to identify specific residences that were omitted from the data set used by the cart manufacturer for delivery planning. The final stages of delivery to these residents are underway now, in the clean-up phase, along with substitutions and returns.

Separate, but related, from this cart distribution effort, the City is undertaking an education campaign to further reduce contamination in the collected recyclables. Authority Executive Director Andrew Kays noted that continuing education is key to maintaining and growing diversion programs. "The City is not taking a "one-and-done" approach with the cart rollout. It is following up to make sure that the message about material types that are acceptable for the program, as well as those that are not, is in the public's view."

For more information on the distribution of the carts, please visit Residential Recycling Carts| Baltimore City Department of Public Works and see the frequently asked



questions at [Recycling Cart FAQs.pdf \(baltimorecity.gov\)](#). For more information on the DPW Less Waste Better Baltimore Plan please visit: [About the Less Waste, Better Baltimore Plan | Baltimore City Department of Public Works](#).



BALTIMORE COUNTY COMPLETES SUMMER WASTE AUDIT

If you happened to drive by the Central Acceptance Facility (CAF) in Cockeysville, MD during the week of July 25, you may have noticed that part of the citizen drop-off was sectioned off and a tent was set up. Workers from MSW Consultants and their subcontractors were busy sorting trash for Baltimore County's summer waste audit.

The primary goal of the audit was to get snapshots of the composition and weight of disposed waste materials from single family homes in Baltimore County. Of particular interest were the percentages of organic and recyclable materials in the waste stream, which the County will use when planning

future organics diversion pilot programs. This analysis, and the potential organics diversion pilot programs, are components of the 2021 Solid Waste Study group recommendations (see the Fall 2021 *Waste Watch* for more information).

Waste audits usually can be broken down into 4 stages: load selection, sampling, sorting, and weighing. Upon arrival at the scale house, staff queried drivers to confirm load origination, type of waste, location, route number, load weight, etc., and recorded the information for analyses and reporting. Private haulers under contract to the County that collected waste mostly from single family homes were directed to the sampling area upon arrival at the

CAF. The haulers tipped and evenly spread their waste onto the tipping floor. MSW Consultants' field supervisor, with assistance from the County's loader operator, took a grab sample from each load. Over the course of 4 days, MSW Consultants staff obtained and sorted a total of 40 samples from different hauler routes. After sampling, a front-end loader transported the sample to the sorting area. MSW Consultants employees transferred the sample from the front-end loader into plastic trash cans for storage while awaiting sorting.

A view of the back of the CAF Citizen Drop-Off during the waste audit. In the foreground on the left is the weighing area with scale, table, and electronic tablet. In the background on the left is the sorting area. On the right is the sample staging area where samples await processing.



One by one, employees sorted each of the 40 samples into labeled plastic bins that denoted 1 of the 37 categories of interest: (see below)

1. Corrugated Cardboard
2. Mixed Paper: includes newspaper, magazines, junk mail, office paper, high-grade stationery, paperboard, telephone directories and soft-backed books
3. Aseptic Packaging and Gable-top Cartons: plastic, or wax-coated, containers
4. Compostable Paper: includes tissues, soiled pizza boxes, paper towels, paper plates, napkins, coffee filters, uncoated paper-board products, and wet/soiled newspapers
5. Remainder/Composite Paper
6. #1 PET Plastics Bottles & Jars
7. #1 PET Non-bottles & Non-jars Containers
8. #2 HDPE Plastics Natural Bottles
9. #2 HDPE Plastics Colored Bottles
10. #2 HDPE Non-bottle Plastics
11. #5 Polypropylene Plastics
12. Other Small Rigid Packaging Containers (#3 - #7)
13. #6 Expanded Polystyrene (Styrofoam)
14. Clean Retail Plastic Bags & Film
15. All Other Plastic Bags & Film & Flexible Packaging
16. Durable / Bulky Rigid Plastics: plastics bigger than a breadbox, excluding #3 PVC
17. Remainder Rigid and Composite Plastic
18. Glass Bottles & Jars
19. Other Glass
20. Non-ferrous (Aluminum) Beverage Cans
21. Aluminum Foil and Trays
22. Ferrous (Steel) Cans
23. Remainder Scrap Metal
24. Food Waste (Vegetative/non-meat)
25. Food Waste (Meat, seafood, dairy and bones)
26. Divertible Food Waste (food items still in containers/packaging)
27. Yard Trimmings
28. Brush/Prunings
29. Natural Wood
30. Miscellaneous Organics/Other: includes animal wastes, diapers, sanitary products, natural fibers, cork, wax, sawdust, hair, cigarette butts, vacuum bags and lint
31. Textiles & Shoes
32. Construction & Demolition Debris Waste
33. Bulky Items: includes furniture, mattresses, box springs, tires, large appliances, etc.
34. Miscellaneous Inorganics/Other: includes organic material not otherwise classified, such as dryer and mop sheets, rubber latex gloves, cosmetics, full liquid soaps and shampoos
35. Fines & Screened Materials: includes all particles capable of passing through a 2-inch screen if encountered loose, regardless of material type
36. Electronic Waste & Small Appliances
37. HHW, Special & Medical Wastes: includes cleaning chemicals, pesticides/herbicides, gasoline, batteries, explosives, anti-freeze, paints, adhesives/glues, etc.

After sorting each sample, MSW Consultants employees weighed each bin with sorted materials on a digital scale. Weights were entered into a tablet computer synced to the cloud

for later data review and analysis. The contents of each weighed container were then dumped onto the citizen drop-off floor for disposal.

MSW Consultants will deliver a final report that will include a weighted waste composition summary, a letter with recommendations for a future composition study, and recommendations for other future studies and potential data uses, as well as limits to the use of current data. The final report will also highlight best practices of applicable organics diversion programs in five other jurisdictions similar to Baltimore County, such as Howard County, MD; Montgomery County, MD; Arlington County, VA; Minneapolis, MN, and Portland, OR. Finally, the report will also include recommendations for potential routes to be used in a curbside organics pilot program.

continued on page 6



Sample 10 stored in trash cans while awaiting sorting.

BALTIMORE COUNTY COMPLETES SUMMER WASTE AUDIT

continued from page 5



The grey, red, and blue plastic bins contain one type of material each. **Bottom row** (from left to right): #2 HDPE Non-Bottle Plastics, Other Small Rigid Packaging Containers (#3 - #7), Clean Retail Plastic Bags & Film, #6 Expanded Polystyrene (Styrofoam), Durable/Bulky Rigid Plastics. **Middle row** (from left to right): #1 PET Plastic Non-Bottles & Non-jars Containers, #1 PET Plastic Bottles and Jars, #5 Polypropylene Plastics, #2 HDPE Plastics Colored. **Top row** (from left to right): Remainder Rigid and Composite Plastics and #2 HDPE Plastics Natural.

MSW Consultants employees use a scale to determine the weight of each category of waste in the samples.



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WasteWatch is published quarterly by the Northeast Maryland Waste Disposal Authority, an independent agency of the State of Maryland governed by its Member Jurisdictions – Anne Arundel County, Baltimore City, Baltimore County, Carroll County, Frederick County, Harford County, Howard County and Montgomery County.