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## Students Sort Waste in Anne Arundel County

So what drives a group of 20-somethings to spend a week going through trash in December? A garbage fetish? Improving their Curbside Collection 2010 Wii video game skills? Hardly. Under the direction of SCS Engineers, through an Authority contract, these students conducted the first part of a two-season waste sort on behalf of the Recycling Division of Anne Arundel County (County). The Authority assisted the County in planning and executing the sort through the use of the Authority's on-call engineers. SCS Engineers was selected to conduct the two-season sort after supplying a proposal for services based on the County's scope of work. The sort focused on the material types accepted in current recyclables program in the County.

So, during a comfortably cold week in December, students gathered under a tent for the waste sort at the Millersville Landfill and Resource Recovery Facility (MLFRRF). The waste-sort tents were set up away from the active landfilling site to reduce impact on County operations. SCS and the County identified trucks from the target routes for sampling prior to the sort. After each designated truck discharged its load of curbside trash at the working face, a County loader grabbed a sample and brought it over to the sorting site. The load was then "dropped" into garbage cans. Each can was weighed until 200 pounds of material was collected (typically four cans full). Minimal handling of the material occurred in order to preserve the trash in its native state.

The trash was then brought into the tent to the sort station, where the students sorted through the load and placed the segregated garbage into different containers based on material type. A site manager for the sort routinely collected

the different material class containers for weighing and the recording of data. Recyclables that were separated from the trash were placed into a County provided roll-off container for processing. The separated garbage fraction was collected and disposed of at the MLFRRF. Typical recyclables found during the sort included newspaper, plastic film, office paper and commingled containers. SCS also performed a visual characterization of the waste brought to the MLFRRF by citizens and commercial entities.

The current study will compare the seasonal and annual data to previous sorts performed in the County. The County uses the sort data to analyze the progress of the recycling program and as part of the planning for future recycling efforts. SCS will examine the difference between recyclables collection in service areas with same-day trash and recyclables collection and those areas where the recyclables and trash are collected on different days. The second waste sort is planned for June or July 2010.

For information on the waste sort or the Authority's on-call engineers, please contact Andrew Kays at the Authority at 410.333.2730 or akays@nmwda.org.



*A County loader fills garbage  
cans for sort station.*

# Representatives Visit Landfill in Cumberland County

Representatives from Carroll County Department of Public Works (County) and the Northeast Maryland Waste Disposal Authority (Authority) participated in a site visit to the Cumberland County landfill in Shippensburg, Pa. on November 20, 2009.

The landfill is operated by Interstate Waste Services (IWS). IWS is the contract operator at the Northern Landfill transfer station and manages the transportation and disposal of municipal solid waste through an Authority contract. The Authority secured these services for Carroll County in 2008. The annual site visit ensures proper disposal of the County's MSW. Representatives of IWS (dba North East Waste Services) led the County and Authority representatives through the site.

MSW is transported from Carroll County in 100-cubic-yard trailers (64 miles, 1 hour 40 minutes through mountain roads). The trailers arrive at the site and are "loaded" onto a tipper at the working face. The MSW is unloaded in less than five minutes and pushed into place quickly to minimize litter.

Landfill staff uses automotive fluff for alternate daily cover. The fluff is the shredded materials (plastic, foam, leather) remaining from automotive recycling programs in Baltimore and Harrisburg, Pa. The fluff is used on inside slopes,



LFGTE

while dirt is used for outside slopes to encourage the growth of intermediate cover.

The cells where Carroll County MSW is disposed are modern Subtitle D cells. IWS recirculates leachate in the cells, expediting settling while increasing gas production. The increased settling (through decomposition) allows the landfill operator to recapture air space for

additional use at a later date. The leachate not used for recirculation is captured and treated on site. Fully treated leachate that meets permit requirements is discharged to a nearby stream. Leachate not meeting permit requirements is re-processed. Landfill gas is collected and turned into electricity at an onsite generating station owned by PPL (Pennsylvania Power and Light) using four separately containerized Caterpillar engines. The 1.6 MW system was brought online in February 2009. IWS and PPL have plans to expand the generation capacity at the landfill from the current 90 acres at a later date. The electricity is sold to Adams Electric.

The facility tour is one facet of the compliance requirements in the contract. IWS is required to supply groundwater monitoring data as well as permit compliance reports to the Authority. To learn more about the Authority and our Transportation and Disposal contracts on behalf of member jurisdictions, please contact John Schott at 410-333-2730 or [jschott@nmwda.org](mailto:jschott@nmwda.org).



Auto Fluff Tipper



Tipper Landscape

# US Composting Council – Annual Conference



The annual conference of the US Composting Council was held January 24-27, 2010, and showcased a broad spectrum of speakers and technology vendors. Conference participants could follow several tracks that focused on the creation and maintenance of diversion programs, improved operations at composting facilities, financing of facilities and the regulatory environment, disaster debris management and the impact of composting on greenhouse gas reduction. Exhibitors ranged from start-up companies with new products or technologies (i.e., biodegradable yardwaste bags, high solids anaerobic digestion processes) to established equipment vendors (i.e., yardwaste grinders, compost screens and covered composting systems).

The conference kicked off with an exciting plenary session featuring three powerful presentations on the future of composting in the United States and the world. Paul Sellw, developer of the IPS composting system, founder and CEO of Earthgro, Inc., and later president of Synagro Technologies, Inc., presented the “next target” for diversion. Mr. Sellw noted the early attempts to compost MSW failed because the end product was not readily marketable. In Mr. Sellw’s estimation, food waste is the next area primed for diversion from the MSW stream. He noted that the challenge of odor management is substantial but not insurmountable. The value-to-food-waste capture is the completion of the recycling loop — returning valuable nutrients to food production processes. Food waste also has a high energy value that can be captured in certain anaerobic digestion processes. Mr. Sellw encouraged conference participants to consider source

separated organics as “stored solar energy,” ready to be captured and turned into valuable, renewable, gasification feedstock, biogas and compost.

Nora Goldstein, executive editor of *Bicycle* magazine and longtime proponent of composting, discussed the role of composting in the development of sustainable communities. According to Ms. Goldstein, sustainable communities, are those that foster the conservation of natural resources, creation of jobs, healthy soils, clear air and increased food production capacity. Ms. Goldstein reported that the development of source-separated organics collections and composting systems is a natural extension of current recycling programs. Her overarching theme was that we need the simplest processes and facilities, not overly complicated systems, for the capture of the food waste and generation of valuable compost.

Carrie Walsh, director of marketing for Sun Chips (a Frito Lay brand), presented the company’s marketing campaign behind the launch of the biodegradable Sun Chips bags. Ashley Leidolf discussed the technology and research behind the development of the bags, including the comprehensive testing to ensure the bag’s compatibility with current composting technologies. Ms. Walsh focused on four concepts behind the marketing: (1) composting awareness through the use of grass roots advocacy/education and mass media partnerships (i.e., Facebook); (2) making composting approachable through the use of simple language; (3) reinforcing the message at the “touchpoint” by having a banner on the bag for instructions on composting; and (4) making it personal, featuring children as

a centerpiece of the promotion. The plenary session ended with Sally Brown, Ph.D., of the University of Washington discussing the impact that the bans on landfill disposal of yardwaste in the early 1990’s had on composting facilities and overall recycling in the United States. Dr. Brown noted that these bans are critical to maintain as three carbon credit exchanges currently grant credits for the diversion of organics from landfills. She noted that composting is good for fighting climate change. Dr. Brown also advocates for the placement of dedicated anaerobic digesters at landfills to capture organics and generate electricity and compost feedstock.

The conference ended with a live equipment demonstration at the Reedy Creek Improvement District facility. The demonstration included high-speed and low-speed wood waste grinders, trommel and disc screens, windrow turners and compost spreaders. Participants at the demonstration were offered a guided tour of the biosolids and foodwaste composting facility at Reedy Creek.

More than 800 people attended the conference this year, reflecting the growth in composting sector and recognition of the value of the services provided by those in the composting industry. Participants heard presentations from a spectrum of presenters, including grassroots advocates, industry consultants, government managers and entrepreneurs.

For information on the conference presentations and exhibitors, please contact Andrew Kays at 410.333.2730 or akays@nmwda.org.

# Maryland Energy Administration Recommends WTE to Meet State's Renewable Energy Goals

The current Renewable Portfolio Standard (RPS) for Maryland requires that renewable sources generate 20% of Maryland's electricity by 2022, including 2% from solar, but does not include waste-to-energy (WTE) plants, which are only eligible to meet the resource requirement through 2018. Renewable energy resources are classified in the RPS statute in two tiers. Right now, only Tier 1 resources are eligible until 2022 to fulfill the requirement. These include: solar, wind, qualifying biomass, landfill methane, geothermal, ocean, certain fuel cells, energy derived from poultry litter, and small hydropower stations.

In the 2010 Maryland Energy Outlook report, The Maryland Energy Administration recommends that the state consider amending

the RPS statute to extend the waste-to-energy requirement beyond 2018. Technologies in Tier 2 of the RPS include WTE and hydroelectric facilities that are larger than 30MW. Currently, the 2.5% Tier 2 requirement drops to 0% in 2019 and beyond.

If Maryland decides to support continued development of WTE facilities, the RPS requirements that include WTE could be extended beyond 10 years and allow newly constructed WTE facilities to be part of the RPS. This would help the state achieve some of its long-term energy goals. WTE facilities provide in-state renewable electricity generation that satisfies RPS requirements and contribute to GHG mitigation, while generating significant ancillary benefits related to sustainable waste management.

According to the report, "WTE facilities provide a potentially attractive local energy resource for Maryland." The report further states, "Technology assessments and cost-benefit analyses could be pursued to determine the best way to harness the inherent value of waste products." For comparison purposes, WTE produces 725kW of electricity per ton vs. 0.000778 kW from one ton of waste in a landfill that has a landfill gas-to-energy facility.

A review of the information in the DSIRE database showed that the Maryland and Washington, D.C., tiers containing MSW are the only renewable energy resources or tiers in all the states with RPSs that are phased out over time. In all other states, resource requirements are permanent and do not decrease over time.



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