

Harford Waste Disposal Center Expansion

Harford County is constructing the first new landfill cell to be built at the Harford Waste Disposal Center (HWDC) since 1995, Cell N1. A permit was approved in late 2007 to expand the landfill, which has been open since 1987, but nearing capacity. Cell N1 will provide 700,000 cubic yards of air space.

In March, the County awarded Dixie Construction Company of Churchville,

MD, the construction contract for Cell N1. Construction commenced in May. This project includes construction of the landfill cell, access roads, leachate sewer and storage tanks, a header for a future landfill gas system, and a plate arch bridge to access the spoil stockpile area. Harford County has been utilizing the Authority's on-call engineer, Malcolm Pirnie, Inc., for design of the new cell, preparation of the bid documents, and engineering and inspection services during construction.

HWDC is the home of Harford County's only MSW landfill. The current HWDC landfill occupies 38 acres of the 286 acre property with an additional 77.5 acres permitted, including Cell N1. Other facilities located at HWDC include a residential convenience center, yard trim composting facility, recyclable materials transfer station, and the administrative offices of the Division of Environmental Services.



Harford County Director of Public Works, Bob Cooper (front), and Harford County Deputy Director of Environmental Services, Tom Hilton, survey the construction of the new landfill cell at the Harford Waste Disposal Center.



WASTEWATCH

Tower II – Suite 402, 100 S. Charles Street
Baltimore, Maryland 21201-2705
(410) 333-2730 / Fax: (410) 333-2721
E-mail: authority@nmwda.org
Website: www.nmwda.org

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In this issue...

Model Shows Link
Between GDP, Waste
Page 2

Montgomery County
Improves Recycling Efforts
Page 3

Authority Members Build
More Renewable Energy
Page 3

It's Easy to Recycle!
Page 3

Harford Waste Disposal
Center Expansion
Page 4

Howard County School Benefits From **SOLAR POWER**

The Northeast Maryland Waste Disposal Authority (the Authority) issued procurement documents for solar energy development at the New Cut Road Landfill in August 2009. This procurement was at the request of the Howard County Department of Public Works (County DPW), which wanted to develop a solar project at the New Cut Road Landfill in Ellicott City (Landfill), MD. The electricity generated from the array was to be supplied to the adjacent Worthington Elementary School (School).

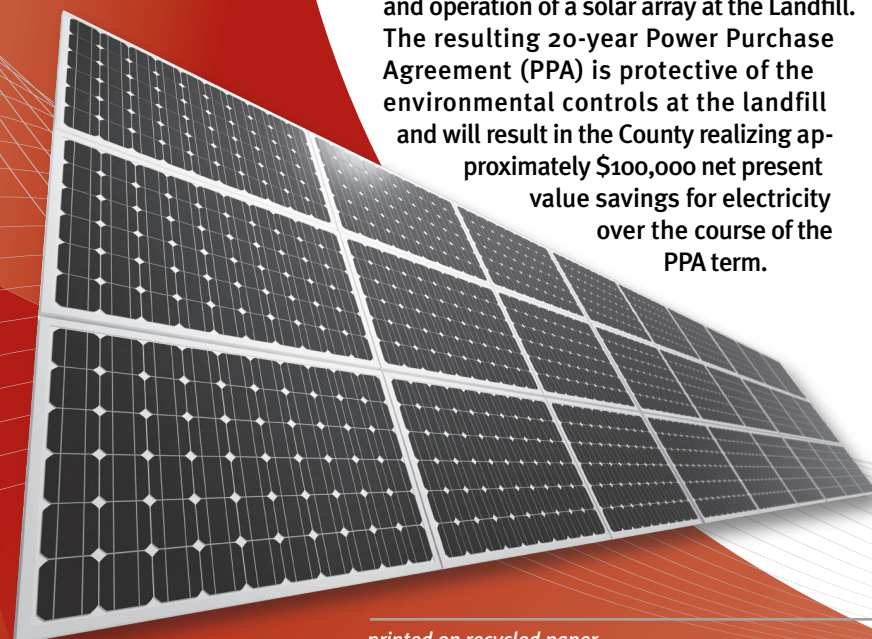
The County DPW, the Howard County Board of Education and the Authority reviewed proposals and selected Sun Edison as the preferred vendor for the purpose of negotiations. The four parties entered into intense negotiations for the development and operation of a solar array at the Landfill. The resulting 20-year Power Purchase Agreement (PPA) is protective of the environmental controls at the landfill and will result in the County realizing approximately \$100,000 net present value savings for electricity over the course of the PPA term.

Over 90 percent of the electricity needs of Worthington Elementary School will be provided by the array.

The Authority applied for and received a grant from the Maryland Energy Administration (MEA) to finance the project.

The Authority Board, Howard County Board of Education and the Howard County Council all approved the PPA and associated contract documents. The County will hold public meetings in the early fall of 2010; construction of the array is anticipated to start in late fall 2010 with a project commissioning no later than June 2011. The current design of the array calls for a 450 KW DC system that is projected to produce over 90 percent of the School's needs on an annual basis. The array will utilize American-made equipment. This will be a showcase project that represents positive cross-agency cooperation for the beneficial use of otherwise dormant land.

For more information, call Andrew Kays at 410.333.2730.



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Authority Members Build More Renewable Energy

Anne Arundel County is now on its way to using its landfill gas to its benefit, both environmentally and financially. On Aug. 2, the Anne Arundel County Council approved the Landfill Gas to Energy (LFGE) Project at the Millersville Landfill and Resource Recovery Facility, and the Authority's board approved the project two days

later. This project is unique compared to other LFGE projects the Authority has assisted in developing — funds from the Federal Energy Efficiency Block Grant will be utilized for a portion of the capital costs. This LFGE facility will use two Caterpillar 3520 internal reciprocating engines, which combined will produce 3.2 megawatts of renewable or “green” energy and is anticipated to be online

within 12-18 months. The facility will capture the landfill gas currently being flared and turn it into electricity, while also generating renewable energy credits (RECs). The greenhouse gas reduction benefits of this facility are equivalent to removing annual emissions from 2,800 vehicles or planting 3,100 acres of forest each year. It will generate enough electricity to power 1,890 homes.

Montgomery County Improves Recycling Efforts

Montgomery County passed an amendment proposed by Executive Ike Leggett that the County recycle, reuse ash residue, and improve recycling of construction and demolition debris. These actions, Mr. Leggett stated “will reap financial and environmental benefits for the County.”

Ash residue from the County's Resource Recovery Facility (RRF/waste-to-energy plant) will be reused and recycled and the recycling of construction and demolition (C&D) debris will be increased under this amendment to the County's waste transportation and disposal contract.

Under the terms of the amendment, the County will receive a credit of \$2.50 for each ton of ash beneficially reused or recycled. The County also will receive 17.5 percent of sales revenues from any additional metals recovered from the ash (most

metals are already removed and recycled at the RRF). Savings on the approximately \$11 million per year waste transportation and disposal contract with Brunswick Waste Management Facility, LLC, a wholly owned subsidiary of Republic Waste, will be about \$250,000 in FY11 and \$500,000 per year through 2017.

The ash will be screened into several sizes and used as road base in modern, lined landfill cells and as alternate daily cover-to-cover trash. The processed ash replaces virgin materials such as stone and soil that would have to be imported, and in some cases mined, from other locations. This will mean a reduction of fuel use and associated air emissions due to less energy used to develop road base materials, fewer trucking miles required and reduced construction of additional landfill space.

Once the ash recycling process is in use, Montgomery County will send less than 10 percent of its total waste stream to a landfill for disposal.



It's Easy to Recycle!

The building management for the Authority's offices has implemented an office recycling program. The Authority recently hosted a meeting with tenants and representatives of building management to explain the new program. In the initial phase of the recycling effort, staff will deposit all paper, plastic and cardboard into specifically marked plastic containers. Building Manager Barbara Etzel indicated that the eventual goal is for all office waste baskets to be used as recycling containers, which will be emptied by the cleaning service each evening. When that plan is implemented, staff only will have to take food waste to the kitchen. Barbara added that staff had been taking recyclables home on a regular basis — thanks, Diane and Steve! Building management has contracted with Allied Waste Services as the vendor for this work.



CONGRATULATIONS to EROI, the operator of the Harford WTE Facility, which celebrates five years of no lost-time accidents.



Model Shows Link Between GDP, Waste

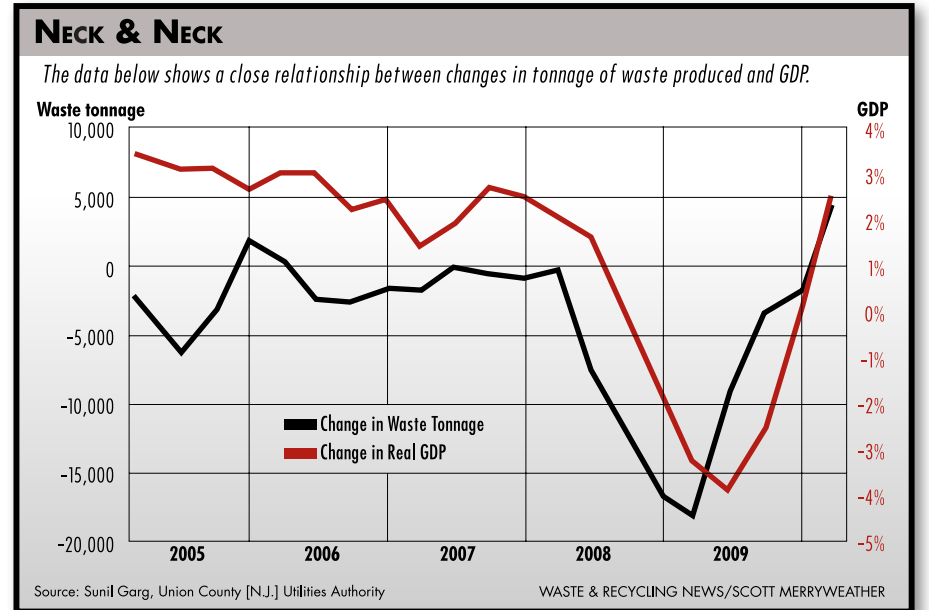
A recent study has shown that a change in the amount of garbage generation is a leading indicator of changes in gross domestic product (GDP) on a quarter-by-quarter basis. In fact as the GDP drops, so does waste tonnage in a predictive manner that is consistently accurate — within four to five percent — among ten years of waste generation data from Union County Utilities Authority (UCUA).

“We have also found that, at least in Union County, change in employment relates well to changes in waste,” says Sunil Garg, executive director of UCUA, who led the team that pored over statistics from GDP, waste tonnage, and other economic indicators to reveal clear and intriguing trends.

“We see that employment numbers can allow us to predict waste numbers about two to three months ahead of time. We used our model to the end of December of 2009 to predict the tonnage for Union County in the first quarter of 2010 and were accurate to about 4.5 percent. That is very good in this business.”

Garg explains that it does make sense — if people are not buying, they are not throwing out. If they are feeling pinched financially, they stop buying discretionary items, thereby generating less waste.

Because authorities such as UCUA — an energy-to-waste facility



This data allowed UCUA to stay ahead of the curve, to predict expected amount of waste.

in New Jersey that annually generates renewable electricity for about 30,000 homes — live “hand to mouth” especially during economic downturns, being able to predict and plan for such a decrease is critical to staying financially solvent.

With the help of this analysis, Garg says his facility is one of the only municipal services in New Jersey that did not have to raise disposal rates in the past two years when it collected a deficit of 70,000 tons of waste and lost \$2 million to \$3 million in revenue.

These models, developed with colleagues from HDR, an architectural, engineering and consulting firm in Boston, will allow Union County to predict the amount of waste it can expect, and act accordingly.

Excerpt from article by Chrissy Kadleck, Waste & Recycling News, with permission