



# Air and Waste Matters

DNREC Division of Air and Waste Management

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## Peninsula Compost Company — Targeting Zero Waste

**P**eninsula Compost Company, LLC is now up and running at 612 Christiana Avenue, adjacent to the Port of Wilmington. The state-of-the-art composting facility specializes in food waste recycling, and accepts yard waste and natural wood to create organic compost and top soil material.

Haven't heard of food waste recycling? Many experts agree that food waste recycling is the only way to reach a target of zero waste. Preventing waste and expanding reuse, recycling and composting programs is the ideal way to achieve zero waste.

Aiming for zero waste is also one of the most effective strategies available for significantly reducing greenhouse gas emissions.

The \$20 million composting operation is the first in Delaware and the largest state-of-the-art composting facility on the East Coast. It will help lower waste disposal costs for local businesses by diverting waste from the Cherry Island Landfill (see expansion story on p. 4).

When the facility reaches full capacity operations this summer, they will generate 160,000 tons of high-quality organic compost and top soil material.

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A front-end loader is used to stage the food waste inside the warehouse.

## Peninsula Composting *Continued...*

It will provide a consistent, high-volume way of making food and yard waste into a recycled product. The waste comes from local consumer food and yard waste generators such as schools, supermarkets, convenience stores and landscapers. The facility has contracts with numerous local food and yard waste haulers to deliver the materials directly to the site. Scientists from the Division's Solid and Hazardous Waste Management monitor the facility operations.



**D.B. Cooper, seagull control at its finest.**

Composting provide green jobs during construction and operation. The agreement specified using local minority-owned contractors and subcontractors with job opportunities for local residents. In addition, Peninsula Composting made a commitment to reduce truck traffic in the nearby Southbridge neighborhood. The facility will also provide compost and other benefits directly to the neighborhood.

It is the first facility to use the GORE® Cover System technology to convert the food discards, wood and yard waste into compost, at a rate five times faster than mother nature. The cover system was also locally developed by W.L. Gore and Associates of Newark.

And another first for Delaware – the project is the first to enter into a Community Benefits Agreement, which stipulated that Peninsula

One of the benefits may be D.B. Cooper, the resident bird dog. He is a rescue dog that recently started “work” at the site. Facility personnel report that within two minutes of walking him onsite, the seagulls all disappeared! Smart seagulls. For more information on the facility, please visit their website at:

<http://peninsulacompostcompany.com/about/index.html>.

*Article by C. Wirtz, DAWM*



**The compost material is staged in “windrows” at the site to complete a three-stage composting process that takes approximately eight weeks. The process is accelerated by covering the windrows with the green GORE® Cover System, preventing rainwater infiltration.**

## Counting Microscopic Mold Spores and Pollen

When it comes to the year's first airborne pollen levels, March comes in like a lamb, and April goes out like a lion! Just ask the thousands of allergy sufferers who wheeze and sneeze through the season. Now they can prepare for nature's onslaught with a little help from the Division's Air Quality Management Section (AQM).

To catch the relatively mild beginnings of tree pollen each year, AQM starts sampling around the first of March. The mold and pollen sample collector is located on the roof of the AQM's offices at Grantham Lane, south of New Castle.

During allergy season, which lasts until October 31<sup>st</sup>, AQM collects and reports pollen and mold counts three days a week (Monday, Wednesday and Friday). The counts are made by observing the pollen and mold spores under a microscope, identifying them, and calculating the volumetric count, based on the air sampling parameters. The resulting report includes a color-coded rating chart that shows the level of hay fever and asthma symptoms that may be related to pollen exposures.

The AQM's pollen counting station is the only station located in Delaware, and is certified by the National Allergy Bureau (NAB) for both pollen and mold spore counts. The NAB is the section of the American Academy of Allergy, Asthma and Immunology's (AAAAI) Aeroallergen Network that is responsible for reporting current pollen and mold spore levels to the public. AAAAI is a U.S.-based professional medical specialty organization that represents allergists, clinical immunologists, allied health professionals

and others with a special interest in treating and researching diseases such as allergic rhinitis, asthma, atopic dermatitis/eczema and anaphylaxis.



**The sample collector, surrounded by photomicrography of tree pollen and mold spores.**

The counts are reported as part of the NAB network which includes the United States, Canada and Argentina. The counts are categorized by tree, grass, and weed pollen, as well as mold spores. The concentration of each category (particles/M<sup>3</sup>) is reported as a color-coded ranking: absent, low, moderate, high, or very high. The information is posted on the AQM's pollen count page, and the NAB's web page.

In Delaware tree pollen is most abundant in spring, grass pollen in late spring through summer, and weed pollen in late summer. Mold spore levels usually don't reach the moderate level until May, and then will fluctuate in response to a variety of environmental factors.

To review the Division's pollen count report, please visit:

<http://apps.dnrec.state.de.us/Pollencount/PollenCount.aspx>.

For more information on pollen and mold, please visit the NAB's website at:

<http://www.aaaai.org/nab/index.cfm>.

*Article by M. McDowell, AQM*

## Cherry Island Landfill Expansion Nearly Complete

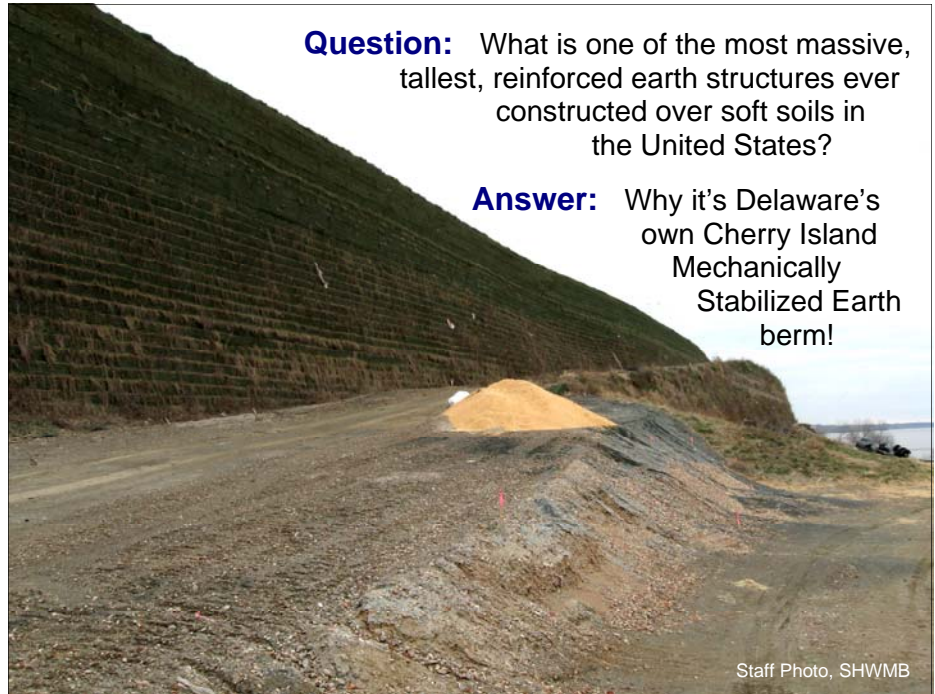
The Delaware Solid Waste Authority (DSWA) is constructing the Mechanically Stabilized Earth (MSE) berm, which looks like a giant wall, at the landfill near Interstate 495 in Wilmington.

While the berm is scheduled to be completed by May this year, other work including installing a liner over a portion of the new area, as well as enhancements to the gas and leachate collection systems could push back the completion date into October 2010.

When finished, the wall will stretch for nearly two miles around three sides of the landfill, with an additional 60 feet of vertical height. The berm, designed to stabilize foundation soils at the base of the landfill, will increase the waste capacity of the landfill and is projected to extend its useful life through 2025.

It is a monumental project and an equally sizable effort for DNREC to carefully monitor the construction activities on the project. Staff from DNREC's Solid and Hazardous Waste Management Branch oversee the ongoing expansion work to make sure that DSWA is complying with their solid waste facility permit. Staff meet with DSWA, their design engineers and Construction Quality Assurance (CQA) inspectors, and the general contractor regularly to discuss the progress of the work, as well any project concerns.

Now that the MSE berm is nearly complete, you can see that it actually has two tiers like a



Staff Photo, SHWMB

**Question:** What is one of the most massive, tallest, reinforced earth structures ever constructed over soft soils in the United States?

**Answer:** Why it's Delaware's own Cherry Island Mechanically Stabilized Earth berm!

**The Mechanically Stabilized Earth berm at the Cherry Island Landfill looks like a giant Mayan wall along the Delaware River.**

layer cake. Currently, gas headers — plastic pipes used to transport landfill gas to the on-site gas plant — are being installed in the upper tier to tie into the existing gas collection system. The new headers will ensure the continued collection of gas throughout the life of the landfill. At current levels, the landfill gas generates enough power to provide electricity to about 18,000 Delaware households annually. That's quite a bit of gas, which will continue to be sold to Conectiv.

In addition to inspecting the ongoing construction, placement and monitoring of special groundwater monitoring wells, dust controls and proper storage, handling and installation of materials, branch staff review the geotechnical monitoring (for landfill stability).

An extensive geotechnical monitoring network is in place to monitor the stability of the berm

*(Continued on page 5)*

## Cherry Island Expansion *Continued...*

as it is being built. To date, DSWA has hauled in over 1,930,000 cubic yards of fill (structural and granular fill) to construct the MSE wall.

Once DSWA has completed the construction, they must begin the equally formidable task of assembling all of the Construction Quality Assurance documents, including as-built drawings, test results, and material certifications in order to certify that the work was done in compliance with the requirements of the solid waste facility permit.

These documents, along with comments and conclusions from the design engineers must be provided to DNREC as the "Final Report" for the

monumental MSE wall at Cherry Island Landfill.

For more information on the work, please visit the DSWA consultant's website:

<http://www.geosyntec.com/UI/Default.aspx?m=ViewProject&p=41>.

The permit governing the landfill operation and the expansion is available at:

<http://www.awm.delaware.gov/SHWMB/Documents/Permit%20Renewal%20DSWA%20NSWMC0001.pdf>.

*Article by SHWMB Staff*



**A track hoe is used to complete the earth-moving work on the lower tier of the Mechanically Stabilized Earth berm. The Port of Wilmington is located across the river from the landfill.**

## It's Back — Open Burning Ban!

Statewide open burning restrictions are in effect throughout Delaware from May 1-Sept 30. This five-month period is considered to be Delaware's ozone season. During these months, high temperatures and sunlight combine with pollution to form a dangerous chemical called ground-level ozone. Elevated ozone levels can cause health problems for many people, especially children, seniors, and anyone with respiratory ailments.

In Delaware, open burning is prohibited as a means of disposal for any refuse or garbage, including but not limited to old lumber, trash, grass, and tree stumps. Burning of leaves is also banned year-round. However, burning of cut or fallen branches, limbs or shrubbery trimmed from a residence is allowed throughout the state from October through April, except when the State Fire Marshal issues a ban on all outdoor burning.

Delaware's Air Quality Management (AQM) Regulation 1113 defines open burning as:

Any outdoor fire or outdoor smoke-producing process from which the products of combustion are emitted directly into the ambient air. This does NOT include incinerators, boilers, or heaters used in process operations. Subject to restrictions in Regulation 1113, six types of open burning activities are allowed in Delaware: \*

- Recreational burning, such as cooking fires (BBQs) (limited to 10 cubic feet).
- Recreational burning, such as camp-

fires (patio fire pits) or ceremonial fires (by organized groups) (limited to 27 cubic feet).

- Burning of small amounts of limbs or brush trimmed/cleared by the homeowner.
- Demolition of structures by intentional burning for firefighting instruction.
- Prescribed burns for forest and land management and invasive species control.
- Agricultural burns for field maintenance, crop residue and land clearing.

**\*Cooking and campfires are allowed year-round, but all other burning activities require DNREC AQM notification and are restricted during the Ozone Season Burn Ban.**

Notification of the respective county fire call board is required prior to any burning activity:

New Castle (302) 571-7331  
 Kent (302) 734-6040  
 Sussex (302) 856-6306

AQM Regulation 1113 can be found at:

[http://www.dnrec.state.de.us/air/aqm\\_page/docs/pdf/reg\\_13.pdf](http://www.dnrec.state.de.us/air/aqm_page/docs/pdf/reg_13.pdf).

For more information on open burning restrictions, please visit:

<http://www.awm.delaware.gov/Info/Pages/OpenBurningMain.aspx>.

You may contact Gerald Mood at (302) 739-9402, or [gerald.mood@state.de.us](mailto:gerald.mood@state.de.us) for more information.

*Article by G. Mood and T. Postell, AQM*

## Sussex County Scrap Tire Day — April 24 in Seaford

Did you know that Delaware produces over 750,000 scrap tires a year? Scrap tire piles present a number of environmental, health, and safety hazards to our communities. They are ideal breeding grounds for mosquitoes. A tire fire started by arson or a lightning strike could take days, even weeks, to put out because burning rubber is extremely difficult to extinguish. In addition, the smoke from a tire fire contains hazardous gases and the oily liquid runoff from the melted tires can pollute groundwater.

**Therefore, the Division's Scrap Tire Control and Cleanup Program is hosting a Scrap Tire Drop-Off Day on Saturday, April 24, from 9 a.m. to 3 p.m., rain or shine, at the Seaford Boat Ramp parking lot.**

DNREC is partnering with the City of Seaford to bring this recycling opportunity to Delaware citizens. The boat ramp is located at the intersection of Nanticoke Street and Nanticoke Avenue in Seaford.

This is the 4th tire recycling event hosted by DNREC at different locations around the state. Delaware residents may recycle up to ten (10) scrap tires free of charge. The maximum of ten tires per Delaware household should be either passenger or light duty truck tires. Reusing or recycling tires keeps them out of landfills. Old or used tires can be shredded or turned into crumbs to be reused in additives to asphalt for roads and playgrounds.



Proof of residency is required, such as a driver's license or utility bill. Note that oversized tires, tires on rims, bicycle tires, or tires from commercial dealers are **not** accepted.

For more information please visit:

<http://www.awm.delaware.gov/Info/Pages/ScrapTire.aspx>.

You may also call Laurene Ehemann, coordinator of the program, at 302-739-9403 or 800-662-8802, or e-mail Laurene at:

[Laurene.Ehemann@state.de.us](mailto:Laurene.Ehemann@state.de.us).



Staff Photo, SHWMB

**There are many large scrap tire piles throughout the state, such as this one at an automobile salvage yard in Sussex County.**

DELAWARE  
DEPARTMENT OF  
NATURAL  
RESOURCES AND  
ENVIRONMENTAL  
CONTROL

Secretary Collin P. O'Mara  
Deputy Sec. David Small

DNREC Division of Air and  
Waste Management  
89 Kings Highway  
Dover, Delaware 19901

Acting Division Director  
Marjorie Crofts  
Phone: 302-739-9400  
Fax: 302-739-5060

Editor: Christina Wirtz  
Phone 302-395-2600  
christina.wirtz@state.de.us

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information.



The Division of Air and Waste Management includes the following sections and responsibilities:

- **Air Quality Management Section** — air monitoring and regulating air emissions.
- **Tank Management Branch** — maintenance and installation of underground and above ground storage tanks & overseeing cleanup of tanks which may leak.
- **Emergency Prevention and Response Branch** — preventing industrial accidents, assuring emergency planning and community right-to-know, and responding to environmental emergencies.
- **Environmental Crimes Unit** — the Enforcement Officers enforce the state's air, waste and water pollution laws, and participate on DNREC's Environmental Response Team by responding to environmental emergencies.
- **Site Investigation and Restoration Branch** — remediation of sites contaminated by hazardous substances (Superfund/Brownfields/Voluntary Cleanup Program).
- **Solid and Hazardous Waste Management Branch** — reuse, recycling, transport and disposal of solid and hazardous waste.

## EASY REFERENCE PHONE NUMBERS

24-Hour Report and Spill Notification Line - 1-800-662-8802  
Aboveground Storage Tanks - 302-395-2500  
Air Quality - Dover Office - 302-739-9402  
- New Castle Office - 302-323-4542  
Asbestos - New Castle - 302-323-4542  
- Kent & Sussex - 302-739-9402  
Boiler Safety - 302-744-2735  
Brownfields - 302-395-2600  
Emergency Prevention and Response - 302-739-9404  
Environmental Crimes Unit - 302-739-9401 or 1-800-662-8802  
Hazardous Waste - 302-739-9403  
Medical Waste - 302-739-9403  
Open Burning - 302-739-9402  
Outreach Ombudsman - 302-395-2515  
Recycling - 302-739-9403  
Site Investigation & Restoration Branch (Superfund/Brownfields) - 302-395-2600  
Small Business Ombudsman - 302-739-9909  
Solid Waste - 302-739-9403  
Underground Storage Tanks - 302-395-2500

## DID YOU KNOW?

During 2009, the Division's Environmental Protection Officers handled a total of 3,916 complaints covering a wide range of violations and emergencies statewide. Water pollution discharges from residential, municipal and industrial sources were the number one complaint with 545 calls, followed by open burning (523 calls) and illegal dumping (472 calls). Citizens are encouraged to call the toll-free, 24-hour Environmental Complaint Line at 800-662-8802. Verizon Wireless customers in Delaware can reach the line by calling #367 on their cell phones.