



Environmental Protection Matters

DNREC Office of Environmental Protection

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Volume 8

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Protecting Delaware's Natural Resources

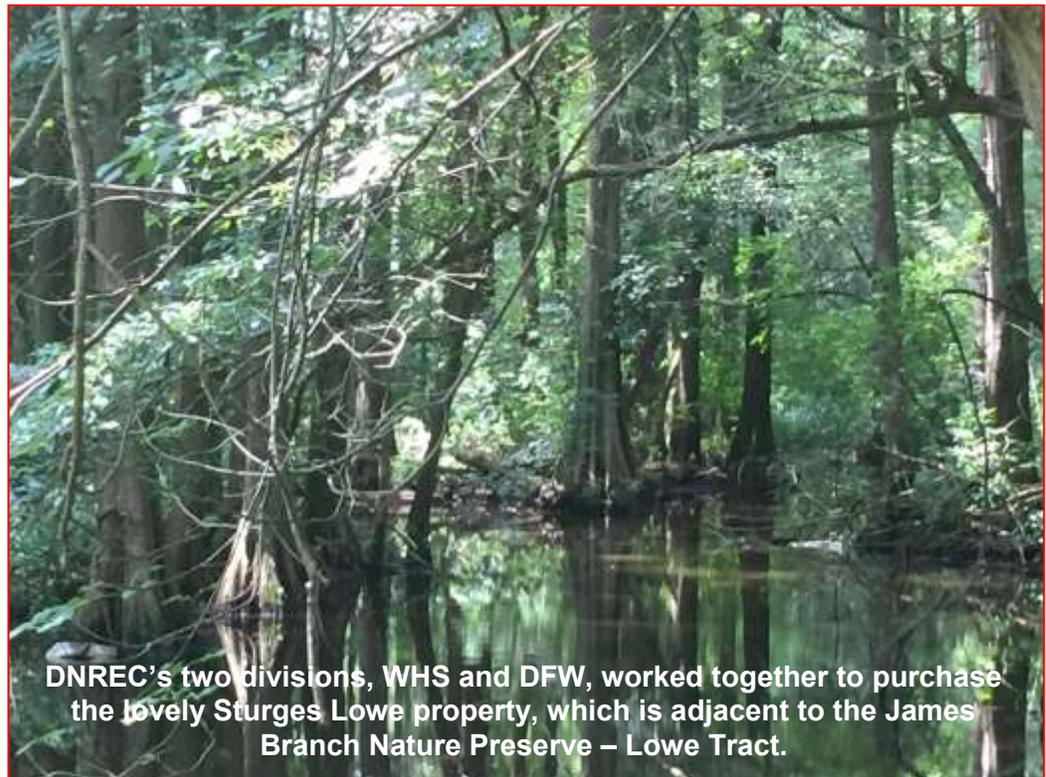
Talk about synergy, DNREC's Division of Waste and Hazardous Substances' Site Investigation and Restoration Section (SIRS) and Division of Fish and Wildlife (DFW) made a little bit of synergistic magic happen last month to conserve a pristine piece of property in Sussex County.

Earlier in the year, SIRS settled a Natural Resource Damage Assessment and Restoration (NRDAR) with potentially responsible parties relating to contaminated site groundwater in Georgetown.

When contaminants are released to the environment, not only are fish and wildlife impacted, but also other natural resources such as surface and groundwater. The state usually works with federal partners to act as trustees for natural resources in the NRDAR program. However, groundwater resources are delegated to the state as the trustee.

NRDAR trustees identify and determine the extent of the natural resource injuries, and recover damages from those responsible. They also plan and carry

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DNREC's two divisions, WHS and DFW, worked together to purchase the lovely Sturges Lowe property, which is adjacent to the James Branch Nature Preserve – Lowe Tract.

Protecting Delaware's Natural Resources *Continued...*

out natural resource restoration activities, as needed. The primary benefit of the NRDAR Program is that the parties responsible for the injuries pay for the restoration on their property, or pay a natural resource settlement, which can include restoring or preserving a different property.

Part of SIRS' settlement was used to remediate the groundwater in the Georgetown area. In addition, SIRS received \$60,000 as a settlement from the NRDAR potentially responsible parties in order to purchase land that would protect future groundwater from becoming contaminated.

By coincidence, DFW was interested in purchasing a corner lot of prime real estate in Laurel that was in an excellent recharge area. It seemed like the perfect use for the new NRDAR settlement funds.

However, many logistics were involved including analyzing the property against groundwater recharge area maps to ensure its acquisition would satisfy the goals of the settlement. Additionally, the property was vetted through the Natural Areas Advisory Council, who voted to bestow Nature Preserve status on the property, granting it the highest level of land protection possible in Delaware.

The NRDAR case managers visited the site with DFW staff and, with all due diligence having been completed, agreed to assist purchase of the property for preservation.



The Sturges Lowe property is heavily vegetated with native species.

The magic? SIRS and DRW were able to expedite the purchase of the pristine Sturges Lowe property because SIRS provided DFW with the majority of the funding that they needed at just the right time. The property is adjacent to the James Branch Nature Preserve – Lowe Tract, with outstanding native species.

The new property is also in an excellent recharge area, and keeping it undeveloped and natural will provide a benefit to the groundwater of the state, especially Sussex County where the original contamination occurred. In addition, the purchased property is adjacent to land that DFW already owns, making oversight and maintenance of the property much more efficient. For more information on the NRDAR program, please visit:

<http://www.dnrec.delaware.gov/dwhs/SIRB/Pages/NRDA.aspx>

*Article by K. Durant, SIRS
Photos by G. DeCowsky, SIRS*

Introducing Tropo!

The Air Quality Partnership (AQP) is very pleased to announce the arrival of Tropo from Planet Sora! Tropo, a new friend of the AQP and Delaware, is here to help raise awareness of how the air we breathe affects our health and how the things we do can impact the air we breathe. Tropo will help children and adults understand that simple steps, including: carpooling, walking, biking, taking public transit, and turning off the car engine when you stop for more than two minutes, can make a big difference to help reduce air pollution.

Long before Earth started seeing the negative effects of mankind and pollution began to reshape our planet, there was a place much like ours suffering the same fate. Far, far away from Earth in another galaxy, millions of light years away, is a planet called Sora. Planet Sora was a lot like Earth, except instead of one moon it had six. On these moons lived various creatures going about their business and using the home planet of Sora and all of her resources without any thought to what they were doing.

Sadly, Planet Sora began to change...the air became thicker; the water less clear and it was obvious something had to be done. The leaders from

the six moon colonies were called together to meet and determine what had happened to their beloved Planet Sora. What could they do to restore her to her original and majestic beauty?

Many from the six moon colonies thought it was too late. They thought why worry about what happens later? They could just keep doing what they were doing and let future generations deal with the consequences.

Luckily, the leaders and scientists from the six moon colonies thought better. They saw an opportunity for everyone to pitch in and do their part to turn around the effects and save planet Sora. And that is exactly what they did! It took a lot of hard work, many experts (and their own Clean Power Plan) to reverse the trends, but slowly Planet Sora was restored.

Tropo came from the 3rd moon and was an expert on Air Quality. He was instrumental in helping to turn around Planet Sora. He also had been to Earth years prior, so our friend Tropo vowed to return one day to help the people, and especially the kids, take steps in the right direction to reverse the negative effects mankind has caused, restoring Earth to its original beauty, too.



Tropo made his appearance on July 28th at the Delaware State Fair, enlightening all about how we can improve air quality.

Tropo has already visited many schools in Delaware and shared his great insights into the things we can do everyday to make a difference in our Earth's environment. For more information on Tropo and Delaware's AQP, please visit: <http://www.airqualitypartnership.org/>

For more information on the Delaware's Clean Power Plan, please visit: <http://www.dnrec.delaware.gov/Air/Pages/CleanPowerPlan.aspx>

Article by J. Martini, DAQ

Dig Clean, Dig Safe in Delaware

Ever wonder what happens if a contractor encounters contaminated soils or ground water on a construction site? Common contaminants in former industrial areas can include petroleum products, solvents and sometimes even high levels of arsenic from historic tanning operations. These contaminants could pose a health risk if encountered on the job.

That's just the kind of scenario DNREC wants to avoid, so DNREC initiated a pilot notification advisory system with "Miss Utility" to inform a contractor or excavator when chemical contamination may be present at, or near, planned excavation areas. Miss Utility is a one-call notification center that informs subscribing facility/utility owners of proposed excavation in Delaware.

Advisories are generated when excavation activities occur within an established map grid that contains a DNREC hazardous substances site polygon. The pilot system began with Newark in Dec. 2012 and included Wilmington in Oct. 2013. The effort grew incrementally to allow feedback and adjustments suggested by Miss Utility members. As of December 2014, coverage was expanded to include all of Delaware.

DNREC shares an interest with Miss Utility in promoting safe excavations when they occur near potential areas of contaminated soil or groundwater. DNREC administers the cleanup of these areas, and therefore can share this information with the excavator when and if an excavation is planned near a potentially contaminated site. With advance knowledge, DNREC hopes excavators can take informed safety measures, based on the information shared.

What is an Excavation Advisory? An advisory is a one or two page form (see page 5), which contains a map showing the reported limits of the excavation activity relative to the boundaries of known contaminated sites. Beyond the map, the form conveys information on one (or numerous) sites that are shown in the map. The information includes the chemicals of concern with hyper-

links to OSHA health advisories. Additionally, a generic Contaminated Materials Management Plan (CMMP) offers more detailed support if potential contamination is encountered as part of excavation activity.

How are Advisories Sent? Advisories are sent typically by email or fax to the caller. The advisories may also be sent by short message service (SMS or text) with an embedded link to the advisory when either an email or fax is available. A link to the advisory is also placed into the National Ticket Management System (NTMS).

Can Emergency After Hours Support Be Received? Prior to contacting DNREC directly, the CMMP should be reviewed. The CMMP does provide emergency numbers that can be used if an excavator judges they need direct support outside of normal business hours.

Do Site Visits or Mark Outs Occur? No field markings of potential contamination are provided. DNREC does not visit the excavation area. Additional support may be requested from DNREC at (302)395-2600 during normal business hours, and (800)662-8802 for emergency after-hours support.

Does Each Excavation Clearance Generate an Advisory? No, when there are no known cleanup sites near the excavation request, no advisory will be transmitted.

Can Contaminated Sites Be Present Even When an Advisory is Not Received? In the areas containing DNREC site polygons, the coverage is thorough. However, if no advisory is received, and chemical odors or other indication of contamination are encountered, then depending on the type of incident, DNREC and/or a local fire agency could offer support during an excavation.

Are There Other Ways to Obtain an Advisory? The DigClean.com website maintains a web lookup form where an excavation ticket number can be entered into the form, and the advisory will be shown.

Article by W. March, SIRS

Example of a Land Use Advisory Ticket

TO:

Phone:
Fax:
email:

FROM: Delaware Department of Natural Resources and Environmental Control

Primary Contact: Wendy March
Phone: 302 395 2600 ext.302 395 2601
email: Wendy.March@state.de.us

RE: Dig Clean Safety and Land Use Advisory Ticket: 153480494

Ticket Priority: STANDARD Work Date: 12/18/15
Work Address: Work Done For:
Near Intersection: Location Details:
Work Description: BEGIN AT ABOVE INTER & EXTEND 1000FT S & MARK 700FT BEYOND THE: E CURB, INCLUDING THE RAMP. Work Type: INST SIGNS

Dig Clean Safety and Land Use Advisory

Please be advised that the work location may be at or near sites where hazardous substances including petroleum are likely present in the soil or groundwater. Sites are shown on the map below relative to the extent of the planned excavation. Known contaminants of concern are also listed with a hyperlink to health and safety information (if available), and whether soil or groundwater is impacted. DNREC has prepared a generic Contaminated Material Management Plan <http://shortlinks.terradox.com/DREC-CMMP> to properly handle contaminated soil and groundwater. If further guidance is needed please contact DNREC with the contact information listed on this form. DNREC does not provide excavation field marks, and does not attend site meetings unless a request is made to the listed DNREC Primary Contact.



W (red) and line indicate your work area as provided to Miss Utility Delaware.
Numbered and shaded polygons (blue) are the areas of the site(s) of concern.
Note, on occasion the area is outside of the map view.

SITES WITH ENVIRONMENTAL RESTRICTIONS SHOWN ON MAP:

- Site 1: DE CITY PVC (DE-0007)
- 1,2-Dichloroethane [View ATSDR 107-06-2 View Agency for Toxic Substances & Disease Info](#)
 - Vinyl Chloride [View ATSDR 75-01-4 View Agency for Toxic Substances & Disease Info](#) [View NIOSH 75-01-4](#)
 - Ethylene trichloride [View NIOSH 79-01-6 View Center for Disease Control and Prevention](#)

ALTERNATIVES TO VIEW INFORMATION:

View on the Web: <http://www.digclean.com>, enter 153480494
Call: 650-209-4229, when prompted enter 314917
Send Text Message: Message: 314917 To: 650-209-4229

Sent By Terradex, Inc. on behalf of Delaware Department of Natural Resources and Environmental Control

Terradex at: operations@terradox.com Phone 650-227-3250, Fax 3255 Terradex Reference Number: 314917 1:
13341.582m 0.000246327area 100 length737
Date: 2015-12-15

Saving Energy and Money with the EEAC

Energy use is at the cornerstone of every business, household, and office's daily functioning. However, energy loss can occur in ways and places that people don't expect, causing them to use (and pay for) far more energy than they need.

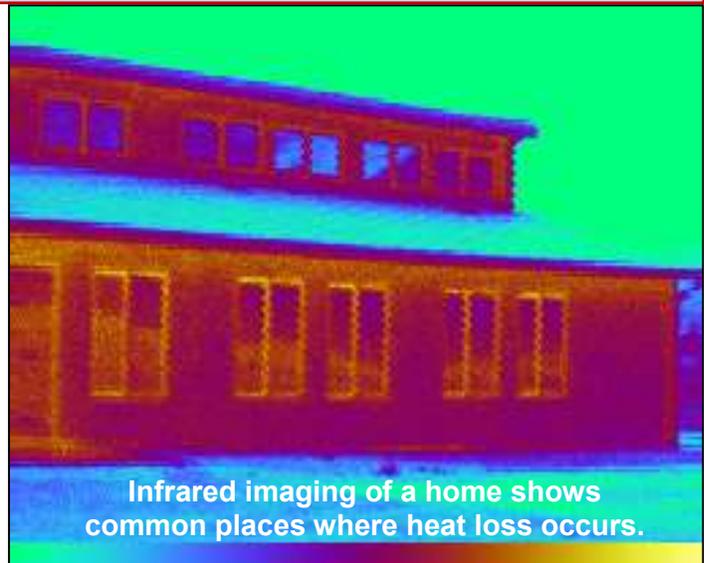
The Energy Efficiency Advisory Council (EEAC) aims to help Delawareans reduce energy loss and cost through energy efficiency programs. The EEAC is a collaborative panel of representatives tasked with developing statewide programs to increase energy efficiency, reduce energy usage, and lower consumer energy costs.

The council is comprised of 13 representatives from across the state, including DNREC's Division of Energy and Climate, energy providers, large and small businesses, manufacturers, low-income and residential populations, and other interests affected by energy efficiency standards, including environmentalists and agriculturalists. The EEAC also includes representatives from the Sustainable Energy Utility and collaborates with the Public Service Commission and the Public Advocate.

The EEAC was created following the Delaware Energy Efficiency Potential Study in 2014, which found that electric consumption could be reduced by as much as 19% through 2025, while adding as much as \$2.3 billion in benefits to the state economy.

According to the American Council for an Energy-Efficient Economy (ACEEE), energy efficiency costs only 2.8 cents per kWh, compared to the Delaware average residential electric rate of 14.05 cents per kWh. In other words, investing \$1 in Delaware energy efficiency programs will return \$2.40 to the economy.

Benefits of energy efficiency investment include lower energy bills for Delaware con-



sumers and businesses, the creation of new in-state jobs, public health benefits from reduced air pollution, and increased energy security, among others. More than any other fueling option, energy efficiency is the least cost-intensive way to power everyday activities while saving money.

The EEAC assists affected energy providers in developing energy efficiency and emission-reducing programs, as well as strategies for decreasing energy use at times of the day when energy is most in-demand, and therefore most expensive (referred to as peak demand).

Programs could include energy audits and assistance with installing efficient lighting and HVAC systems, as well as tools to alert home or business owners when energy is at peak demand. Homeowners can save costs by cutting down energy-intensive activities (like doing laundry or running air conditioners) during peak demand times.

In its first year, the EEAC has set aggressive energy saving goals, aiming for a 2.1% reduction of Delaware's total energy use over three years. DNREC, which chairs the council, reviews existing Delaware energy efficiency programs, looking to avoid duplicative efforts.

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Saving Energy and Money with the EEAC *Continued...*

In order to track the success of proposed projects, DNREC has drafted Evaluation, Measurement and Verification (EM&V) Regulations, which have been vetted by the EEAC and are currently under review by the Attorney General's Office. Along with a consistent template for program portfolio submissions and uniform data collection methods, these regulations will allow the Council to determine the success and outcomes of projects, each measured against the same criteria for accurate comparisons.

The Council continues its inclusive approach by utilizing local, regional, and national input through the diversity of the Council itself, the Council's consultant, Optimal Energy, and guidance from the ACEEE and the Northeast Energy

Efficiency Partnership. This coming year will again find the Council quite busy reviewing and recommending program portfolios, finalizing uniform data collection, promulgating EM&V regulations, launching energy efficiency programs, monitoring the effectiveness of those programs, and conducting subsequent EM&V.

The Council and its actions represent truly groundbreaking territory for Delaware in the area of energy efficiency and its many benefits. To learn more about the EEAC and the Division of Energy and Climate's energy efficiency programs, please visit:

www.energy.dnrec.delaware.gov

Article by C. Fitzgerald, DEC

Did You Know?

The *Kalmar Nyckel* Foundation (KNF) Brownfields redevelopment site is also a new ecological revitalization project site! The landscaping enhancements were implemented entirely as a cooperative effort involving DNREC's Site Investigation and Restoration Section (SIRS), the Hazardous Substance Cleanup Act (HSCA) Advisory Committee Ecological Revitalization and Green Remediation Subcommittee (HSCA Subcommittee), and the KNF, specifically as a demonstration and education project to show the value of sustainable landscaping using native plants.

In addition to work performed by the SIRS environmental contractor, valuable *pro bono* contributions to the design effort came from University of Delaware extension horticulturist, Dr. Susan Barton; and independent ecological consultant, HSCA Subcommittee member and *Kalmar Nyckel* volunteer, Matt Sarver.



K. Hendershot, SIRS

In order to conserve DNREC's public funds, the project was designed from the beginning to be implemented largely by volunteers, and was the first demonstration project for the HSCA Subcommittee. Numerous volunteers from SIRS, the HSCA Subcommittee and the KNF participated in the planting effort over several weeks to install THOUSANDS of native plants. For more information on the SIRS' Brownfield Redevelopment Program and the HSCA Advisory Committee, please visit:

<http://www.dnrec.delaware.gov/dwhs/SIRB/Pages/Brownfields.aspx>

Article by G. DeCowsky, SIRS

DELAWARE
DEPARTMENT OF
NATURAL
RESOURCES AND
ENVIRONMENTAL
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www.dnrec.delaware.gov



Division of Air Quality handles the majority of air issues in Delaware including: monitors and regulates all emissions to the air; issues "permits to construct" and "permits to operate" to air contaminant sources; maintains emission inventories from business and industry; develops the State Implementation Plan as required by the Clean Air Act; adopts new regulations and enforces existing regulations and permits; and inspects asbestos removal sites.

Division of Energy and Climate's mission is to serve the people of Delaware by reducing the adverse impacts of energy use on our environment, health, and economy. We educate, lead by example, and build partnerships to increase energy efficiency and renewable energy, promote sustainable growth, and prepare for a changing climate.

Division of Waste and Hazardous Substances plans for and responds to, environmental incidents; regulates the handling, transfer, storage and disposal of solid, infectious and hazardous waste; manages the recycling program in Delaware; regulates above and underground storage tanks and boilers; oversees the remediation of sites that have been contaminated by hazardous substances and chemicals; and implements Delaware's Brownfields Development Program.

Division of Water manages and protects water resources through various programs by providing technical assistance, laboratory services, regulatory guidance and implementation, and educational services; and performing applied research.

EASY REFERENCE PHONE NUMBERS

24-Hour Report and Spill Notification Line - 1-800-662-8802

Aboveground Storage Tanks - 302-395-2500
Air Quality - New Castle Office - 302-323-4542
Air Quality - Kent & Sussex - 302-739-9402
Asbestos New Castle - 302-323-4542
Asbestos Kent & Sussex - 302-739-9402
Biosolids Permits - 302-739-9946
Boiler Safety - 302-395-2500
Brownfields - 302-395-2600
Community Ombudsman - 302-739-9040
Delaware Estuary Program - 302-739-9283 (Delaware Coastal Management Program)
Division of Air Quality Director's Office - 302-739-9402
Division of Energy and Climate Office - 302-735-3480
Division of Waste and Hazardous Substances Director's Office - 302-739-9400
Division of Water Information - 302-739-9950
Dock/Dredging/Bulkheads/Rip-Rap/Wetlands & Subaqueous Lands - 302-739-9943
Emergency Prevention and Response - 302-739-9404
Environmental Crimes Unit - 302-739-9401 or 1-800-662-8802
Environmental Laboratory - 302-739-9942
Hazardous Waste - 302-739-9403
Hazardous Chemical and Toxic Release Inventories - 302-739-9404
Industrial Stormwater Permits - 302-739-9946
Loans & Grants for Wastewater and Septics (Financial Assistance Branch) - 302-739-9941
Medical Waste - 302-739-9403
Non-Hazardous Liquid Waste Transporters - 302-739-9948
On-site Wastewater Licensing Program - 302-739-9948
Open Burning - 302-739-9402
Outreach Ombudsman - 302-395-2600
Recycling - 302-739-9403
Septic System Permits-Large Systems (Community & I/A) Statewide - 302-739-9948
Septic System Permits-Small Systems for Kent & New Castle Counties - 302-739-9947
Septic System Permits-Small Systems for Sussex & Holding Tank Compli. Program - 302-856-4561
Site Investigation & Restoration Section (Superfund/Brownfields) - 302-395-2600
Small Business Ombudsman - 302-739-9909
Solid Waste - 302-739-9403
Source Water Protection - 302-739-9945
Surface Water Discharge Permits (NPDES) - 302-739-9946
Underground Injection Control & Spray Irrigation - 302-739-9948
Underground Storage Tanks - 302-395-2500
Wastewater Collection, Conveyance and/or Treatment Facility Construction Permits - 302-739-9946
Wastewater Treatment Facility Operators - 302-739-9946
Water Allocation Permits - 302-739-9945
Water Testing - Drinking Water (Division of Public Health) - 302-741-8630
Water Supply - 302-739-9945
Well Driller's License - 302-739-9944
Well Permits & Licensing - 302-739-9944
Wells - 302-739-9945
Wetlands and Subaqueous Lands Section - 302-739-9943