

VI NPS Update

Nonpoint Source Pollution Committee Newsletter

Vol. 3, No. 4

January 2001

6th Annual NPS Conference Highlights New, On-Going Efforts to Combat Pollution in the V.I.



Nonpoint Source Conference attendees listen to Dr. Gibbons NEMO presentation.

Over 100 attendees at the **Sixth Annual Virgin Islands Nonpoint Source Pollution Conference** had the opportunity to learn about a variety of **New Projects and Programs for a New Millennium**. Dr. James Gibbons, one of the founders of the University of Connecticut's Nonpoint Education for Municipal Officials (NEMO) project, described NEMO's natural resource-based approach to development. The NEMO approach addresses factors such as open space, natural vegetation, species habitat and other natural resources through a comprehensive planning process involving all local stakeholders. The goal of the project is to *retain the natural landscape and make the impact of development minimal*, according to Dr. Gibbons. NEMO links land use to water quality. It explains the concepts of nonpoint source pollution and watersheds, reviews the impacts of land use on water resources and introduces natural resource-based planning and impervious surface (paving) reduction principles. The Nonpoint Source Pollution Committee plans to develop and implement a NEMO project for the U.S. Virgin Islands.

NEMO was just one of the many local and national projects and programs featured at the Conference. According to conference planning committee chair, UVI Cooperative Extension Service's Julie Wright, *The purpose of this conference is to provide practical information on how to reduce nonpoint source pollution and its impacts to as wide an audience as possible, everyone from inspectors to individual homeowners.* Regulators, architects, engineers, community leaders, educators, and homeowners from the

USVI, Tortola, Puerto Rico and the United States were exposed to many new concepts and programs during the conference, held December 6th and 7th at the Divi Carina Bay Resort & Casino on St. Croix.

Nonpoint source pollution is pollution caused by rainwater flowing over and through the ground, picking up pollutants and carrying them to our coastal and ground waters, simply pollution that does not come directly from a pipe or point source. Oral and poster presentations focused on reducing pollution from construction and land conversion activities, individual onsite sewage disposal systems (septic systems), and marinas and recreational boating through regulatory programs, watershed planning, pollution prevention practice implementation and education/outreach programs.

Highlights of the conference included a student poster, poetry and photography contest based on the conference theme in which over 100 students participated, and an exhibitor hall of poster presentations and educational information displays. Conference attendees also participated in a field trip to two critical sites on St. Croix for which management plans are currently being developed: Great Pond and South Gate property recently donated to the St. Croix Environmental Association (SEA).

Discussions at the field trip sites focused on managing pollution throughout the

watersheds surrounding the Great Pond and South Gate sites. SEA consultant Onaje Jackson also described the comprehensive planning process used by SEA to develop a low impact eco-tourism development plan for the site that also incorporates traditional uses.

The V.I. Resource Conservation & Development Council, Inc. (RC&D) provided funding for the conference through a Nonpoint Source Pollution Management (\$319) grant received from the V.I. Department of Planning and Natural Resources (DPNR). UVI Cooperative Extension Service (CES) staff spearheaded the conference planning effort, in cooperation with UVI Conservation Data Center (CDC) and Center for Marine & Environmental Services, RC&D, DPNR and USDA Natural Resources Conservation Service (NRCS) representatives. The conference was also sponsored by the V.I. Nonpoint Source Pollution Committee, the U.S. Environmental Protection Agency (EPA), and the National Oceanic & Atmospheric Administration (NOAA). For further information regarding the conference, contact Julie Wright, UVI-CES, at (340) 774-693-1082.



Eudora Kean High School's Kimberly E. Boyd poses with her winning photography entry.

DPNR-CZM Website Online!

You can now find DPNR's Coastal Zone Management Program on the World Wide Web at <http://www.viczmp.com>. The web site features downloadable CZM Permit applications, a calendar of events, and other useful information about the Virgin Islands Coastal Zone Management Program (CZM). You can still reach DPNR-CZM at (340) 774-3320 on St. Thomas and (340) 773-3450.

Table of Contents

6 th Annual NPS Conference Highlights New, On-going Efforts to Combat Pollution in the V.I. . . .	1
DPNR-CZM Website Online!	1
CDC Finalizes REA Maps	2
Magens Bay Installs Innovative Sewage Disposal Systems	2
Your Chance to Review Draft Fish Bay Management Plan	2
Web Resources	3
Available Grants	3
Upcoming Events	3

CDC Finalizes REA Maps

Recently, the UVI Conservation Data Center (CDC) conducted two meetings of their marine and terrestrial Scientific Review Committees to review the St. John and St. Thomas Rapid Ecological Assessment (REA) maps. The St. John meeting was held on November 16, 2000 and the St. Thomas meeting was held on December 14th.

Representatives from The Nature Conservancy, the UVI Center for Marine and Environmental Studies, the V.I. Department of Planning and Natural Resources, the U.S. Geological Survey's National Biological Survey, and the National Park Service attended. The revisions suggested at these review meetings are being incorporated into the final products for presentation to the public.

To highlight the maps' importance to natural resource management, the St. John maps will be publicly unveiled on February 1, 2001 at the Legislative Building in Cruz Bay. This date was selected as it coincides with World Wetlands Day on February 2nd.

UVI-CDC is also planning a marine classification workshop and a CDC products and services seminar for March. The goal of the classification workshop is to facilitate resource mapping by ensuring that all data gatherers use the same field methodologies and classification systems.

Such an effort will prove invaluable to the various territorial projects that have been organized under the Coral Reef Initiative. CDC has already received inquiries from local divers about the workshop, and is poised to become a training unit for these efforts. NOAA would also like to include personnel from other Caribbean programs. For further information on the REA maps or UVI-CDC's programs, contact Dayle Barry at (340) 693-1030.

Magens Bay Installs Innovative Sewage Disposal Systems

UVI's Cooperative Extension Service (UVI-CES) and Magens Bay Authority (MBA) recently combined forces to solve a growing problem at Magens Bay. The standard septic systems serving both the concession and bath houses were struggling to handle the wastewater volume from up to 2500 visitors a day. These old (> 40 years), malfunctioning septic systems posed a pollution threat to Magens Bay.

UVI-CES and MBA received a \$49,800 \$319 grant from DPNR to retrofit the existing septic systems with two alternative onsite sewage disposal systems (AOSDS). These systems were

designed by architect Brian Emerich. The AOSDS use microorganisms on the roots of plants to digest and transform contaminants in wastewater. Cinder blocks were used to build a series of connected subterranean trenches retrofitted to the original septic systems at Magens Bay. Exterior walls were coated with a concrete sealer. Walls of the interior trenches were left uncoated to allow some seepage from trench to trench. Trenches were filled with 18" of washed gravel, with the exception of the primary trench where the bottom 8" was left unfilled for wastewater to accumulate. The gravel was covered with grating and geotextile, and the trenches were topped with 16" of soil. Because of the shallow soil bed depth, plants in



AOSDS trenches were built with cinder blocks. Sand was then backfilled around the structure.

the system are supported by the soil but their roots receive nutrients from the wastewater flowing through the gravel beds under the soil.

Plants are not only able to transform and remove the contaminants in wastewater; they also absorb the large volumes of water produced at Magens Bay and evaporate this moisture through their leaves. Plants selected for the Magens Bay AOSDS must tolerate the brackish water used in the Magens Bay bathhouses. Identifying plants that will tolerate and flourish in an AOSDS with salt water inflow is experimental and new to the V.I.

October's groundbreaking for the new systems was covered by WSTA and Channel 8. During construction, Cable TV's Channel 12 televised on-site interviews with project partners (Magens Bay Authority, UVI-CES, DPNR-DEP and Emerich). The construction phase was



The subterranean trench style AOSDS at the Magens Bay bathhouse (before planting) is unobtrusive in the landscape.

completed in five weeks, and the planting phase is well underway. The V.I. Department of Agriculture's Urban and Community Assistance Program provided funding for some of the plants, and other plants have been donated by the project designer and other friends of Magens Bay. For more information on the project, contact Toni Thomas, UVI-CES, at (340) 693-1084.

Web Resources



Constructed Wetlands Treatment of Municipal Wastewater.

EPA has published a new manual describing the appropriate use, design and performance of constructed wetlands. Order *Constructed Wetlands Treatment of Municipal Wastewaters* (EPA/625/R-99/010) from: www.epa.gov/ttnrmrl/625/R-99/010.htm

EPA Drafts Guidelines for Onsite Wastewater System Management. EPA has developed draft voluntary management guidelines for onsite wastewater systems, such as septic systems, that can be adapted for local conditions. Local communities can use the guidelines to develop a program tailored to local conditions, adjusting for water resource sensitivities, the types of systems in use, system densities, and the availability of operation and maintenance services. A fact sheet on the draft guidelines is at www.epa.gov/owm/decent/whatsnew.html

EPA Lists Best Nonpoint Source Documents. EPA highlights some of the best nonpoint source materials available for both professionals and the public. Categories of materials include: agriculture, forestry, marinas, urban, stream restoration, NPS monitoring, and funding. Visit www.epa.gov/owow/nps/bestnpsdocs.html for a copy of the list.

IECA's on-line bookstore provides practical, how-to information for many common erosion and sediment control problems. Features include: concise, easy to use erosion and sediment control field manuals and the definitive manual on silt fence installation, *Silt Fence That Works*. For these and other materials, visit www.ieca.org/index_bookstore.html.

Your Chance to Review DPNR's Draft Fish Bay Management Plan

DPNR's Draft Fish Bay Watershed Management Plan is now available for public review and input. A series of public meetings and discussions will be held to obtain input from all concerned citizens concerning this plan. For more information, call Bill Rohring, DPNR-CZM, at (340) 774-3320.

LGEAN Distributes Free Internet Guide for Small Local Governments. A free guide to Internet use for local government officials is available through the Local Government Environmental Assistance Network (LGEAN).

Getting Online: A Guide to the Internet for Small Town Leaders, explains the power, organization, and tools of the Internet. Visit <http://lgean.org/html/whatsnew.cfm?id=79> for more information.

Storm Water Internet Resource. A web site providing a variety of stormwater pollution management information to public works professionals is available on the Internet. The Texas Nonpoint Source Book provides information on selecting proper best management practices, planning stormwater management programs, funding mechanisms, and more. Visit www.txnpsbook.org/ for more information.

New Report on the Economic Value of Clean Water. EPA's *Liquid Assets 2000: America's Water Resources at a Turning Point* explores the current condition of the nation's water resources and demonstrates the link between clean water and a strong economy by focusing on specific businesses and activities that rely on clean water. Visit www.epa.gov/ow/liquidassets for a copy of the report.

Nonpoint Source Pollution Study. The Environmental Law Institute recently completed a study on state-enforceable nonpoint source pollution control mechanisms, entitled *Putting the Pieces Together: State Nonpoint Source Enforceable Mechanisms in Context*. For information, visit <http://lgean.org/html/whatsnew.cfm?id=102>.

Survey on Beach Water Pollution Available EPA has released the results of its third annual voluntary beach survey, under the Beaches Environmental Assessment, Closure and Health (BEACH) Watch program. The survey reports swimming conditions at nearly 1900 beaches nationwide. For more information, visit <http://lgean.org/html/whatsnew.cfm?id=103>.

Free Software on Wastewater Treatment Options for Small Communities. *Alternatives for Unsewered Communities* is a free software program developed in part by EPA. It can help small communities identify alternative wastewater treatment options and provides a guide to the facilities planning process for small communities. To download the program, visit www.epa.gov/seahome/unsewer.html

New Report on Toxic Release Inventory (TRI) Data. EPA has released the *1998 Toxics Release Inventory Public Data Release*, which provides an in-depth analysis of national TRI data. The TRI program requires companies to report quantities of toxic chemicals annually released

into the air, water and/or land by their facilities. A copy of the report can be viewed at: www.epa.gov/tri/tri98/pdr/index.htm.

Guide On Public Involvement In Environmental Permits Available. *Public Involvement in Environmental Permits: A Reference Guide* is intended to improve the quality of public involvement in permitting decisions across all of EPA's air, water and waste permit programs. To view the document, visit www.epa.gov/permits.

Free Subscription to Storm Water Magazine. Free, one-year subscriptions are available to STORMWATER, a bi-monthly journal written for local government officials and other professionals who manage stormwater and other surface water quality issues. For a free subscription or to view the current issue, visit www.stormh2o.com.

Available Grants



Earthwatch Institute Grants. Earthwatch's Center for Field Research is seeking proposals on the following topics:

Sustainable Development Field-based demonstration projects promoting sustainable development,
Sustainable Agriculture, and
Research in National Parks & Public Lands.

All awards are derived from funds contributed by volunteer participants on the research team who are members of Earthwatch. These volunteers are qualified non-specialists, recruited and screened according to project needs. Grants will range from \$7,000 to \$130,000, depending on length of time in the field and number of volunteers. Visit www.earthwatch.org/cfr/CFRguidein.html to determine if your project qualifies for funding. For grant applications, visit: www.earthwatch.org/cfr/CFRgrntpkt.html.

Turner Foundation Grants. The Turner Foundation is soliciting grant applications on:

Water/Toxins - protecting rivers, wetlands, lakes, aquifers, oceans and other waterbodies from contamination and degradation.

Forests & Habitats - defending biodiversity by protecting habitats.

Energy - protecting the atmosphere and other natural resources by promoting energy efficiency, renewable energy and improved transportation policies and practices.

Deadlines are April 1 and October 1. Visit www.turnerfoundation.org/turner/application.html for more information.

Free Environmental Grant Writing Software. EPA's Grant-Writing The tutorial walks users through an actual grant proposal step-by-step.

The software includes a mock grant writing activity and covers topics such as enhancing grant proposals and completing grant application forms. To access the tutorial, visit www.epa.gov/seahome/grants.html

Upcoming Events

Local

February 1, 2001. **St. John Rapid Ecological Assessment Maps** public release, 6:30 p.m. at the Legislative Conference Room, Cruz Bay, St. John. Contact Dayle Barry, UVI-CDC, at (340) 693-1030 for more information.

St. Croix Agrifest is Coming!

Plan now to attend this year's St. Croix Agrifest, *Reflections of the Past, Visions of the Future*, to be held February 17-19, 2001 at the V.I. Department of Agriculture Fair Grounds.

March 11, 2001. **Crop/Livestock Production Training Course** - Farmers w/ Govt. Leases, UVI-CES St. Thomas Conference Room. Contact Carlos Robles at (340) 693-1083 for more information.

March 13-14, 2001. **Indoor Air Quality Training Workshops**, UVI-CES, St. Thomas and St. Croix, respectively. Contact Julie Wright, UVI-CES, at (340) 693-1082 for information or to register.

March 14-15, 2001. **Farm Safety (Pesticides) Workshop**, UVI-CES St. Thomas Conference Room. Contact Stafford Crossman, UVI-CES, at (340) 692-4054 for more information.

March 21-22, 2001. **Farm Safety (Pesticides) Workshop**, Room 133 UVI Research & Extension Center, St. Croix. Contact Stafford Crossman at (340) 692-4054 for more information.

April 2001. **Box & Container Gardening Workshop for Science Teachers**, UVI-CES, St. Croix. Contact Charles Smith, UVI-CES, at (340) 692-4081 for more information.

April 11, 2001. **History of the Baobab Tree Workshop**, UVI St. Croix Research & Extension Center Room 133, 6:00 - 8:00 pm. Contact Olasee Davis, UVI-CES, at (340) 692-4053.

April 19, 2001. **Root Crops Production Workshop**, UVI St. Croix Research & Extension Center Room 133, 7:00-9:00 pm. Contact Stafford Crossman, UVI-CES, at (340) 692-4054.

May 15 & 17, 2001. **Passion Fruit Production Workshop**, 7:00-9:00 pm., UVI St. Croix Research & Extension Center Room 133 & UVI-CES St. Thomas Conference Room, respectively. Contact Clinton George, UVI-CES, at (340) 692-4071.

May 21-24, 2001. *Managing Beaches in the Caribbean*, University of Puerto Rico/Sea Grant. For information, contact Ruperto Chaparro at r_chaparro@rimac.uprm.edu.

National

February 5-9, 2001. *International Erosion Control Association (IECA) 32nd Annual Conference and Expo*, Las Vegas, Nevada. For more information, visit the conference website at www.ieca.org/index_conference.html.

March 4 - 7, 2001. *2001 Geospatial Information & Technology Association (GITA) Annual Conference XXIV*, San Diego, California. For more information, visit the conference website www.gita.org/events/01xxiv_open2.html.

May 16-18, 2001. *Izaak Walton League of America National Conference*, Orlando, FL. Topics include: wetland education, restoration, conservation, and international issues. To get on the mailing list for the conference, email: awm@iwl.org or call 800-BUG-IWLA.

May 20-23, 2001. *Seventh National Watershed Conference*, Richmond, VA. *Small Watershed Programs: Past, Present, and Future*. For more information, contact John W. Peterson, (703) 455-6886 or jwpeterson@erols.com.

June 3-5, 2001. *National Conference on Locally Led Conservation Efforts*, Nebraska City, Nebraska, sponsored by USDA-NRCS, National Arbor Day Foundation, and National Association of Conservation Districts. For information, visit www.arborday.org/programs/conferences.html.

July 15-19, 2001. *Coastal Zone 01*, Cleveland, OH. CZ01 will feature important lessons learned by coastal managers around the world and models of successful partnerships. For more information, visit: www.csc.noaa.gov/cz2001/conference.html.

August 4-8, 2001. *Soil and Water Conservation Society (SWCS) 2001 Annual Conference*, Myrtle Beach, South Carolina. For more information visit the conference website at www.swcs.org/what_calendar.htm.

Editor & Designer:

Julie Wright, UVI-CES

Reviewers:

Dayle Barry, UVI-CDC,
Clarice Clarke, UVI-CES,
Janice Hodge, DPNR-CZM,
Rudy G. O'Reilly, Jr., USDA-NRCS,
Bill Rohring, DPNR-CZM

Photograph her:

Dale Morton, UVI-CES

Nonpoint source (NPS) pollution results from rain water flowing over and through the ground, picking up pollutants and depositing them into guts, salt ponds, beaches, coastal waters, and ground water.

VI NPS Update is a quarterly newsletter published by the University of the Virgin Islands Cooperative Extension Service, Kwame Garcia, State Director, and produced by the Virgin Islands Nonpoint Source Pollution Committee to inform the public about projects funded by U.S. EPA Nonpoint Source Pollution Management (§319) grants and other NPS pollution control/prevention projects in the territory, and to provide information and material regarding the control/prevention of NPS pollution. No endorsement of products or firms is intended, nor is criticism implied of those not mentioned. Issued by the Virgin Islands Cooperative Extension Service and the U.S. Department of Agriculture in furtherance of the acts of May 8 and June 30, 1914. Extension programs and policies are consistent with federal and state laws and regulations on non-discrimination regarding race, color, national origin, religion, gender, age, disability or gender preference. Funding for **VI NPS Update** provided by the U.S. Environmental Protection Agency, Nonpoint Source Pollution Management Program through the Virgin Islands Department of Planning and Natural Resources, Dean C. Plaskett, Esq. Commissioner.

To have your article, announcement or activity included in VI NPS Update, please mail, fax or email your submission to the Editor at: VI NPS Update, c/o Julie Wright, UVI Cooperative Extension Service, #2 John Brewers Bay, St. Thomas, VI 00802-9990, fax (340) 693-1085, email: jwright@uvi.edu.

VI NPS Update mail-in coupon.

* ☐ **YES**, please add me to the **VI NPS Update** mailing list.

* ☐ Please change my address.

Name: _____

Organization: _____

Address: _____

City/State/Zip: _____

Phone/Fax: _____

Email/Website: _____



Postage and Fees Paid
U.S. Department of Agriculture
AGR 101

