

VI NPS UPDATE

Nonpoint Source Pollution Committee Newsletter

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8th V.I. Nonpoint Source Conference Draws A Crowd!



Marine field trip guides Olasee Davis (UVI-CES) and Rafe Boulon (VINP) describe St. John coastal habitats and nonpoint source pollution issues.

Over 180 V.I. government agency personnel, researchers, architects, engineers, farmers, community groups, students and residents of the Virgin Islands, Puerto Rico and the U.S. made the 8th V.I. Nonpoint Source Pollution Conference, held December 4-5, 2003 at the Westin St. John Resort & Villas, the biggest ever. In keeping with the conference's theme of "**Strengthening Community Awareness to Protect & Restore Our Environment**," participants chose from over 50 oral and poster presentations and exhibits relating to nonpoint source pollution control in tropical climates. Presentation topics covered a wide range of issues such as land use impacts on water quality, nonpoint source education and outreach, new V.I. government initiatives, stream/gut and habitat restoration, and agriculture.

Opening speaker Senator Louis P. Hill described the two goals he hopes to accomplish during his term as senator: 1) to pass a bill to create a territorial waste management authority and 2) to enact the Comprehensive Land and Water Use Plan. "*The damage caused by November's heavy rains points out the need for a comprehensive plan*," he stated, urging conference participants to help get that message to the public.

EPA Region 2 Nonpoint Source Coordinator, Donna Somboonlakana, gave the territory high marks for its efforts to deal with nonpoint source pollution. "*The Virgin Islands program has progressed the most*," she said. She also said she observed "unbelievable" sedimentation caused by November's torrential rains during her island tours, much of which could have been avoided. "*Education is half the battle*."

UVI's President Dr. LaVerne Ragster charged conference participants to report back at next year's conference how well they were able to address the issues. She pointed out that while everyone is a part of the problem, they are also part of the solution. She was pleased to see that the conference was now in its eighth year, "*I'm always thrilled in the Virgin Islands when something goes past two years*," she joked.

Conference planners organized a special marine tour/field trip around the spectacular St. John coastline. Leaving from and returning to the Westin Hotel Dock, the ferry cruised past the developed areas (Cruz Bay, Peter Bay, Haulover Cut, Rendezvous Bay and Fish Bay) and entered and exited VInational Park waters (Cinnamon, Trunk,

Francis, Leinster, Lameshur, and Reef Bays) and into Coral Bay, the fastest growing and one of the largest watersheds in the territory. Throughout the trip, local scientists and educators spoke to participants about research projects and protection programs taking place on St. John.

The conference also featured a youth participation session on Day 2 capped off with the presentation of the student logo contest prize. Two 7th graders from Antilles School, Julia Casazza and Michelle Wiebracht, won \$50 each for their logo design.



Youth logo contest winners describe their first place design to NPS Committee Chair Marcia Taylor and conference attendees.

The conference was sponsored by the Virgin Islands Department of Planning and Natural Resources (DPNR) Coastal Zone Management Program (CZM), Division of Environmental Protection (DEP) & Division of Fish & Wildlife (DFW); the University of the Virgin Islands (UVI) Cooperative Extension Service (CES), Conservation Data Center (CDC) & Marine Advisory Service (VIMAS); the Virgin Islands Resource Conservation & Development Council, Inc. (VI RC&D); the Virgin Islands Nonpoint Source Pollution Control Committee; and the U.S. Environmental Protection Agency (EPA). For more information on the conference or nonpoint source pollution issues in the territory, contact DPNR-DEP at (340) 773-1082 or UVI-CES at (340) 693-1080. Conference presentations will soon be available on CD from DPNR and at <http://rps.uvi.edu/CES/VINPSconf2003.htm>.

Combating St. Croix Marine Debris: Coastweeks 2004

This year was the eleventh year that Coastweeks has been celebrated on St. Croix. Coastweeks is a 3-week period where hundreds of volunteers across the VI help to keep our coastlines beautiful by doing beach clean-ups. The event is sponsored by The Ocean Conservancy and coordinated locally by UVI's Center for Marine

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and Environmental Studies component. *"The purpose of Coastweeks is not just to cleanup our islands, but also to increase awareness about the marine debris problem and collect data on the types of debris found,"* said UVI's Marine Advisor Marcia Taylor. *"This year on St. Croix there were 25 different coastal cleanups involving 543 volunteers, which makes it the largest ever Coastweeks celebrated here on St. Croix!"*



Ricardo Richards 'Litter Gang' students pose with trash collected during Columbus Landing, Salt River, St. Croix Coastweeks clean-up!

Worldwide, the Coastal Cleanup is the largest volunteer event on behalf of the marine environment. Last year 391,000 volunteers in 100 countries participated. Recent data indicates that smokers contribute the largest number of debris items, with cigarettes/cigarette filters being the most numerous item collected. Even underwater, cigarette butts were the second-most numerous item. Smoking-related activities accounted for nearly 31% of the debris collected during the global 2002 cleanup. Food wrappers and containers were the second most common item found. In fact, since 1990, most debris found has been from cigarettes, food wrappers, and beverage containers.

VI data is similar. Eighty-four percent of the debris found in the USVI was from shoreline and recreation activities like picnics (worldwide the average is 60%). Caps and lids were the most numerous (15%) followed by beverage bottles and cups, plates, forks, knives and spoons. *"This year we found lots of interesting items including a kitchen sink, refrigerator, doors and plenty more!"* reported Ms. Taylor.

Littering and ocean dumping are not new problems, but the type of trash found has changed. At one time, most trash came from organic materials that readily broke down. But today, synthetic, durable elements like plastics are the primary substance of our trash. These items stay intact for centuries and many are buoyant, allowing them to travel in currents for thousands of miles, endangering ocean ecosystems and wildlife along the way.

Marine debris is not only unsightly; it can be dangerous to wildlife, people and the marine environment. Marine debris can entangle or be ingested by marine life. It can hamper an ani-

mal's movement, prevent it from eating, inflict wounds or cause suffocation. Marine debris can disable boats leaving boaters stranded at sea, and can also be a health hazard to humans by exposing people to hazardous chemicals or pathogens.

There are several things we can do to reduce marine debris. Public education has to be high on our list – most debris is from those of us who live here. We must learn to manage our waste. We should dispose of packaging properly and purchase foods and other items with less packaging. We can also use reusable containers and utensils and recycle whenever possible. And we can continue to participate in coastal cleanups to keep trash away from the sea. We all contribute to the marine debris problem and we must do our part in reducing it. For more information on Coastweeks or marine debris, contact Marcia Taylor at (340) 692-4046 or mtaylor@uvi.edu.

USVI Wetlands Program

DPNR is pleased to announce the creation of a new program designated to monitor wetlands in the territory. DPNR has been sampling representative wetlands since 2002 through the *"Inventory of USVI Wetlands and Riparian Areas"* project funded by a Nonpoint Source Pollution Management grant. The inventory is a joint project between the UVI Conservation Data/Eastern Caribbean Centers, Island Resources Foundation, and DPNR.

The project's objectives are to update and correct the mapping of 636 wetlands in the Virgin Islands Rapid Environmental Assessment (REA) and design and test basic monitoring tools for wetland characterization in the Virgin Islands. Additionally, the project is assessing the effect of stressors on watershed and wetlands areas, based on the condition of the existing landscape, biological community, plants, and animals, supported by appropriate chemical and physical data. The indicator chosen for analysis is the IBI (Index of Biological Integrity), a bioassessment measure that integrates several biological metrics to indicate a site's condition.

Recently, DPNR also received a grant from EPA to further study the territory's wetlands. This is the first grant awarded to the USVI by the EPA Wetlands Program. DPNR will use this grant to develop a comprehensive wetland monitoring and assessment program that builds the Virgin Islands' capacity to determine the causes, effects and extent of wetland pollution and develop pollution prevention, reduction, and elimination strategies.

The project objectives for the EPA grant are to:

1. Prepare a comprehensive wetland characterization and assessment process directly linking territorial water quality, coastal zone management and watershed management processes; and

2. Obtain information about the condition of territorial wetlands and associated riparian areas and their respective watersheds, archive the data in digital form for easy accessibility and integration with other territorial GIS systems, and link wetlands characteristics with relative Indices of Biological Integrity for Virgin Islands watersheds.

For more information, contact Dr. Monica Grasso or Syed Syedali, DPNR-DEP, at (340) 773-1082.

DPNR Sponsors High School Environmental Clubs

DPNR is using a multi-faceted public education and outreach approach to increase public awareness of environmental issues. The Environmental Protection Division is establishing environmental education clubs at four VI public high schools. Students under the guidance of their respective school counselors will be involved in a number of environmental projects to enhance their awareness of protecting and preserving the quality of the Virgin Islands' watersheds and corresponding coastal water bodies.

Some proposed activities for the students are:

- C **Community Outreach:** "Adopt a Watershed," "Adopt a Gut," "Clean Channel," "Coastal Cleanup"
- C **Island Beautification Projects**
- C **Signage Placement:** Storm drains, Well-head Protection, Demonstration Projects
- C **Field Trips:** Watershed Restoration, Environmental Trails
- C **Conduct surveys** for failed septic systems in impaired watershed areas; GPS water quality monitoring stations; GPS mapping

Through these and other projects students will be able to enjoy new experiences, put their ideas and talents to work, learn about the environment through hands-on experience, and learn practical applications of GPS (global positioning system) survey equipment and GIS (geographic information system) mapping. Students can also earn "community hours" to satisfy their high school graduation requirements. For more information, contact Diane Capehart, DPNR-DEP, at (340) 773-1082.

DPNR Unveils New Underground Storage Tank Program Initiatives

There are currently over 150 underground storage tanks (UST) located in the Virgin Islands. However, 89% of St. Croix' service stations with USTs are located on top of the island's primary groundwater source, the Kingshill aquifer. This groundwater contributes up to 81% of water production, supplying 65% of the island's population.

To protect the health and safety of this valuable resource, the public and the environment, DPNR is pursuing several new UST initiatives for Fiscal Year 2004. The new projects include:

- C Developing a **permitting program** to insure the registration of all USTs. Notification frequency would be linked to the following new permits and renewals:

1. *Permit to Construct/Upgrade an UST*: this requires a site survey and a facility plan including proposed piping, leak detection, financial responsibility, etc.
 2. *Permit to Own/Operate an UST*: this requires installer certification and proof of financial responsibility or pollution insurance.
 3. *Permit to Close an UST*: this requires a closure plan and a plan for corrective action.
- C Ensuring that all UST systems provide proof of financial responsibility. In the event of a leak, damages and cleanup would be covered.
 - C A status review of fourteen LUST (Leaking Underground Storage Tank) sites.
 - C The setup of an UST **"Trust and Impress Account,"** fund for environmental cleanup. This potentially may impose a gasoline tax of 1 cent/gallon.
 - C The development of soil and groundwater cleanup standards and determination of the applicability of Risk-Based Corrective Action levels for UST closures and site assessments.
 - C Developing a local Certification program for persons working with UST systems.

For more information regarding DPNR's UST Program, contact Melissa Kalicin or Syed Syedali, DPNR-DEP, at (340) 773-1082.

Web Resources



EPA announces a new electronic, paperless, **online permit application system**. This system is designed for use by construction companies that need coverage under EPA's NPDES stormwater program. This free electronic stormwater application, known as the Stormwater Notice of Intent or eNOI, will save construction companies time and money with a simple, fast, and accurate application process. Learn more about the new system at www.epa.gov/npdes/enoi.

A **Watershed-based permitting guidance** for the National Pollutant Discharge Elimination System (NPDES) program is now available online. The watershed approach to permitting provides a process for considering all stressors within a hydrologically defined drainage basin, instead of addressing individual pollutant sources on a discharge-by-discharge basis. Visit www.epa.gov/npdes/watersheds to review or download the guidance.

EPA has published **new guidelines for the National Nonpoint Source (NPS) Program**. These guidelines completely replace all previous NPS grants guidelines beginning in fiscal year

2004. The guidelines focus approximately one-half of EPA NPS grant money on remediation of impaired waters through the development of total maximum daily loads (TMDLs), and the development and implementation of watershed-based plans. The guidelines are posted on EPA's NPS web site at: www.epa.gov/owow/nps/.

EPA has launched its **GreenScapes Alliance**, which aims to combine government and industry into a powerful, unified influence over the reduction, reuse, and recycling of waste materials in large land use applications. These land use activities include 4 million miles of roadside landscaping, Brownfields land revitalization, and the beautification and maintenance of office complexes, golf courses, and parks. For details, visit www.usgbc.org.

The **STORET National Data Warehouse** has recently been redesigned, improving speed and enabling larger and more flexible user defined queries. The STORET Warehouse is EPA's main repository for ambient water quality and biological monitoring data. For details, visit the STORET home page at www.epa.gov/storet.

The **Fundamentals of Environmental Education** on-line course is being offered from February 16th to April 30th. Participants may obtain three undergraduate or graduate level credits from the University of Wisconsin-Stevens Point. The course provides educators with the knowledge and skills necessary to incorporate quality environmental education into their classes. Visit <http://www.eetap.org/cecourse> for details.

Getting to Smart Growth II: 100 More Policies for Implementation provides states and communities with 100 policy options that can be mixed and matched to fit local factors, visions, and values, and highlights steps that the private sector can take to encourage more livable communities. The publication serves as a road map for states and communities that are unclear on how to achieve smart growth. For details, visit www.smartgrowth.org/library/articles.asp?art=870.

The **EPA Septic System Additives Factsheet**, from the recent onsite wastewater treatment systems manual contains good summary information about various additives and their relative worth (if any). The fact sheet is available at www.epa.gov/ORD/NRMRL/Pubs/625R00008/fs1.pdf. The complete manual is available at www.epa.gov/ORD/NRMRL/Pubs/625R00008/.

The **Sustainable Water Resources Roundtable** now includes a Reports and Publications section on its web site. Other information about the Roundtable may also be found on this site, such as links to water conditions and trends, and related links concerning sustainable water

resources. View reports and publications at <http://water.usgs.gov/wicp/acwi/swrr/RptPubs/index.html>.

Available Grants



One-Stop Grants site. The Health and Human Services Department has completed Grants.gov, a site providing "one-stop" grants shopping. The site includes information about more than 800 grant opportunities at federal 26 agencies. Visit the site at www.grants.gov/.

Corporation for National and Community Service: AmeriCorps Education Awards Program AmeriCorps is a national service network that provides full and part-time opportunities for members to serve their communities and build the capacity of nonprofit organizations to meet local environmental, educational, public safety, homeland security, or other human needs. Within these five issue areas, programs may submit proposals that address specific local community issues. For details, visit www.americorps.org/resources/guidelines2004.html.

EPA Five-Star Restoration Challenge Grants. This program (including Puerto Rico and Virgin Islands) is open to all small scale wetland, riparian and coastal restoration projects that have an educational component, monitoring plan, and diverse strong partnerships with organizations that contribute funding, land, technical assistance, workforce support or in-kind contributions. Applications deadline is March 1, 2004. For details, visit www.epa.gov/owow/wetlands/restore/5star.

The National Fish and Wildlife Foundation (NFWF) is seeking proposals for **Coral Reef Conservation projects** that build public-private partnerships to reduce and prevent degradation of coral reefs and reef habitats (seagrass beds, mangroves etc.). Projects may address causes of coral reef degradation wherever they occur, from coastal watersheds to the reefs and surrounding marine environment. For details, visit www.nfwf.org/programs/coralreef.htm.

National Research Initiative FY04 Competitive Grants Program: Watershed Processes and Water Resources Program & Managed Ecosystems. The NRI supports research, extension, and education grants that address key problems of national, regional, and multistate importance in sustaining all components of agriculture: farming, ranching, forestry (urban and agroforestry), aquaculture, rural communities, human nutrition, etc. For grant details, visit www.reeusda.gov/1700/funding/04/rfa_nri04.htm.

MacArthur Foundation Conservation & Sustainable Development Grants are dedicated to conserving biodiversity, enhancing knowledge of

long-term, sustainable natural resource use, and promoting environmentally sustainable economic growth benefitting those living in or near sensitive areas. The program focuses exclusively on endangered tropical ecosystems. For details, visit www.macfdn.org/programs/gss/csd/about_csd/grantmaking_cycle.htm.

USDA-CSREES 2004 National Integrated Water Quality Program grant applications are currently being solicited. The program's goal is to improve the quality of U.S. surface water and groundwater resources through research, education and extension activities. Funded projects will facilitate achieving this goal by advancing and disseminating the knowledge base available to agricultural and rural communities. Visit www.reesusda.gov/1700/funding/04/rfa_csm_grants_prg_04.htm for grant details.

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.

Upcoming Events

Local

February 3, 2004. **Understanding Your Septic System**, St. John. Contact Dale Morton, UVI-CES, at 340-693-1086 or dmorton@uvi.edu to register.

February 14-16, 2004. **St. Croix Agri-Fest**, Estate Lower Love, St. Croix. Contact Clarice Clarke, UVI-CES, at 340-692-4060 or cclarke@uvi.edu for details.

March 9-11, 2004. **Core/Private Pesticide Applicator Training**, UVI St. Croix & St. Thomas, Rooms EC713 & T101 respectively. Contact Dr. Jozef Keularts, UVI-CES, at 340-692-4052 or jkeular@uvi.edu to register.

April 19, 2004 (week of). **St. Croix Earth Day Eco-Fair**, St. George Village Botanical Garden. Contact St. Croix Environmental Association at (340) 773-1989 for details.

June 14-18, 2004. **8th Annual Caribbean Urban & Community Forestry Conference**, Westin St. John Resort & Villas, USVI. For details, visit <http://rps.uvi.edu/CES/UrbanForestry/urbanforestry.htm>.

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National

February 16-20, 2004. **35th Annual International Erosion Control Association Conference**, Philadelphia, PA. For details, visit www.ieca.org.

February 19-21, 2004. **North American Interdisciplinary Conference on Environment and Community** - Call for Papers, Saratoga Springs, NY. Submission deadline: November 1st. For details, www.esc.edu/EnvironConf.

February 23-26, 2004. **Mangrove Forest Ecology, Management and Restoration Training Course**, Ft. Lauderdale, FL. For details, email SherryCapaz@aol.com.

March 14-16, 2004. **National Green Building Conference**, Austin, TX. For details, visit www.nahbrc.org/conferencesseminarsgreen.asp?CategoryID=1676.

March 21-24, 2004. **10th National Symposium on Individual & Small Community Sewage Systems**, Sacramento, CA. For details, visit www.asae.org/meetings.

May 3-7, 2004. **EPA Environmental Monitoring and Assessment Program Symposium**, Newport, RI. For details, visit www.csg.org/CSG/Policy/environment/environmental+monitoring+and+assessment+program/default.htm.

May 17-20, 2004. **4th National Monitoring Conference: Building and Sustaining Successful Monitoring Programs**, Chattanooga, TN. Email nwqmc2004@tetrattech-ffx.com for details.

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.

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