

VINPS UPDATE

Nonpoint Source Pollution Committee Newsletter

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October 2002

Coastweeks 2002 Kick-Off!

Coastweeks 2002 began September 21st with this year's International Coastal Cleanup. *Coastweeks* is an annual fall event dedicated to increasing our awareness and understanding of the importance of our beaches and marine resources. VI volunteers join thousands of volunteers from more than 80 countries in a worldwide effort to conserve and protect the abundance and diversity of marine life and the health of our waterways.

The U.S. Virgin Islands is celebrating its eleventh year of cleaning the territory's coastlines. This year 150 St. Croix volunteers started Coastweeks by picking up trash on several beaches around St. Croix. Over the next three weeks, 550 volunteers from 25 groups or classes are scheduled to participate in beach cleanups around St. Croix. Over fourteen public and private schools (including UVI), businesses and community groups are scheduled to participate in clean-ups this year.

Last year approximately 1000 volunteers removed over 15,000 lbs of trash from VI beaches during Coastweeks. A majority of the debris came from land-based sources, including food wrappers, plastic utensils, diapers, six-pack rings, cigarette butts and lighters, bottles (plastic and glass) and styro-foam cups and containers. Most of the trash collected was plastic. The features that make plastic popular with people (it is light and durable), make it especially dangerous in the marine environment, where it travels easily and persists for long time periods. This means that plastic debris can entangle, smother and harm marine organisms for many years after it initially enters the sea.

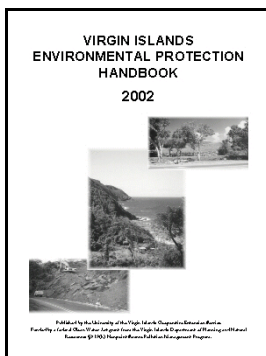
On St. Thomas, a number of groups also participated in Saturday's International Coastal Cleanup. The 220-member Eudora Kean High School JROTC group collected an astonishing 4,720 lbs. of trash along 2.4 miles of the Redhook roadside and salt pond. According to the group's leader, Colonel David Waller, "About 1,200 lbs. of the collected trash was recyclables. Now that the Anti-Litter and Beautification program has started its recycling program, that trash will bring in approximately \$300.00 for the JROTC's." Other local groups conducting Coastweeks cleanups included Department of Planning and Natural Resources (DPNR) staff at St. Thomas' Lindqvist Beach, and Cruz Bay Watersports at Lind Point on St. John.

Bertha C. Boschulte Middle School and Lockhart Elementary School are both scheduled for beach cleanups during the upcoming weeks. Coastweeks runs through October 12, 2002, and many other organizations will participate in cleanup efforts.

Coastweeks beach and underwater clean-ups are coordinated by the VI Marine Advisory Service (VIMAS) on St. Croix, and by DPNR's Divisions of Fish and Wildlife, Coastal Zone Management, Environmental Protection and Environmental Enforcement, along with the St. Thomas - St. John Anti-Litter & Beautification Commission on St. Thomas and St. John. For more information or to volunteer for a cleanup, contact Marcia Taylor, UVI-VIMAS, at 340-692-4046 on St. Croix; Lillian Moolenaar, DPNR-CZM, at 340-774-3320 or Donna Griffin, DPNR-DFW, at 340-775-6762, on St. Thomas or St. John.

DPNR's V.I. Environmental Protection Handbook Now Available Online

The *Virgin Islands Environmental Protection Handbook* is now available on the UVI website in Adobe Acrobat® format. The Handbook, revised and reprinted by UVI-CES through a non-point source pollution management grant from DPNR, describes proper pollution prevention practice design, installation and maintenance. The Handbook presents up-to-date information on design practices for low-impact developments, specifications for erosion, sediment and stormwater best management practices (BMPs), and describes predictive models that can be used to estimate erosion and runoff. The Handbook is specifically designed for the construction industry (architects, contractors, draftsmen, developers, and engineers), but is also useful for individual property owners.



To view or download the Handbook, visit <http://rps.uvi.edu/CES/VIEnvironmentalProtectionHandbook.pdf>. Hard-copies of the Handbook are also available for \$15.00 per copy. To order your copy of this Handbook, contact either Ms. Faye Williams, V.I. RC&D, at 340-692-9632 x. 101, Ms. Julie Wright, UVI-CES, at 340-693-1082, or any other V.I. NPS Committee member.

Fish Bay Comprehensive Road Stabilization Plan (CRSP) Under Development

Erosion and sedimentation research has been ongoing in the Fish Bay watershed since the early 1990's. Results have shown that steep, unpaved road sections and unprotected steep cutslopes erode more severely and contribute more sediment to the Fish Bay watershed than do individual construction sites, flat unpaved roads, paved roads, or protected cutslopes.

Runoff from steep, unpaved roads produces most of the sediment currently impairing Fish Bay and the surrounding watershed. Erosion and sedimentation in these common areas harm both the watershed's environment and residents' quality of life. Repairing vehicle and property damage and removing excess sediment not only takes a financial toll on residents, but also increases their daily stress. Fortunately, there are solutions to this environmental and public problem.

A Comprehensive Road Stabilization Plan (CRSP), is being designed to address stormwater drainage and treatment for all sections of unpaved roadways

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in the Fish Bay watershed system. To control erosion on the steepest, most heavily eroding road sections, the plan proposes to prioritize roads and pave them in order of priority as soon as funding can be awarded through one or more grants.

As part of CRSP, proper gutters, swales, box culverts and other storm drainage devices will be installed. The system will be designed to not only direct stormwater runoff, but also to reduce runoff velocity as much as possible. CRSP will make use of available terrain features in the design of the storm drainage system and will utilize oil/water separators, sediment traps and other Best Management Practices (BMPs) to reduce the amounts of pollutants entering the lower reaches of the watershed. The minimum standard that the stormwater runoff system will be designed to is the 50-year, 24-hour storm.

The Comprehensive Road Stabilization Project is making progress. Information and plans are regularly submitted for review to DPNR. The Fish Bay Homeowner's Association is eagerly awaiting the final results of this project and anticipate becoming full partners in the Fish Bay Watershed Management Plan, developed under the auspices of the Virgin Islands' Nonpoint Source Pollution Committee. For more information on the Fish Bay CRSP, contact Bill Rohring, DPNR-CZM, at 340-774-3320 or bill.rohring@noaa.gov.



Candace Cornwall sorts black mangrove seeds in preparation for planting them into tree cones.

St. Croix Youth Help to Restore Mangroves

The UVI Center for Marine and Environmental Studies' (CMES) St. Croix office has embarked on a project to provide environmental education and hands-on training to high school students and to restore mangroves at the UVI Wetlands Reserve. Marcia Taylor, St. Croix VI Marine Advisory Service (VIMAS), is heading the project, funded by the USGS through UVI's Water Resources Research Institute (WRRRI).

Mangrove areas are important to wildlife and help maintain the quality of our marine waters by

reducing nonpoint source pollution. Yet as much as 50% of mangrove areas in the VI have been destroyed in the last 50 years. This project seeks to assist in restoring a mangrove area and provide hands-on training to St. Croix youth.



Amaris Chew, a St. Croix Educational Complex 10th grader, collecting red mangrove seedlings.

This one-year project has three main parts. First, it will provide hands-on training on mangrove restoration techniques to at least 10 St. Croix high school students. Students collect red and black mangrove seeds and plant the red mangroves directly at the Reserve. The black mangrove seeds are germinated and grown for several months before planting. The new trees will be monitored and replaced as needed. Second, the project will train student interns to lead educational tours at the Reserve and provide them with an opportunity to lead tours for other St. Croix youth. The interns learn about the plants and animals at the site and the importance of the major ecosystems found there, and teach other students. Third, two hundred black and fifty red mangroves will be planted at the site to help restore the mangroves that were impacted by recent hurricanes.

"Working with the interns has really been delightful" remarks Marcia Taylor, marine advisor for the project. "They are all enthusiastic and are able to effectively transfer information they have learned to other students. Most of the interns want to major in science when they go to college and some want to pursue degrees in marine biology. This project is providing a great way for them to gain experience in the field."

VIMAS is also involved with two other mangrove restoration projects. The largest is in Salt River, St. Croix, where 13,500 red and 3000 black mangroves were planted with a nonpoint source pollution management grant from DPNR. VIMAS is also beginning a project with the National Park Service to plant 500 red, black and white mangroves in Lameshur Bay, St. John. For more information on this project or VIMAS, contact VIMAS at 340-692-4046 or email mtaylor@uvi.edu.

Mulching Your Landscape to Conserve Soil & Water

Mulch is a protective covering that is spread over the soil or left on the top of the soil surface. Mulch occurs naturally in the forest as leaves, twigs, branches, and other plant parts fall to the forest floor and cover the soil. Gardeners and landscapers manipulate this natural occurrence in the home landscape by using organic and/or synthetic (man-made) mulch materials. Mulched soils need to be

Nonpoint Source Project Grants Available from DPNR

The V.I. Department of Planning and Natural Resources (DPNR) announces the availability of grant funding for fiscal year 2003. This funding will be awarded as pass-through grants to perform Nonpoint Source Pollution Control and Management Implementation projects in the territory. The grants are funded through Section 319(h) of the federal Clean Water Act for monitoring projects, projects implementing best management practices (BMPs) in priority areas, or for education projects targeted to critical audiences.

DPNR will be conducting meetings to provide RFP information and guidelines to interested parties. The meetings will be held 6:00 - 8:00 p.m. November 18th in the SBDC conference room, Nisky Center, St. Thomas and 7:00 - 9:00 p.m. November 20th in the DPNR conference room, 45 Mars Hill, Frederiksted, St. Croix. Guidelines for NPS Pollution Control and Management Implementation grant proposal development may also be obtained from the DPNR-DEP Nonpoint Source Program by calling 340-773-1082 or visiting DPNR-DEP offices at #45 Mars Hill in Frederiksted.

cultivated less frequently than bare soils. Many different mulch types are available that:

1. Reduce evaporation.
2. Suppress weeds.
3. Protect against temperature extremes.
4. Break raindrop impact, reducing soil erosion and crusting.
5. Increase water infiltration into the soil.

The three basic types of mulch include:

1. Organic: hay, straw, pine bark, cedar chips, shredded dried leaves and twigs, grass clippings, sawdust, coffee grounds, manure. Organic matter improves soil structure by prompting soils to aggregate. Large aggregates and improved moisture conditions, which encourages root development and biological activity, enhancing soil structure. However, organic mulches can also rob soils of nitrogen as they decay.

2. Synthetic (Man-made): Black Plastic: advantages include its abilities to suppress weeds growth and retain soil moisture. However, although black plastic prevents water evaporation from the soil, it also prevents water from entering the soil.

Geotextiles or Landscape Fabric: woven and non-woven fabrics of polypropylene or polyester. They block weed growth, reduce surface evaporation, and allow water, fertilizer, and oxygen to penetrate easily into the soil. Used alone, they can be degraded by sunlight.

3. Mineral: crushed stone, gravel, ornamental rock, volcanic rock. Advantages over plastic and geotextile include: wind resistance, they do not harbor weed seeds or diseases, and they do not rob the soil of nitrogen. Mineral mulch can be thrown by rotary lawn mowers, potentially causing injury. Unless underlain with a synthetic fabric or plastic mulch, they can migrate into soils. For more information on mulching,

gardening and landscaping, contact UVI-CES at 340-692-4080 on St. Croix or 340-693-1080 on St. Thomas-St. John, or visit <http://rps.uvi.edu/CES>.

Web Resources



The **Center for Watershed Protection** has upgraded the Stormwater Managers Resource Center website at www.stormwatercenter.net. Eight new slideshows have been added, along with new stream restoration factsheets, resources for financing stormwater programs, watershed education information, hydraulic and hydrologic modeling tools, and several new publications, all for free! Also look for their new improved *Do-It-Yourself Watershed Planning Kit* at www.cwp.org.

Cruise Control: How Cruise Ships Affect the Marine Environment. The Ocean Conservancy released a hard look at the cruise industry and its impacts on the marine environment last May. Visit www.oceanconservancy.org/dynamic/press/releases/archive.htm?id=020529a to view the report.

The **Education for Sustainable Development Toolkit** is an easy-to-use manual for beginning the process of combining education and sustainability. It can help schools and communities develop a process to create locally relevant and culturally appropriate education. Visit www.esdtoolkit.org for details.

The **IGU Commission on Coastal Systems Newsletter** (issue #50) is now available on the Commission website at <http://igu-ccs.ucc.ie>.

The National Environmental Education and Training Foundation (NEETF) has produced an online document, *No Subject Left Behind*, to guide local and state leaders and practitioners to some of the major sources of funding for environmental education programs in President Bush's No Child Left Behind (P.L. 107-110) education plan. For details, visit www.neetf.org/Education/index.shtm.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas is a draft technical guidance and reference document for State, local, and tribal managers to use to implement nonpoint source pollution management programs. It contains information on the best available, economically achievable means to reduce surface and ground water pollution from urban areas. Visit www.epa.gov/owow/nps/urbanmm/index.html for details.

EPA's **National Menu of Best Management Practices for Storm Water Phase II** is now online. The menu provides guidance to regulated small MS4 municipalities on the types of practices they could use to develop and implement storm water management programs. For details, visit www.epa.gov/npdes/menuofbmps/menu.htm.

The National Pollution Prevention Center for Higher Education has produced a set of references on pollution prevention in the coastal zone, including many sources of info about preventing pollution from marinas and other sources. Visit www.umich.edu/~nppcpub/resources/compendia/coastal.html to view or download documents.

EPA's **Nonpoint Source News-Notes**, a periodic report on the condition of the water-related environment, the control of nonpoint sources of Water Pollution, and the ecological management and restoration of watersheds is available online at: www.epa.gov/owow/info/NewsNotes, or visit www.epa.gov/owow/info/NewsNotes/issue68/68issue.pdf for the PDF version.

EPA's NPS Grants Management Workgroup put together a PowerPoint presentation on **State 319 Grant RFPs** which they presented at the National NPS Meeting in New Orleans in November, 2001. That presentation is now on EPA's NPS site at: www.epa.gov/owow/nps/improving_rfp2.ppt

"Paving Our Way to Water Shortages: How Sprawl Aggravates Drought," produced by Smart Growth America, NRDC, and America Rivers is now available online to view or download from: www.americanrivers.org/landuse/sprawldroughtreport.html.

The Environmental Law Institute and the Smart Growth Network have produced **"Smart Links: Turning Conservation Dollars into Smart Growth Opportunities."** The Smart Links concept links conservation funding with techniques to promote smart growth and compatible development. Visit www.eli.org/store/r02smartlinks.html for details.

The Center for Watershed Protection has a new slideshow presentation available entitled **"Why Watersheds?"** It is designed to bridge the gap for people who may not understand the processes of watershed protection. "Why Watersheds?" can be viewed at www.cwp.org.

The first edition of the USDA Forest Service quarterly publication, **Wildland Waters**, is available at www.fs.fed.us/wildlandwaters. This edition provides a broad view of the current ecological, political, and social status of water issues in the United States in an easy-to-understand format.

The **Year of Clean Water** website provides information on events celebrating the 30th anniversary of the enactment of the Clean Water Act. The website also provides information on the history of the Clean Water Act, state and federal "Year of Clean Water" Proclamations, "Year of Clean Water" publications, videos, posters, and bookmarks, and National Water Monitoring Day, to be held October 18, 2002. For details, visit www.yearofcleanwater.org/.

Available Grants



The EPA Innovations Work Group (IWG) is accepting pilot proposals promoting energy recovery, waste minimization, recycling, environmental protection through land revitalization, and retail partnerships. Local governments wanting to participate in this Initiative must meet with an IWG member or EPA Regional or Headquarters employee to discuss ideas. Visit www.epa.gov/oswer/IwgPilotInitiative.htm for details.

EPA Watershed Initiative Grants. Proposals for a new grant program to encourage the protection and restoration of U.S. water bodies through the use of watershed approaches are being solicited. Subject to the availability of appropriations, EPA plans to select up to 20 watersheds throughout the country for grants to support promising watershed-based approaches to clean water. Applications are due November 21, 2002. For details, visit www.epa.gov/owow/watershed/initiative/.

EPA Wetland Program Development Grants (WPDGs) are available to allow eligible applicants to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. Application deadline is January 31, 2003. For details, visit www.epa.gov/fedregstr/EPA-WATER/2002/August/Day-26/w21670.htm.

The U.S. Fish and Wildlife Service and the North American Wetlands Conservation Council are seeking proposals that request matching funding for wetland conservation projects. Projects must meet the purposes of the North American Wetlands Conservation Act (NAWCA) of 1989 and request no more than \$50,000. Application deadline is November 29, 2002. For details, visit <http://birdhabitat.fws.gov/NAWCA/USsmallgrants.html>.

Support Agriculture- Eat What You Grow!

That's the theme of the 21st annual St. Thomas-St. John Agriculture and Food Fair, to be held Saturday and Sunday, November 23 & 24, 2002, on the grounds of UVI's Reichhold Center for the Arts. Food & drinks, fruits, vegetables, plants and arts & crafts will all be on sale. There will also be educational displays, livestock exhibits, pony rides, and live entertainment. Admission is \$1:00 for children under 13 and \$2.00 for everyone else. A calf, 5 fruit trees, 6 bags of feed, and a native recipes cookbook will be raffled off. For details, call the V.I. Agriculture Department at 340-774-5182 or UVI-CES at 340-693-1080.

Upcoming Events

Local

October 20, 2002. **World Food Day**, UVI St. Croix. Contact Stafford Crossman, UVI-CES, at 340-692-4054 or scrossma@uvi.edu for details.

October 22 & 24, 2002. **Hydroseeding Certification Training Workshop**, St. Croix & St. Thomas, respectively. Contact Julie Wright, UVI-CES, at 340-693-1082 or jwright@uvi.edu for details.

October 22&29; 24-25, 2002. **Certified Pesticide Applicators Training**, day and night sessions, respectively, UVI room EC807 St. Croix and UVI St. Thomas room T115. Contact Dr. Josef Keularts, UVI-CES, at 340-692-4052 or jkeular@uvi.edu for details.

October 31 & November 1, 2002. **Sustainable Livestock Production Practices Workshop**, UVI-CES St. Thomas & St. John, respectively. Contact Kofi Boating, UVI-CES, at 340-692-4066 or kboaten@uvi.edu for details.

November 9 & 10, 2002. **Nursery Stock Selection / Tree Planting Workshop**, UVI-CES St. John & St. Thomas, respectively. Contact UVI-CES at 693-1080 for details.

November 20, 2002. **GIS Day**, Adelita Cancryn Jr. High School. Contact Dayle Barry or Stevie Henry, UVI-CDC, at 340-693-1030 or 340-693-1033 for details.

December 11, 13 & 18, 2002. **Organic Pest Control Workshop**, UVI-CES St. Thomas, St. Croix and St. John, respectively. Contact Dr. Josef Keularts, UVI-CES, at 340-692-4053 or jkeular@uvi.edu for details.

National

October 23-25, 2002. **Water Web Consortium's Fifth Water Information Summit**, Fort Lauderdale, FL. Visit www.waterweb.org/wis/wis5/ for details.

November 3-7, 2002. AWRA 2002 Annual Water Resources Conference, Philadelphia, PA. For details, visit www.awra.org.

November 13-16, 2002. Water Environment Federation TMDL Conference, Denver, CO. For details, visit at www.wef.org/conferences.

January 30-February 1, 2003. **2nd Annual New Partners for Smart Growth Conference**, New Orleans, LA. Visit www.outreach.psu.edu/C&I/SmartGrowth/default.html for details.

February 24-28, 2003. **International Erosion Control Association 34th Conference & Expo**, Las Vegas, NV. Visit www.ieca.org for details.

April 7-11, 2003. **Bureau of Reclamation International Workshop on Integrated Water Resource Management**, Denver, CO. For details, visit www.usbr.gov/international/trn_integrated.htm.

April 13-16, 2003. **Inaugural National Conference on Coastal and Estuarine Habitat Restoration**, Baltimore, MD. Visit www.estuaries.org for details.

June 2 - 4, 2003. National Source Water Protection Conference, Washington, D.C. For details, visit www.epa.gov/safewater/protect/swpconf.html.

June 29-July 2, 2003. "Watershed Management for Water Supply Systems," New York, NY. Call for papers due November 15, 2002. For details, visit www.awra.org/meetings/NewYork2003/index2.html.

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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.

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