



Title: Low-Impact Development Practices for the Virgin Islands

Name: Julie Wright

Email: jwright@uvi.edu

Organization: Univ. of the Virgin Islands, Cooperative Extension

State: Puerto Rico-Virgin Islands **Region:** New York - New Jersey - Puerto Rico - Virgin Islands

Year of Funding: 2002

Theme: Watershed Management

Situation: The Virgin Islands' are currently facing serious environmental challenges. Urban, suburban, commercial, and tourism-related development is rapidly altering the Islands' fragile watersheds. Significant ecosystem and water quality degradation has resulted from poor land clearing and landscaping practices that negatively impact our forests, wildlife, soil and coastal water resources. The increased conversion of forests and agricultural land to residential and commercial development has resulted in numerous environmental and public health problems, including: 1. Pollution of coastal waters from toxic chemicals washed from roadways, parking lots and other impervious areas. 2. Increased flooding and damage to public and private property from increased storm water volumes & velocities. 3. Erosion and siltation of mangrove areas, salt ponds, coral reefs and sea grass beds. 4. Surface and ground water contamination from failing septic systems. 5. Changes in microclimates across the Territory due to forest and open space loss and gut channelization. A lack of education on low-impact development practices and the incentives needed to implement these practices has substantially contributed to the environmental problems we face today. To address these issues UVI-CES, in partnership with DPNR-CZM, initiated a "Smart Growth" project entitled: "The Link Between Land Use and Environmental Quality". CES and CZM are researching Smart Growth initiatives and ideas to assist in developing strategies for low-impact development in the Virgin Islands. This project is linked to the national NEMO network and will help to educate territorial officials about the direct impacts uncontrolled development - and the resultant increases in NPS pollution, sprawl and impervious surfaces - has on our tourism-based economy.

Objectives: 1. Conduct research, obtain materials on smart growth ideas and practices and adapt them to fit constraints found in the U.S. Virgin Islands (environmental, terrain, and severe weather). 2. Produce PowerPoint presentations and printed materials for the following target audiences. a. Homeowners and builders. b. Engineers, architects, draftsmen and contractors (Building Industry). c. Other local government agencies and policy makers to allow for better decision-making by government agencies responsible for development. 3. Lay groundwork through presentations and aggressive distribution of materials for development of the NEMO project with the ultimate goal of adopting a comprehensive Land and Water Use Plan based upon smart growth principles and NEMO training.

Methods: Research has been conducted on smart growth initiatives and programs introduced throughout the United States. A thorough review of the literature is being conducted to distill the main principles and ideas for public use in the Virgin Islands. All practices used to implement smart growth principles are being evaluated to determine whether any can be successfully used in the Virgin Islands, either as already developed, or in a modified form. All practices are being catalogued and used in the production of deliverables. Products to be produced include posters, brochures, factsheets, PowerPoint presentations and public service announcements/advertisements. Presentations are being made to the targeted audiences (regulators/decision-makers, construction industry, general public) & printed materials distributed at these presentations, at other meetings and public activities, and through other government offices.

Partnerships: Project is being conducted by UVI-CES in partnership with the V.I. Department of Planning & Natural Resources Coastal Zone Management Program with assistance from the UVI Conservation Data Center and Cornell Cooperative Extension LEAPE program.

Research: The project is utilizing research products from both the UVI Conservation Data Center and the Cornell Cooperative Extension LEAPE program to develop PowerPoint presentations & printed materials.

Outputs: To date, UVI-CES has conducted a workshop series entitled "Pre-Construction Planning for Property Owners" for over 75 realtors, government agency personnel, property managers, educators, and property owners on all 3 islands. Attendees learned how to assess a property's physical conditions and develop an effective Earth Change plan. Workshop materials were also provided to over 15 residents unable to attend the workshops. 98 percent of workshop evaluation respondents stated that they increased their knowledge of VI soils, soil conservation, materials needed to develop an ESC plan, ESC practices, and plant/habitat preservation. 65 percent of respondents stated that they would adopt at least one of the practices recommended at the workshop. UVI-CES, in partnership with DPNR-CZM, conducted training for 25 DPNR staff members (plan reviewers and inspectors) entitled "Reviewing Sediment & Erosion Control Plans for Effectiveness." All attendees reported that the training increased their awareness of appropriate practices, improved their knowledge of practices to recommend to clients, and provided them with the skills they needed to review ESC plans. Attendees also stated that they would promote the practices learned at the training. CES & CZM will also deliver Smart Growth presentations at the upcoming V.I. NPS Pollution Conference to an estimated audience of 125 regulators, inspectors, architects, engineers, educators, decision-makers, researchers, other government agency personnel and general public.



The mission of CSREES is to advance knowledge for agriculture, the Environment, human health and well being, and communities.

