

Water Quality

Water Quality

V(A). Planned Program (Summary)

1. Name of the Planned Program

Water Quality

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	10%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
111	Conservation and Efficient Use of Water	40%			
112	Watershed Protection and Management	20%			
133	Pollution Prevention and Mitigation	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	1.8	0.0	0.0	0.0
Actual	1.9	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 80000	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 80000	1890 Matching	1862 Matching	1890 Matching
	0	0	0
1862 All Other 71000	1890 All Other	1862 All Other	1890 All Other
	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Interest in the popular V.I. Home & Farm Water Quality Assessment (VI*A*Syst) program spread mostly by word-of-mouth. Throughout the year, VI*A*Syst presentations and workshops were regularly requested by schools, community groups, youth groups, churches, scouts, businesses, maintenance professionals, government agencies, and residents of the British Virgin Islands. These presentations, focused on transmitting information about water quality protection and least-toxic household products to the respective audiences so convincingly that many attendees indicated that they would stop using hazardous products. Locally oriented outreach materials were also requested and disseminated related to water conservation, drinking-water

protection, waste water disposal and best management practices for pollution prevention through the VI*A*Syst program. Linkages between lifestyle practices, watershed health and water quality were key outreach focuses of the VI*A*Syst program. CES conducted tours and workshops that promoted watershed awareness with a special focus on the health of VI watercourses (guts). Watershed awareness also was promoted through the adoption of the methodology used by the CDC-CES "Pilot Study to Integrate the Effects of Watershed Activity Patterns and Coastal Processes on Near-Shore Coral Reefs" in targeted watersheds by the UVI Master of Marine and Environmental Science program and the UVI Center for Marine and Environmental Studies. This study funded by VI EPSCoR utilized GIS technology to investigate the patterns of sediment delivery and septic system nutrient loading and the impacts on coastal water quality. Study findings are also being utilized in a CDC-CES grant-funded project to develop a field guide of VI wetlands and watersheds for resource managers funded by the VI Div. of Environmental Protection and the VI Dept. of Agriculture. CES promoted the implementation of BMPs to protect water quality at coastal public parks, hotels and large subdivisions with extensive coastal and off-shore resources. Media outreach methods utilized by the WQ Program were PSAs, television video spots, and local talk shows (radio & TV). In addition, local newspaper reporters published information referring to water quality issues obtained through interviews with WQ program staff. During office, phone consultations, and site-visits, clients were provided with technical assistance about erosion and sediment control, storm water control, preserving land cover, xeriscaping, wetlands preservation and restoration, preservation of riparian systems (guts) and alternative waste-water treatment systems. Ties with the Region 2 WQ team strengthened. The team collaborated in the design of a demonstration animal waste treatment facility to be constructed on a St. Croix farm. Progress was made in obtaining construction materials for the demonstration animal waste digester and facility. Additional collaboration with the EPA Region 2 liaison resulted in the development of a pollution prevention grant.

2. Brief description of the target audience

Policy-makers and regulatory personnel, community groups, teachers and students, business community, resource managers, owners/developers of large properties (>300 acres), non-governmental organizations, and the general public.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	200	1000	200	300
2008	110	150	60	200

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008:	0

Patents listed

3. Publications (Standard General Output Measure)**Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan	0	0	
2008	0	0	0

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

Education/Classes/Training in water quality protection and VI * A * Syst Program

Year	Target	Actual
2008	2	2

Output #2**Output Measure**

Workshops / Presentations about water quality protection, less toxic household products and NPS BMP's through the VI * A * Syst Program, on-site waste water treatment, cistern care, and watershed protection.

Year	Target	Actual
2008	4	8

Output #3**Output Measure**

One on one consultations with residents, government employees, students

Year	Target	Actual
2008	175	44

Output #4**Output Measure**

Tours of VI natural areas with students, community groups and others to raise awareness about watersheds and water quality protection.

Year	Target	Actual
2008	2	8

Output #5**Output Measure**

Educational/research publications, articles, posters, newsletters, GIS maps related to non-point source pollution, on-site wastewater treatment, watersheds, VI * A * Syst, and protection of VI native plant communities.

Year	Target	Actual
2008	6	5

Output #6**Output Measure**

PSAs

*Not reporting on this Output in this Annual Report***Output #7****Output Measure**

Fairs

Year	Target	Actual
2008	2	2

Output #8**Output Measure**

TV/Media

Year	Target	Actual
2008	2	3

V(G). State Defined Outcomes

O No.	Outcome Name
1	Awareness of the health risks associated with water quality impairment and water and wastewater treatment systems will increase, and 75 homeowners will consider installing or retrofitting their existing septic systems with improved packaged sewage treatment systems or alternative wastewater treatment systems.
2	Fifty (50) homeowners will request technical assistance with the evaluation of old septic systems; 20 homeowners will proactively pump their septic systems, and three (3) businesses will construct alternative wastewater treatment systems based on successful prototypes recommended by CES.
3	Educational materials, workshops, tours and other direct and indirect outreach methods will increase public knowledge of the characteristics and functions of aquatic ecosystems (guts, salt ponds, mangrove lagoons, bays and oceans) including their role within a watershed. Five (5) homeowners and/or natural resource managers will protect riparian and wetlands vegetation. Fifty (50) clients will become aware of the VI laws protecting riparian and wetlands vegetation.
4	Requests for site visits and VI*A*Syst assessments and presentations will increase. 75 clients or more will each adopt at least one VI*A*Syst recommended practice such as the use of non-toxic household products, etc. Fifty (50) homeowners will improve cistern water quality by following CES recommendations.
5	At least twenty (20) clients will implement effective stormwater, erosion and sediment control practices and xeriscaping. The VI Dept. of Public Works roadside maintenance crews (10) will improve their roadside clearing methods to prevent soil erosion and sediment runoff.
6	Over 1000 VI youth will become aware of the vital connections between human activities and water quality, how land-based activities affect coastal water quality, why watershed protection is important to them and their well-being. Youth and volunteer involvement in water quality protection and resource conservation will increase.
7	Information from watershed studies utilizing oceanographic and GIS technology will lead to specific recommendations for watershed residents and government agencies about how to reduce sediments and nutrients in stormwater runoff.

Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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V(H). Planned Program (External Factors)

External factors which affected outcomes

Government Regulations

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

After Only (post program)

Before-After (before and after program)

During (during program)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}