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Abstract

The United States Virgin Islands is a small territory to the east of Puerto Rico that consists of three main islands, St. Thomas, St. Croix, and St. John, and a few smaller, mostly unpopulated islands. There are no significant sources of surface water and minimal groundwater due to the high relief of the islands. A significant proportion of the population of all of these islands draws their water from cisterns that collect rooftop water. The rest are dependent on groundwater sources. Everyone must purchase water purified by reverse osmosis when there are no other sources. Streams in the territory are intermittent and heavily impacted by erosion from construction activities and roads. Young people in the Territory will have to deal with these issues in the future as the watersheds on St. Thomas are heavily impacted by development activities that have increased impervious surfaces and diverted runoff into new and unstable channels. This project seeks funds to continue and expand the Water Ambassadors Program funded in the last grant cycle. The Water Ambassadors Program promotes synergies between researchers, public schools, and the general public centered on watershed protection education, climate data collection, and reporting about the state of the landscape in watersheds. This proposal builds on previous proposals that involved creating a weather station network in the Territory. It also connects to the UVI Etelman Observatory which is using the data to build models of when the observatory telescope should be opened and closed and connects to the Department of Agriculture which is building a set of similar stations for general data collection and water management prediction. This proposal includes funding for a second year in which we will enter more public schools, add to an expanding network of weather stations that will be used in schools, cooperate with the Department of Agriculture and the Observatory, make more climate data available to the general public, and help create a culture of citizen reporting of environmental problems and hazards on the landscape.