

## **Sandwatch Helping Bequia Go Green**

The Bequia Community High School Sandwatch Group is now back up and running. So far we have planted some trees on one of our most popular beaches in Bequia (Princess Margaret Beach), and we are embarked on a joint project with Bureau of Standard in analyzing the quality of water at the Bequia Fishing complex and we are also in the process of producing a brochure, which should be completed very shortly.

On 11th May the Sandwatch Group of the Bequia Community High School joined with the St. Vincent and the Grenadines Bureau of Standard in a water quality analysis project at the Bequia Fisheries Complex in Paget Farm Bequia. Teachers and students of the Sandwatch group accompanied the three delegates from the Bureau of Standard, Grenadines' representative Mr Herman Belmar was also present. Samples were taken from three strategic points to determine the presence of bacteria or any harmful element, the first sample was taken from the well the water is collected from and the two other intake points, 3 metres away from the fishing complex and 60 metres away. The results from these testing would be submitted to Caribbean Community Climate Change Centre (CCCCC), which would help the engineers in its design of the filters for the Reverse Osmosis Desalination (SWRO) plant.

### **OVERVIEW OF THE REVERS OSMOSIS PROJECT**

In early 2007 the World Bank, under the Global Environment Facility programme began preliminary work under the Implementation Measures in Coastal Zones project (SPACC). This project involves the islands of Dominica St. Lucia and St. Vincent & the Grenadines. In St. Vincent and the Grenadines the areas of Spring Village on mainland St. Vincent, Union Island and Bequia were given consideration. Bequia kick started the programme with an investigation into the vulnerability of the island to the impact of climate change, with emphasis on the existing water situation on island, where there are no active streams, and no proven source of ground water. All water on the island must be collected from the roofs of houses, and stored in water tanks. During the peak of the rainy season (this is fast becoming unpredictable), there is often more water than the limited water tanks can store, and for the rest of the year there is either extreme rationing or no water at all in some parts of the island. This is often alleviated by the extreme measure of the Central Water and Sewerage Authority having to bring in water by barge and distribute it by a couple of buckets per household.

To discuss the health related problems, and hardship caused at such times will indeed take quite a dissertation. However, the Project in conjunction with the Caribbean Community Climate Change Centre(CCCCC) operating out of Belize as the implementing agency, held wide discussions with stakeholders on the island and decided to take action to offer relief to the most vulnerable side of the island (Paget Farm). The pilot project will install a Reverse Osmosis Desalination plant at the Fisheries Unit in Paget Farm, and pump the potable water to an elevation of approximately 450 feet above the existing com-munity, then reverse the water flow to the com-munity using gravity pressure for the distribution.

In order to combat the high cost of electricity generated through the use of fossil fuels, the project will be installing a wind turbine, de-signed to generate up to approximately 120 percent of the energy requirement of the SWRO plant, and to have the energy diverted directly to the energy grid thus contributing in a small way to the slow reduction in the use of diesel, and the elimination of diesel power to produce the water. It is the intention of the project to cater for a least 1000 households in the first instant, with capacity to expand, to encompass the entire southern section of Bequia from Friendship to Moon Hole, and the built in options for future growth. With this leap in technology and all the benefits associated, it is absolutely important to get it right, hence the reason for the slow progress. The St. Vincent Bureau of Standards is currently taking water samples from the intake point for the SWRO, and the Sandwatch students and teachers, Mr. Belmar are conducting parallel studies of the same sample areas, and for the same elements, in order to develop a regimen of checks and balances, as we make our independent comparative analysis. While this may appear to be a straight forward task, it is in fact demonstrating how students can get involved in experimental education, and contributes in a big way towards determining the way forward for an entire community. The Directorate of Grenadines Affairs congratulates the students and teachers of the Sandwatch programme for their participation in this most important venture.

By Joanna Stowe, Bequia Community High School



Drawing the water from the well for testing