

VI NPS Update

Nonpoint Source Pollution Committee Newsletter

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VOLUNTEERS PLANT OVER 3000 MANGROVE SEEDLINGS ON ST. CROIX

The St. Croix Environmental Association (SEA) and VI Marine Advisory Service (VIMAS) continued restoring a vital mangrove ecosystem within the Sugar Bay subbasin of the Salt River watershed this summer. Sugar Bay's mangrove forest was almost 100% destroyed during Hurricane Hugo in 1989. With the help of many volunteers, over 3000 propagules were planted during two planting weekends. Volunteers included students from the Educational Complex, Country Day School, The Good Hope School and the St. Croix Boys and Girls Club.



Volunteers getting started (and muddy) at the Sugar Bay mangrove planting site.

SEA and VIMAS are using the Riley Encased Methodology (www.mangrove.org) to plant 18,000 red mangroves in Sugar Bay over the next three years. The goal of this technique is to encourage mangrove reforestation to create habitat, decrease shoreline erosion, improve water quality, and reduce nonpoint source (NPS) pollution within the watershed. The Riley technique was developed for planting red mangroves in high wave or wake energy areas or in deep water, such as around breakwaters. It is also effective in conditions similar to those at Sugar Bay, where water levels fluctuate due to seasonal high tides and runoff from rain events.

The Riley Encased Methodology uses a two-part PVC encasement system to protect and support red mangrove propagules (seedlings) until they can establish prop roots. A PVC bottom piece that varies in height depending on the water level (the bottom piece is meant to reach the mean high tide mark) is attached to a fixed-length PVC top piece with a PVC coupling. The top piece compensates for seasonal high tides and runoff. Once prop roots have been established (about 2 years), the top piece can be removed, allowing it and the coupling to be reused. The bottom piece cannot be removed without damaging the young tree. Over time the bottom piece itself becomes a habitat encrusted with organisms. The project partners anticipate that the encasement technique will greatly improve the success rate for mangrove establishment in Sugar Bay.



UVI science professor, Dr. Stuart Ketcham, instructs students from the St. Croix Educational complex in the mangrove propagule planting method.

SEA and VIMAS will also provide additional materials to the St. Croix Aquarium in Caravelle Arcade to expand their mangrove exhibit, including a collection of photos of the reforestation project. An educational module about mangroves was produced for SEA's "My Environment" grade 3 curriculum. More than 300 students have benefitted from this module, and it is available from SEA for interested teachers and youth group leaders. For more information on the Sugar Bay reforestation project, please contact Card Cramer-Burke, SEA, at (340) 773-1989, or Paige Rothenberger, VIMAS, at (340) 779-3141. Information on the Riley Encased Methodology can be obtained from their website at <http://www.mangrove.org>.

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