

**Regulatory Challenges and Opportunities to
Protect Coral Reef Communities in the US Virgin Islands
Anne Marie Hoffman, The Nature Conservancy
February 25, 2013**

Summary

Two priority Marine Protected Areas (MPAs) managed by the Territorial government, the St. Thomas East End Reserves (STEER) and the St. Croix East End Marine Park (STXEEMP), were established to manage coral reef communities and other essential habitats. Partners including The Nature Conservancy, VI Department of Planning and Natural Resources (DPNR), University of the Virgin Islands (UVI), Horsley Witten Group and NOAA have developed management plans and watershed plans for both MPAs. Involvement of the EPA in the protection of these MPAs would be beneficial and improve the status of coral reefs and associated habitats. There are several regulatory challenges and opportunities for EPA to assist, as summarized in the following table:

Regulatory Challenges for USVI MPAs	Current efforts in USVI MPAs	Opportunities for EPA
CWA 303(d); NPDES and TPDES, VI Code Title 12, Chapter 7, Section 195: Impaired water bodies, Impacts from stormwater and point source pollution	TMDL for Benner Bay/Mangrove Lagoon; STEER and STXEEMP Watershed Plans	Development and implementation of TMDLs and Watershed Plans; outreach to decrease boat/marina/boatyard inputs; enforce TPDES and stormwater discharge permits
Tributyltin in sediments above screening levels	Sediment sampling in STEER, results of 248ng Sn/g TBT (upper screening level proposed for a Superfund site of 144ng Sn/g)	Delineate TBT footprint, risk assessment, remediate sediments, regulate against new inputs
RCRA 7003(a): Bovoni landfill impacts to groundwater, surface water and wetlands	Consent Decree vs VI Waste Management and private entity, impacts to mangroves excluded	Delineate seepage impacts, identify COPCs and implement interim remedial actions to mitigate impacts on mangroves

Background

The STXEEMP and STEER form the beginnings of a territory-wide system of MPAs and are considered priority coral reef managed areas. STXEEMP (71mi²) and STEER (3.7mi²) are designed to protect systems of coastal resources including coral reefs, mangroves, seagrass beds, salt ponds, lagoons and cays. Located at the southeastern end of St. Thomas, the STEER is thought to be one of the most valuable fish nursery areas remaining on St. Thomas. The STXEEMP, on the east end of St. Croix is the largest MPA in the USVI. Threats to STEER and STXEEMP resources include land and marine-based sources of pollution, climate change, unsustainable or illegal fish harvest, trash and debris and physical damage from boats.

Regulatory Challenges

Clean Water Act:

Six bays/lagoons in the **STEER** have been included in the 2010 USVI 303(d) list for water quality impairments - temperature, turbidity, bacteria and dissolved oxygen were the primary parameters of concern listed. A TMDL Report was developed in 2005 for Benner Bay and Mangrove Lagoon but lacks sufficient implementation. Eight assessment units in the **STXEEMP** have been included in the 2010 USVI 303(d) list for water quality impairments—turbidity, dissolved oxygen, and bacteria were the primary parameters of concern listed. USVI DPNR and US EPA are in the early stages of developing TMDLs for three of these areas: Tamarind Reef/Southgate Lagoon, Green Cay/ Chenay Bay, and Green Cay/offshore. Watershed Plans have been developed by NOAA that include specific, targeted recommendations for design and construction projects throughout the watersheds (http://www.horsleywitten.com/stx-east-end-watersheds/pubs/final/111114_FinalSTXEEMPWatershedPlan.pdf) and (<http://www.horsleywitten.com/STEERwatersheds/index.html>). Funding assistance and regulatory action are needed to develop and implement the TMDLs and watershed plans in order to improve water quality and decrease impacts to coral reef communities and associated habitats.

Stormwater and point source pollution impact water quality in both **STEER** and **STXEEMP**. Enforcement of TPDES and stormwater discharge permits for existing as well as new development is needed to improve compliance and water quality.

Tributyltin:

NOAA conducted sampling of **STEER** sediments in 2011, identifying extremely high TBT results in sediments (248 ng Sn/g), exceeding the upper screening level proposed for a Superfund site in Puget Sound of 144 ng Sn/g. Risk assessment and funding assistance to delineate the extent, impact and preferred remediation of the TBT contamination are necessary.

Resource Conservation and Recovery Act:

A Consent Decree was lodged in 2012 against the VI Waste Management Authority and a private disposal entity for the Bovoni Landfill after failure to comply with an Administrative Order on Consent. The Bovoni Landfill, located on St. Thomas adjacent to Mangrove Lagoon, a primary fish nursery area in **STEER**, is impacting the largest remaining mangrove forest on St. Thomas. Control of storm water run-on and run-off, groundwater corrective action, gas collection and closure are requirements under the CD. Language regarding the protection of the adjacent MPA and mangrove system is absent from the CD, and while a closure plan is required, interim measures to protect the mangroves is necessary. Funding and regulatory assistance are needed to delineate seepage (leachate) impacts to groundwater, surface water and wetlands; determine COPCs; and implement interim remedial actions to mitigate impacts to the mangroves and associated fishery.