

South Shore Industrial Complex – Coastal Marine Environment Baseline Assessment, St. Croix, USVI

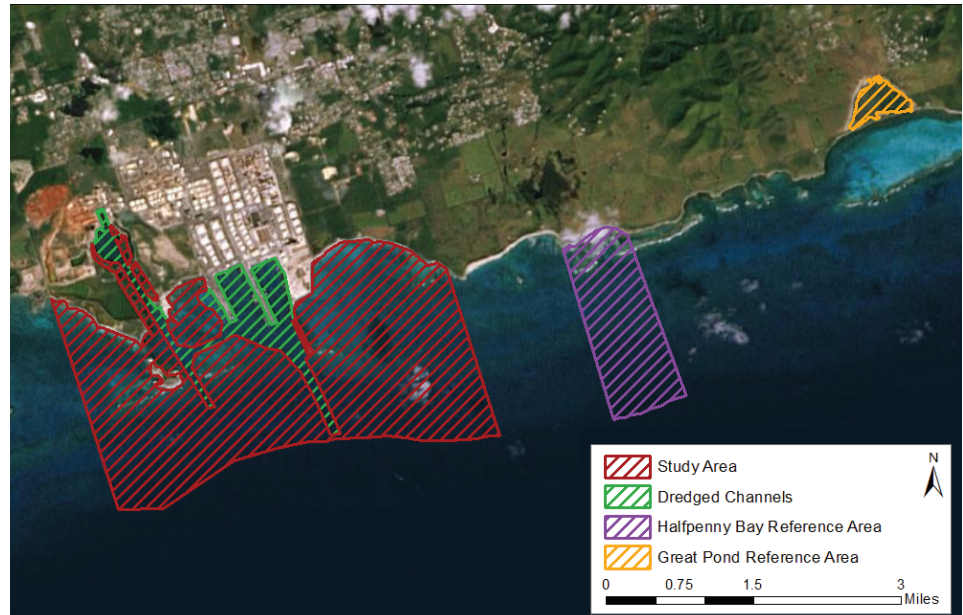
Data collection efforts to assess the current marine environment adjacent to the former Hovensa facility.

SUMMARY

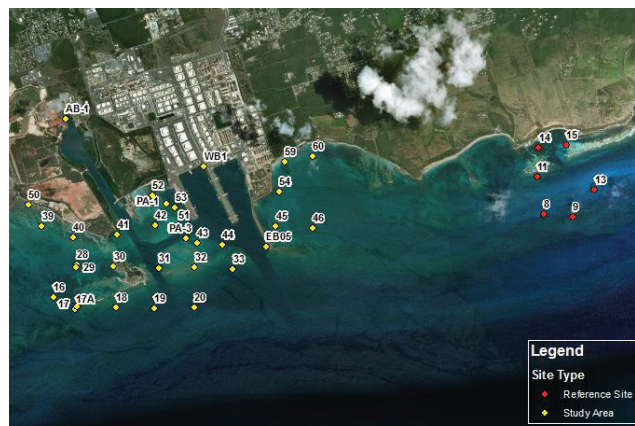
Environmental conditions were assessed in the “study” and “reference” areas focusing on three primary habitat categories: benthic habitat, mangroves, and dredged channels. In the study area off the South Shore Industrial Complex, both benthic and shoreline mangrove habitats were assessed. Two Reference Areas were assessed for comparative purposes with the Study Area: Halfpenny Bay for benthic habitat and Great Pond for mangroves. Mangroves were assessed for habitat health along transects from the edge of the water up to 50 meters inland. Benthic habitats were assessed along 15 meter transects for seagrass, corals, or non-vegetated bottom habitat. Sediment chemistry was analyzed at select benthic habitat sites and all dredge channel sites. Water quality measurements were taken at all benthic habitat and dredge channel sites. Characterizing the current condition of the nearshore marine environment within the Study Area will help establish an understanding of the baseline condition of habitats and natural resources prior to operation of the Limetree Bay Terminals as a petroleum storage facility.

DATABASE

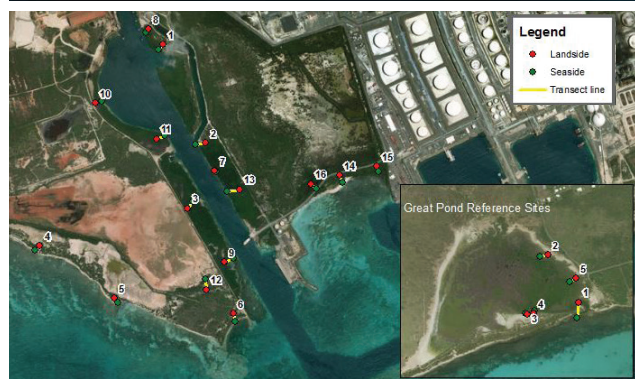
All data collected during this study are available in an Access Database titled Hovensa Marine Baseline Database. Raw data and summary data can be accessed by clicking buttons for predefined data categories of mangroves, benthic habitat, sediment chemistry, water quality, and fish data. Additionally, all data collected at a specific site are available via a separate query button.



▲ Map of Study Area and Reference Areas



◀ Benthic habitat and dredge channel sampling sites in the Study Area and Halfpenny Bay Reference Site



◀ Mangrove sampling sites in the Study Area and Great Pond Reference Site

Data by Category



MANGROVES

- 16 sites along the Study Area
- 5 sites in the Great Pond Reference Area
- Adult and seeding data collected
 - Species
 - Height
 - Diameter at breast height
 - Crown diameter
 - Number of stems
 - Number of seedlings/saplings
 - Canopy cover
 - Condition



BENTHIC HABITAT

- 27 sites in the Study Area
- 6 sites in the Halfpenny Bay Reference Site
- Line Point Intercept (LPI) transect data collected
 - Species
 - Percent cover of each species
 - Rugosity
 - Relief
 - Macroinvertebrate counts
 - Endangered corals
 - 100 LPI photos along the transect



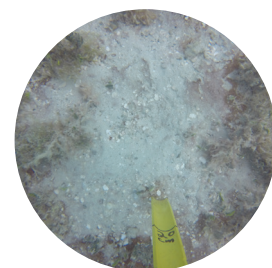
FISH DATA

- 27 sites in the Study Area
- 6 sites in the Halfpenny Bay Reference Site
- Fish data collected along benthic habitat transects
 - Number of fish observed
 - Size class of fish



WATER QUALITY

- 27 sites in the Study Area
- 5 dredge channel sites
- 6 sites in the Halfpenny Bay Reference Site
- Data collected at the surface, at depth, and in the middle of the water column
 - Temperature
 - Dissolved oxygen
 - pH
 - Salinity



SEDIMENT CHEMISTRY

- 36 sites (5 dredge channel, 26 Study Area, 5 Halfpenny Bay reference site)
- All sites were analyzed for the following:
 - Metals (e.g., mercury, copper)
 - Polycyclic aromatic hydrocarbons
 - Total petroleum hydrocarbons
- BTEX
 - All dredge channel sites, 15 Study Area sites, two reference sites
- Biomarkers
 - All dredge channel sites, six Study Area sites, two reference sites



MORE INFORMATION
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