

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

The NPS is preparing this environmental assessment (EA) to consider the environmental consequences related to the potential construction and operation of a Marine Research and Education Center (MREC) and the demolition of an abandoned hotel structure at Salt River Bay National Historical Park and Ecological Preserve (SARI).

1.2 PROJECT LOCATION

SARI is located along the north/central coast of St. Croix, United States Virgin Islands (USVI) (Figure 1-1). The NPS and the Government of the Virgin Islands (GVI) jointly manage the 1,015-acre park. SARI is five miles from Christiansted National Historic Site and can be reached by car via Rt. 75 from Christiansted, connecting to Rt. 80.

1.3 SALT RIVER BAY NATIONAL HISTORICAL PARK AND ECOLOGICAL PRESERVE

In 1992 Congress created SARI as part of the National Park System (Figure 1-2). SARI was created to preserve, protect, and interpret nationally significant natural, historical, and cultural resources. In 1994, the Salt River Bay Commission recommended approval of a Land Protection Plan, which was signed by the Governor of the Virgin Islands and the Director of the NPS in 1995. This plan set the priorities for the purchase of lands within the boundary of SARI.

SARI contains a combination of marine, estuarine, and terrestrial habitats including coral reefs, seagrass beds, an undersea canyon, and the largest remaining mangrove forest within the U.S. Virgin Islands. Salt River Bay is fringed by mangrove forests, creating a habitat that plays a critical role where land and sea meet. Mangroves in SARI are still recovering from Hurricane Hugo (1989). Restoration is underway for red mangroves, which held (before Hugo) the last major natural mangrove stand set in an estuary in the Virgin Islands. The mouth of the bay, with its undersea canyon and coral covered walls, opens to the sea, which falls away into the deep Virgin Islands Trough. SARI is a protected natural area that exhibits many of this region's important ecological relationships in a small area. The water acreage of SARI was also designated as a National Natural Landmark (1980) that is home to 27 species that have been listed as threatened or endangered.

Salt River Bay is an estuary, where fresh and salt waters mix. The diverse terrestrial environment is dominated by shrub land and much of the flora is adapted to dry conditions. This dynamic relationship between land and bay is ecologically important. The survival of the local fishery, for example, may depend on preserving healthy natural conditions both inside and outside Salt River Bay. Endangered hawksbill turtles feed and rest along the coral canyon walls. Snappers and grunts hide among coral reefs by day and feed at night in seagrass beds. Threatened green sea turtles and queen conch thrive on turtle grasses. Coral reefs have built up in the Caribbean over the past 13,000 years. More than 400 species of reef fish are known in near-shore waters. Coral reefs may support one-third of all fish species globally and possibly a total of a half-million animal species.

Salt River Bay also contains prehistoric and colonial-era archeological sites and ruins that are found in this dynamic tropical ecosystem. Every major period of human habitation in the Virgin Islands is represented at SARI including several South American Indian cultures, the 1493 encounter with Columbus, Spanish extermination of the Caribs, attempts at colonization by a succession of European nations, and enslaved West Africans and their descendants. More than a dozen major archeological investigations since 1880, together with historical research, have revealed this remarkable story.

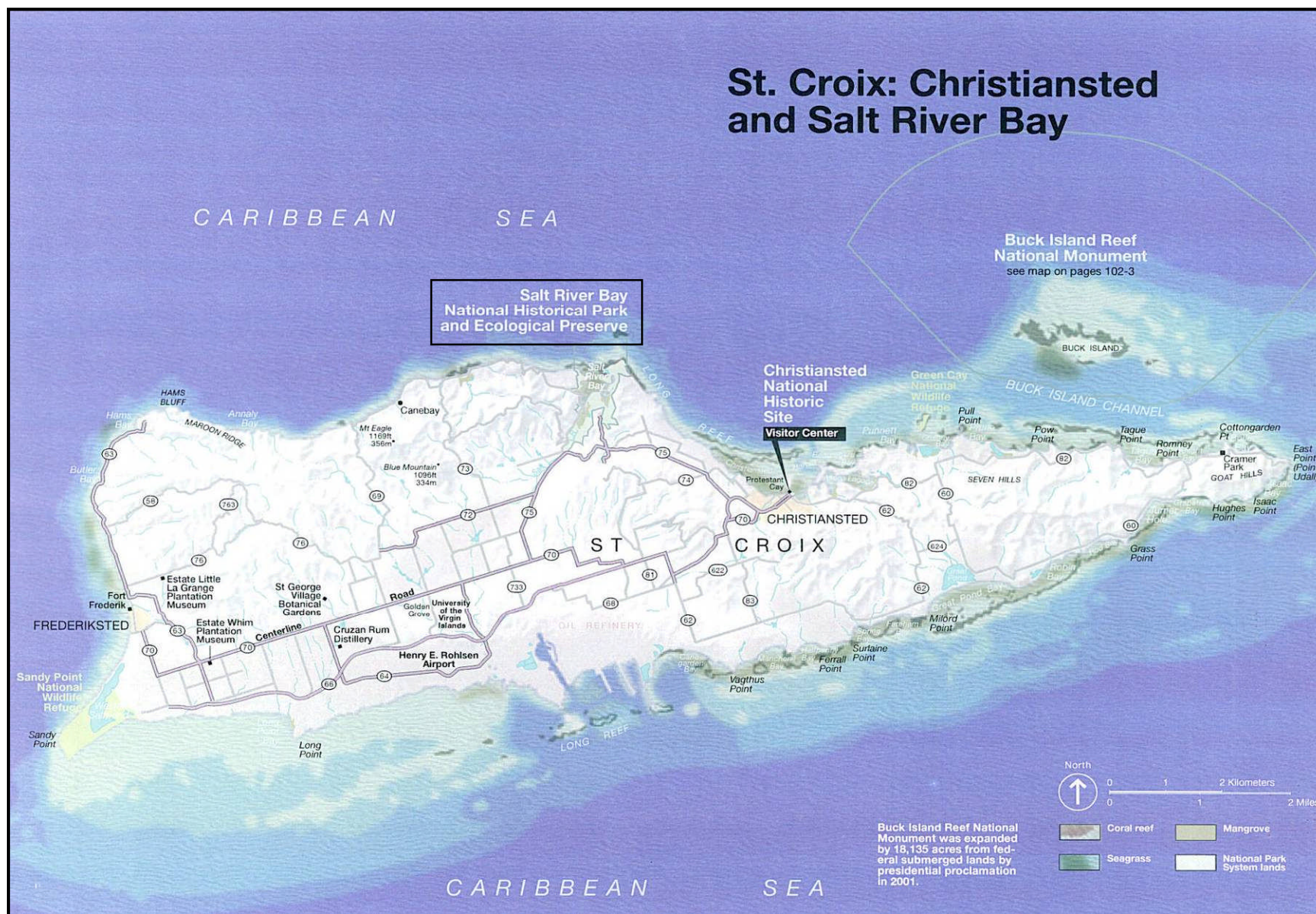


Figure 1-1 Location Map of Salt River Bay National Historical Park and Ecological Preserve

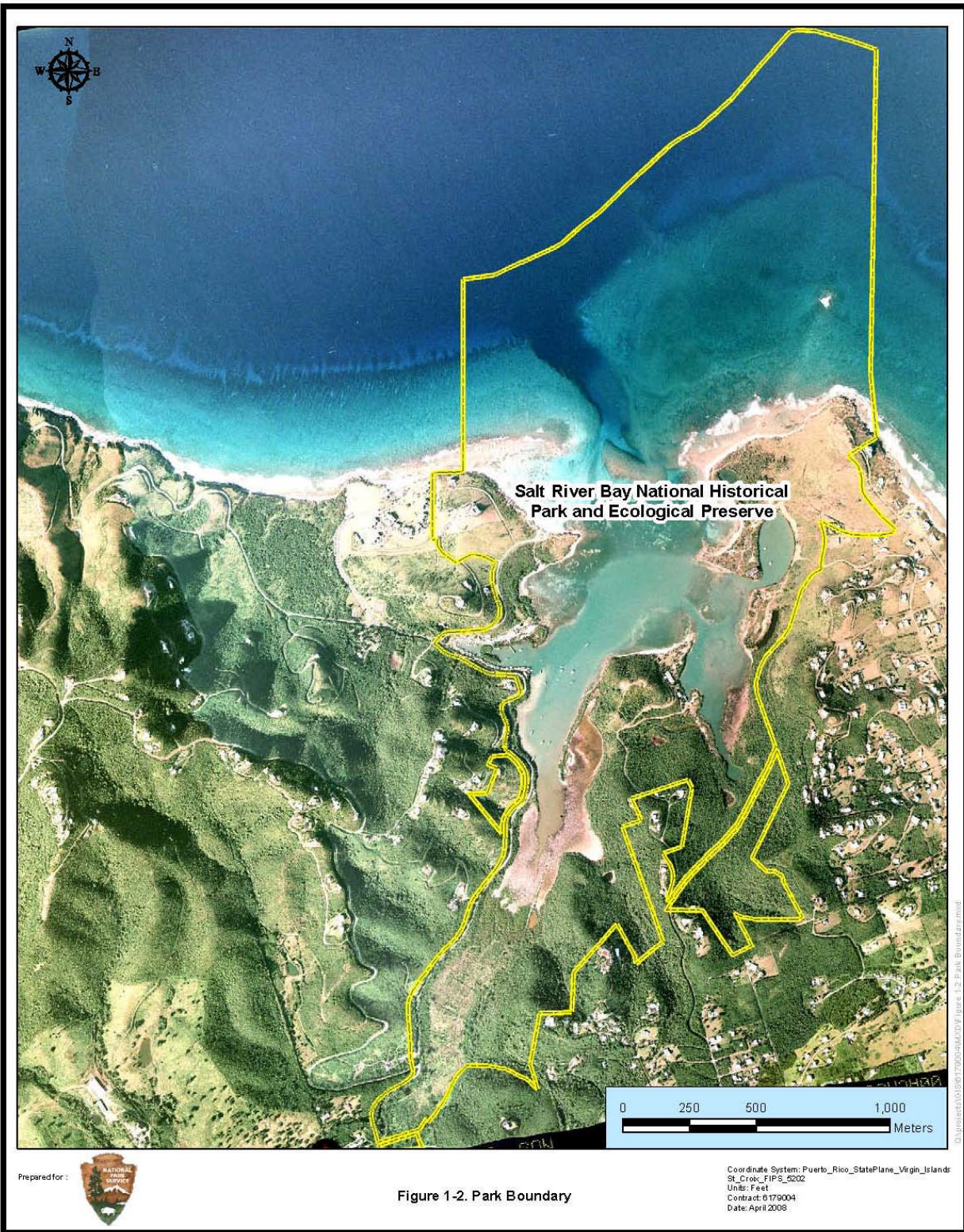


Figure 1-2. Park Boundary

1.4 PROJECT BACKGROUND

1.4.1 Marine Research

At one time SARI's reef and hard bottom habitats in the canyon were among the most extensively studied and characterized coral structures in the world. However, since the closing of the National Oceanic and Atmospheric Administration's (NOAA) Undersea Research Center in Salt River Bay, this is no longer the case. Reefs that fall within the boundaries of SARI but are outside of the canyon itself are currently monitored by the University of Virgin Islands (UVI) Seagrass Program and the USVI Department of Planning and Natural Resources (DPNR); however, with limited funds and resources. The seagrass and algae communities which were also studied by the NOAA facility researchers receive limited monitoring by USVI DPNR Division of Fish and Wildlife (DFW) and Division of Environmental Protection (DEP). These communities are of increasing concern due to water quality issues in the bay.

There are concerns for the future of coral reef ecosystems in the Caribbean region. Although there are over 93 million acres of coral reef submerged lands under U.S. jurisdiction, few have been properly studied to assess their overall health, and evidence is overwhelming that coral reefs and associated ecosystems are deteriorating at a rapid rate throughout the world.

1.4.1.1 Joint Institute for Caribbean Marine Studies

Concerns about the state of coral reef ecosystems in the Caribbean and elsewhere in the world has led to the formation of a partnership between the U.S. Department of Interior (DOI), through the NPS, the Department of Commerce/ National Oceanographic & Atmospheric Administration, and the Joint Institute for Caribbean Marine Studies (JICMS). JICMS is a university-based organization consisting of four initial members, including the University of North Carolina at Wilmington, the University of the Virgin Islands, Rutgers (the State University of New Jersey), and the University of South Carolina.

The purpose of JICMS is:

- To foster understanding and proper management of coral reef and other tropical and sub-tropical marine ecosystems by initiating a comprehensive long-term research and education program in the U. S. Virgin Islands;
- To foster public awareness of the importance of coral reefs and other marine ecosystems from economic, aesthetic and global health standpoints through educational programs for students and the general public; and
- To share information and research and to form partnerships with other nations within the Caribbean and adjacent regions with common interests in and concerns for the marine environment.

1.4.1.2 Siting the Proposed Marine Research and Education Center at Salt River Bay

JICMS has long considered St. Croix the most desirable location to establish a Marine Research and Educational Center (JICMS 2004). Considering that coral reef systems are linked throughout the Caribbean, St. Croix's central location and proximity to many nations within the region make it a perfect site for a MREC.

Additionally, the island has a rich coral reef research history. Extensive research was conducted from 1970-1989 at the former West Indies Laboratory on the eastern end of the island and at the NOAA Undersea Research Center based at Salt River Bay. Scientists collected significant amounts of chemical, physical and biological data that will serve as a baseline for comparative studies in the future. A NOAA-

CREWS meteorological and oceanographic monitoring platform has been moored at Salt River Bay since 2002 and is collecting physical and biological data as part of NOAA's International Coral Health and Monitoring Program (JICMS 2004).

Perhaps most important is the federal ownership and availability of the site at Salt River Bay and other property, both dry and submerged, owned or managed by the NPS in St. Croix. The SARI and the Buck Island Reef National Monument can all be closely linked to the MREC's programs (JICMS 2004).

The Salt River Bay site is also within a short distance by boat and vehicle to a diverse ecosystem that is representative of coral reef systems throughout the Caribbean.

1.4.1.3 Research and Educational Programs

A MREC would have programs to promote the sustainable utilization and conservation of marine resources through sound scientific principles with application throughout the Caribbean, West Indies and southern U.S. (JICMS 2004). The research program may include programs to:

- Provide long- and short-term monitoring of physical, biological, chemical, geological and meteorological parameters to track the processes governing stability and change in coral reef systems;
- Conduct indigenous marine aquaculture research that could lead to stock enhancement of species that have been severely depleted in the wild;
- Conduct specific research on the causes of coral reef diseases and degradation;
- Conduct research that would lead to the restocking of depleted species of fish and other marine organisms; and
- Study deep reef systems including the effects of global warming and the cataloguing of its virtually unknown biodiversity.

The MREC would also establish an educational program on marine issues aimed at Caribbean stakeholders (i.e., students, resource managers, local elected officials and the general public). The programs would include:

- Full-semester classes for credit in the marine sciences provided by the university partners;
- Short-term field courses taught by university partner faculty and visiting professors;
- Student internships featuring hands-on field and lab experiences;
- Partnership programs between scientists and K-12 educators that bring real world marine science experiences into Caribbean classrooms;
- Coastal training programs and services to support science-based management of Caribbean coastal resources;
- Public programs focusing on current coastal policy and management issues; and
- Interaction with scientists in the field through video and telecommunication systems.

1.4.2 Demolition of the Abandoned Hotel

A second project evaluated in this EA is the demolition of an abandoned hotel structure located on the east side of SARI. The hotel structure was part of a development project started in the late 1960s that encompassed the entire Judith' Fancy peninsula. This development project as well as other previous projects proposed to develop the entire peninsula. The structure (proposed to be known as the Virgin Grand Hotel) was abandoned and never completed. This structure is referred to as the "abandoned hotel structure" throughout this document. Currently the structure is deteriorating and presents a safety and environmental concern for the park. The park proposes to remove the entire structure, reuse and recycle

as much of the material as possible, mitigate previous development impacts, and rehabilitate the site to a more natural condition. In addition to these actions, the park is proposing to construct a haul road for the construction vehicles to get to and from the site, and for the haul out of materials produced from the demolition of the abandoned hotel structure.

1.5 PURPOSE AND NEED OF THE PROJECT

1.5.1 Marine Research and Education Center

The purpose of this project is to implement a proposed MREC at SARI. As mentioned previously, St. Croix has been the host of over thirty years of world class marine research. Both Fairleigh Dickinson University's (FDU), West Indies Laboratory (WIL), and NOAA's National Undersea Research Program (NURP) facility and their manned undersea research habitats "Hydrolab" and "Aquarius" were located in Salt River Bay. These two facilities brought hundreds of students and researchers from local communities and from all over the world to study and work in and around the island's marine environment annually. Unfortunately both facilities were closed after Hurricane Hugo. The loss of these facilities greatly impacted the educational opportunities the island resources offer and hindered on-going and future research.

There is a need to reestablish a MREC on the island of St. Croix. SARI was selected by JICMS as the ideal location for the MREC for the following reasons:

- Long-term conservation and education goal for the NPS and the Government of the Virgin Islands who jointly manage and maintain the 1,015-acre park;
- Legacy of the former FDU/WIL and NOAA/NURP programs with years of baseline information on the marine community inside and outside the bay and into the depths of the submarine canyon;
- Need for scientific information for the Government of the Virgin Islands to restore and maintain St. Croix's last living and functioning mangrove, estuarine, and coral reef ecosystem;
- Close proximity to the target resources for education and research, and
- Long-term security for the project through park ownership and management.

1.5.2 Abandoned Hotel Structure

The purpose of removing the abandoned hotel structure is to alleviate the safety and environmental concerns of the structure and to improve the cultural landscape at the park. The abandoned hotel is a modern intrusion visible throughout the park. The hotel structure has deteriorated since it was abandoned in the 1970s, and it now is a safety hazard and is incompatible with the surrounding environment. Once the abandoned hotel structure is removed the park would be able to rehabilitate the peninsula through revegetation of native plant species and to return the area to a more natural condition. This project also needs a Haul Road to be constructed to transport the demolition equipment to and from the site and to haul materials away from the site. The Haul Road would also divert the construction and demolition vehicles from going through Estate Judith's Fancy.

1.6 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This EA was prepared in accordance with National Environmental Policy Act (NEPA) guidelines, and it examines the consequences of a proposed action and alternatives on the environment. This document analyzes the short-term, long-term, and cumulative effects of the proposed action for the MREC, along with two other alternatives and the "no action alternative." This document also analyzes the short-term, long-term, and cumulative effects of the demolition of the abandoned hotel and the "no action alternative." By comparing the proposed action with other alternatives, and identifying mitigation

measures that would minimize adverse effects, this EA will assist stakeholders in the decision-making process.

1.7 ORGANIZATION OF THE ENVIRONMENTAL ASSESSMENT

Chapter 1 discusses the location and background of the project, the history of SARI, the purpose and need of the project, and the scope of the EA (these topics were previously discussed in Sections 1.1 through 1.6), organization of the EA (current section being discussed – Section 1.7), impact topics considered, evaluated, and dismissed (Section 1.8), and applicable statutory and regulatory requirements (Section 1.9). Chapter 2 discusses the preferred alternative for the MREC, the South Site Alternative, the West Site Alternative, the no action alternative, and the environmentally preferred alternative. Chapter 2 also includes the demolition of the abandoned hotel, the no action alternative for this action, and the environmentally preferred alternative for this project. Chapter 3 describes the affected environment and discusses the physical, natural, socio-economic, and cultural resources in relation to the alternatives. Chapter 4 presents the environmental consequences for the described alternatives (preferred, South Site, West Site, and no action) for the MREC to physical, natural, socio-economic, and cultural resources. Chapter 5 presents the environmental consequences for the described alternatives (proposed action and no action) for the abandoned hotel demolition to physical, natural, socio-economic, and cultural resources. Chapter 6 discusses the cumulative impacts on each resource of actions in the past, the present, and the future. Chapter 7 discusses the mitigation measures that would minimize any adverse impacts. Chapter 8 describes the environmental commitments including the unavoidable adverse impacts and irreversible or irretrievable commitments of resources. Chapter 9 discusses compliance with environmental regulations. Chapter 10 discusses the public involvement and scoping process that occurred throughout the NEPA process, and agency consultation and coordination. Chapter 11 is the list of document preparers and is followed by a list of document references (Chapter 12) and appendices.

1.8 IMPACT TOPICS AND ISSUES

Issues can be defined as the relationship between the alternatives and the human, physical, and natural environment (NPS 2001a). Issues are used to define which environmental resources may experience either negative or beneficial consequences from an action. They do not predict the degree or intensity of potential consequences that might result from an action. Issues were identified by the NPS, Territorial and Federal agencies, and by the public during the scoping process. For more information, see Chapter 10 on Public and Agency Involvement and Consultation and Coordination. From these issues, impact topics were developed for each affected environmental resource area. Impact topics are used to define and focus the discussion of resources that could be affected by the alternatives, and are the focus in the evaluation of the potential environmental consequences of the alternatives.

Potential impact topics were identified based on legislative requirements, executive orders, topics in *Director's Order #12 and Handbook* (NPS 2001a), *NPS Management Policies* (NPS 2006), guidance from NPS, input from other agencies, public concerns, and resource information specific to Salt River National Historical Park and Ecological Preserve. A summary of impact topics analyzed and dismissed from further analysis is provided below, along with the rationale for their inclusion or dismissal.

1.8.1 Impact Topics that were Analyzed in this EA

The following impact topics have the potential to be affected by the alternatives for both the MREC and the demolition of the abandoned hotel and are evaluated in detail in this EA:

Soils – Soil disturbance during construction of the MREC and demolition of the abandoned hotel would have implications for this resource.

Bathymetry – Potential maintenance dredging needed for the MREC would create minor impacts to the bathymetry.

Air Quality – During the short-term construction phase of the MREC project, the operation of construction equipment would generate some criteria pollutant emissions, including carbon monoxide and particulate matter. Demolition of the abandoned hotel would also have implications for this resource.

Noise – The construction phase of MREC project is expected to create minor and short-term noise impacts at the site. Demolition of the abandoned hotel is expected to create moderate and short-term noise impacts.

Climate/Seismicity– The potential for coastal storms and earthquakes should be considered for implementation of the MREC.

Water Quality– The construction of the MREC would cause temporary minor impacts to the water quality of the bay.

Hydrology – The construction of the MREC and the demolition of the abandoned hotel structure would impact the hydrology of the site.

Floodplains – The water dependent structures (i.e., boat dock, wet lab) of the MREC and the abandoned building materials for the hotel are located within the 100-year floodplain.

Coastal Zone/Coastal Barrier Resources System (CBRS) Area – The proposed projects are located within the coastal zone and the CBRS area.

Wetlands/Mangroves – The proposed MREC would impact wetland and mangrove areas.

Terrestrial Resources – Vegetation and wildlife habitat would be disturbed during construction activities of the MREC and demolition of the abandoned hotel.

Aquatic Resources – Potential maintenance dredging needed for the MREC would create minor impacts to the seagrasses and fish habitat. Installation of the seawater supply pipeline has the potential to impact the coral reefs.

Threatened and Endangered Species – Protected species utilize the habitats within park. This environmental document will serve as the basis for appropriate consultation with the agencies charged with protecting listed species.

Unique Natural Areas/ Ecologically Critical Areas – Salt River Bay and watershed is one of 18 Areas of Particular Concern (APC's) designated by the V.I. Department of Planning and Natural Resources due to its unique mix of resources. The “Salt River Bay Complex” was also identified as a potential *Significant Natural Area* by the Coastal Zone Management (CZM) Program. Additionally, a 690-acre portion of Salt River Bay was designated as one of five *National Natural Landmarks* for the U.S. Virgin Islands included in the National Registry of Natural Landmarks.

Cultural Resources – SARI is home to several known historically significant sites and the Salt River Bay itself is a significant historic landscape.

Indian Sacred Sites and Indian Trust Resources – There are no Indian trust resources associated with SARI since there are no Indian sacred sites located there. The Native population didn't survive European settlement.

Recreation – The construction of the MREC and the demolition of the abandoned hotel would affect local recreational activities.

Socioeconomic Resources – Implementing the MREC would improve the quality of life in the Salt River Bay region by providing additional opportunities for educational programs for students and the general public, recreational opportunities, and additional opportunities for employment.

Environmental Justice – Environmental justice was retained to thoroughly analyze the presence of minority or low-income populations in the vicinity of the project. However, no disproportionate impacts are expected.

Aesthetics – Aesthetics at the site may be temporarily altered during construction of the MREC and demolition of the abandoned hotel.

Public Health and Safety – The demolition of the abandoned hotel would improve the safety concerns at SARI.

Energy Requirements and Conservation Potential– The proposed actions would require temporary increases in energy use during construction of the MREC and demolition of the abandoned hotel. The MREC would also permanently impact energy once implemented.

Infrastructure – The MREC would require electricity, telecommunications, a road structure, and waste disposal.

Visitor Use and Experience – Construction of the MREC and demolition of the abandoned hotel would cause minor alterations to visitor use and experience.

Park Operations – Construction of the MREC and demolition of the abandoned hotel would cause minor alterations to park operations. Additionally, implementation of the MREC would have a permanent impact on park operations.

1.8.2 Impact Topics Dismissed from Further Analysis

Geology – The major geologic formations for the Salt River watershed consist of two primary lithologic units, the Miocene Kingshill Formation and the Cretaceous Judith's Fancy Formation. The Kingshill Formation is primarily limestone whereas the Judith's Fancy Formation is a mixture of volcanoclastics, sandstone, and mudstone, and contains a few small dioritic or gabbroic intrusions. The proposed projects do not have the potential to affect the geology at SARI.

Topography – The topography of SARI and the surrounding watershed is varied, and ranges from near flat land behind the mouth of Salt River to steep slopes in both the western and eastern portions of the watershed. The proposed actions would not affect the topography or alter the slope of the site, as no extensive grading is needed.

Prime and Unique Farmlands – Prime farmland, as defined by the United States Department of Agriculture (USDA), is described as land that has the best combination of physical and chemical characteristics for producing specified crops and is available for these uses. Sometimes, soils are only considered prime farmland under certain conditions (USDA 1998). The soil series Glynn gravelly loam, 5 to 12 percent slopes, rarely flooded (GyC) is described as prime farmland, but only if this soil series is irrigated (USDA 1998). This soil series is located within the NPS boundary of the West Site. This soil series is not currently irrigated, so based upon this condition, the area is not technically considered prime

farmland by the USDA. Therefore, the proposed projects do not have the potential to affect prime farmland at SARI.

Land Use -Most of the land within the boundaries of SARI is currently zoned for low and medium density residential development, and for waterfront pleasure. Land use designations in SARI include public (owned by Federal or local government), and mixed waterfront/pleasure/industrial. Within SARI boundaries lies the Columbus Landing Site (owned by the V.I. Government), the former Triton Bay Wildlife Sanctuary, the Salt River Marina (privately owned), and the former NOAA Undersea Research Center (privately owned). Implementing the proposed projects would not conflict with the current land use plans for SARI.

Groundwater - Groundwater resources are significant within the Salt River watershed. The area contains three of the major groundwater areas of the island, and potential yields of as much as 15,000 gallons per day (GPD) in the lower parts of the valley (IRF 1993). Sand and gravel alluvium can be found within the Salt River basin, capable of producing 10 to 50 gallons per minute (GPM) of groundwater (NPS 1990). Cisterns and reverse-osmosis freshwater production are proposed for the MREC facilities; therefore, the proposed projects do not have the potential to affect the groundwater at SARI.

Wild and Scenic Rivers – There are no designated wild and scenic rivers on the island of St. Croix or within SARI as defined in the Wild and Scenic Rivers (WSR) Act (16 U.S.C. 1271-1287). Additionally, no study rivers defined as “designated for potential addition to the national wild and scenic rivers system” by the WSR Act are located in the vicinity of SARI (NPS 2004).

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,400 free-flowing river segments in the United States that are believed to possess one or more “outstandingly remarkable” natural or cultural values judged to be of more than local or regional significance by the NPS (NPS 2004). Under a 1979 Presidential directive and related Council on Environmental Quality Procedures, all Federal agencies must seek to avoid or mitigate actions that would adversely affect one or more NRI segments. There are no streams in the NRI in the vicinity of the site.

Natural or Depletable Resources - Natural or depletable resources include resources such as oil, gas, coal, minerals, and water. No depletable resources at SARI would be used.

1.9 APPLICABLE LAWS AND REGULATIONS

Applicable Federal policies, executive orders and regulations are listed in Table 1-1 below, and how they relate to each resource that was originally considered. In addition, NPS *Management Policies* (NPS 2006) was used for guidance for numerous impact topics. Other regulations specific to NPS include the Director’s Orders listed below, and NPS Organic Act of 1916.

Table 1-1. Applicable Federal Laws and Regulations

Resource	Relevant Laws and Regulations
Soils, Geology, Topography	National Cooperative Soil Survey Standards
Air Quality	Clean Air Act NPS Organic Act
Noise	Director's Order #47 Noise Control Act
Water Quality, Hydrology	Clean Water Act Rivers and Harbors Appropriation Act Executive Order 12088
Floodplains	Executive Order 11988 Director's Order #77-2
Coastal Barriers	Coastal Barrier Resources Act
Coastal Zone Management	Coastal Zone Management Act
Wetlands	Executive Order 11990 Clean Water Act Executive Order 12088 Director's Order #77-1 Rivers and Harbors Appropriation Act
Terrestrial Resources	Migratory Bird Treaty Act Wilderness Act Executive Order 13112
Aquatic Resources	Magnuson-Stevens Fishery Conservation and Management Act Marine Mammal Protection Act
Threatened and Endangered Species	Endangered Species Act NPS Organic Act
Ecologically Critical Areas	Endangered Species Act
Wild and Scenic Rivers	Wild and Scenic Rivers Act Director's Order #46
Prime and Unique Farmlands	Farmland Protection Policy Act Memorandum on Prime and Unique Agricultural Lands and NEPA (CEQ 1980)
Cultural, Historic, and Archaeological Resources	National Historic Preservation Act Archaeological Resources Protection Act Director's Order #28 NPS Organic Act
Indian Sacred Sites and Indian Trust Resources	DOI Secretarial Orders No. 3206, 3175 Director's Orders #66 and #71B Executive Orders 13007, 13175
Socioeconomic Resources	Director's Orders #2 and #12
Environmental Justice	Executive Order 12898
Aesthetics	NPS Organic Act
Public Health and Safety	Architectural Barriers Act Americans with Disabilities Act Director's Orders #42 and #83 Executive Order 13045

Resource	Relevant Laws and Regulations
Energy Requirements and Conservation	Energy Policy Act Executive Orders 13031, 13123, 13149
Visitor Experience and Experience	NPS Organic Act Director's Order #12
Park Operations	NPS Organic Act

1.10 REQUIRED PERMITS

Table 1-2 provides information on permits and certifications that would be required for the MREC. Certifications and permit applications for the MREC would be prepared accordingly depending on the final design of the proposed project. Certifications and permits will be obtained from the appropriate agencies following completion of this EA, signing of the Finding of No Significant Impact (FONSI), and before construction of the MREC commences. Chapter 4 discusses certifications and permit requirements for each resource as applicable.

For the demolition of the abandoned hotel structure, a Coastal Zone Consistency Certification is required. See Section 5.3.3 for more information on the Coastal Zone Consistency. Any other permits or certifications for the demolition of the abandoned hotel structure would be prepared accordingly depending on the final design of the proposed project.

Table 1-2 Permits and Certifications Required for the Marine Research and Education Center

Permit/ Consultation	Level (Territorial/ Federal)	Authority	Responsible Agent	Description
404 Permit	Federal	Clean Water Act (CWA), Section 404 33 Code of Federal Regulations	United States Army Corps of Engineers (USACE)	To protect waters of the U.S., including wetlands, by authorizing only necessary and unavoidable impacts, including filling, soil movement and placement of certain pilings in wetlands. Discharges of dredged or fill material are regulated for all waters and wetlands regardless of size. Required for any activity that involves filling waters of the U.S., including rivers and wetlands. Required for construction of marine facilities and construction that may impact wetlands.
Section 10 Permit	Federal	Rivers and Harbor Act, Section 10 30 Code of Federal Regulation (CFR) Part 322	USACE	Regulates any activity that affects the course location and capacity of a navigable water. Regulates all activities, including construction, excavation, or deposition of materials, that take place in, on, above, or underneath navigable waters. Permits issued under Section 10 are not associated with protection of wetlands. Section 10 permits are required along with permits under Section 404 of the CWA. Permit may be required for construction of seawater lines associated with the proposed wet labs and construction of marine facilities.
401 Water Quality Certification	Territorial	CWA Section 401	USVI DPNR/DEP	To prevent violations of water quality standards. Required for wetlands and waterways construction permits, potentially including construction of the marine facilities and seawater lines associated with the proposed wet labs.
Coastal Zone Management Certification	Territorial	Virgin Islands Coastal Zone Management Act (VICZMA) Section 910	USVI DPNR Division of Permits	Required for any development activity in the first tier of the coastal zone including alteration of the shoreline or submerged lands, construction of new structures for commercial or private use, discharge or disposal of waste materials, enlargement or expansion of existing structures, land clearing, grading, or excavation, and placement of permanent or temporary structures on submerged lands (e.g., moorings, docks, etc.).