

This site has little potential for wind power as it lacks an appropriate ridge and is further inland.

This plan is contingent upon the acquisition of the property by the NPS. Road access is circuitous and would have to be improved to support the public use of the site.

There is a possibility that maintenance dredging may be needed at this location if future bathymetry studies reveal that the water depths are too shallow in the bay for research boats to reach the boat dock.

### **Characteristics of the Site Concept Plan**

- The Education Center would be located in an existing building. The other buildings would be screened by topography and vegetation.
- This site is in a more protected location than the other two sites and may be less susceptible to storm damage.
- The low lying nature of the site and its proximity to wetlands would result in fewer breezes and potentially more mosquitoes and other nuisance insects.
- The Education Center could have views of the bay, but might not have direct views of the Columbus Landing site. Constructing a new building could create more potential for views, but would most likely increase visual impact. Views could also be increased by selective clearing of vegetation.
- The Education Center would be separate from the rest of the complex to distinguish between public and private areas.
- The Student Center, cafeteria, and dormitories are in proximity to one another.
- The dormitories are in separate bungalow style buildings, each having balconies and unobstructed views to the mangrove area.
- The cafeteria deck has a view of mangrove area.
- The wet lab and maintenance building are accessible by sidewalk and a separate road from the Education Center.
- The wet lab and maintenance building would have a boat launch and would be located near the boat dock.
- The Education Center would have a drop off area that would provide a drop off for the boat dock.
- The wet lab is located within the 100-year flood boundary; all other buildings are located outside of the 100-year flood boundary.

#### **2.1.2.4 West Site Alternative**

Figure 2-5 presents the concept plan for the West Site which is located within the West Site boundary location presented in Figure 2-1. Figure 2-3 presents the site access route for this alternative.

### **Description of Site**

This alternative encompasses two non-contiguous areas: the NPS Visitor Contact Station and the Salt River Marina. The NPS Visitor Contact Station is located on the northwest shore of the bay. This site is made up of several parcels of approximately 6.0 acres in all and includes a split-level house, guest quarters, accessory structures and a community beach. The NPS Visitor Contact Station can be accessed from North Shore Road (Route 80) to Route 801.



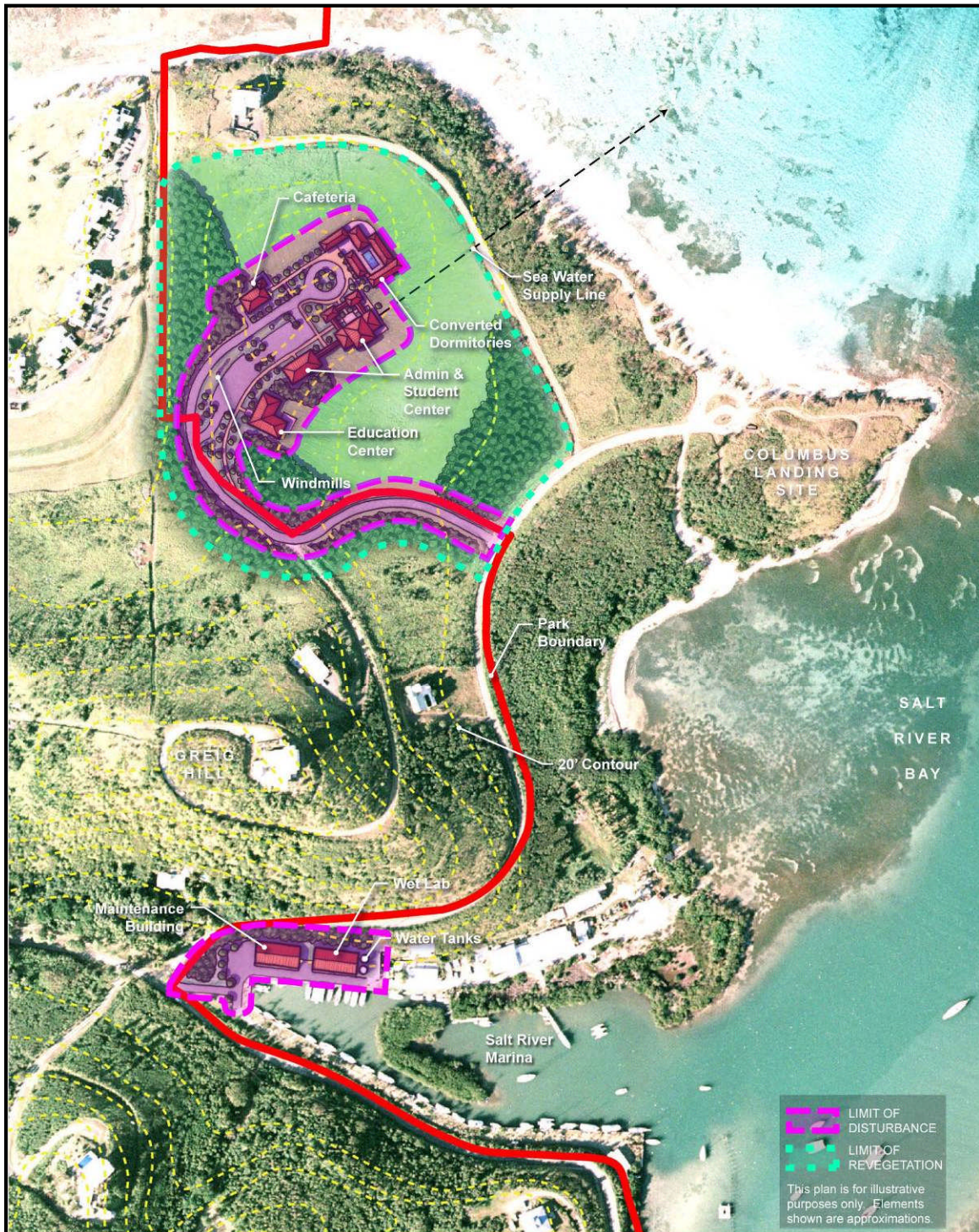


Figure 2-5. West Site Alternative Concept Plan.



November, 2006

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The marina hugs the shoreline on approximately 14 acres along the western edge of the bay. This property is privately owned and includes buildings used for maintaining, constructing and painting boats, as well as for office space, and parking lots for marina guests. The shoreline consists of long sections of steel bulkheads with docking facilities. Several mooring buoys are available in the bay. The highest levels of fecal coliform in Salt River Bay were detected at the Salt River Marina according to the NOAA Technical Memorandum, *An Ecological Characterization of the Salt River Bay National Historical Park and Ecological Preserve, U.S. Virgin Islands*, (Kendall et al 2005). The marina can be accessed by going north on North Shore Road (Route 80) from North Side Road (Route 75).

### **Site Concept Plan**

As noted above, both sites were analyzed and determined it was appropriate to combine them into one alternative. Most of the building program would be located on the NPS Visitor Contact Station site. This would include administration, the Student Center, Education Center, cafeteria building, and dormitories converted from the existing residential buildings (currently the NPS Visitor Contact Station).

At the marina would be located the maintenance building and wet lab, either constructed as new or located in an existing building.

The seawater intake line would be routed from the Education Center to an appropriate intake point in the ocean. Water holding tanks could be located near the Education Center or down at the marina, with a pipe connecting the Education Center and wet lab along the public right-of-way. It is anticipated that the seawater supply pipeline would have the shortest in-water route to the sea.

In this plan, it is assumed that the NPS would acquire most, if not all, of the parcels adjacent to the Visitor Contact Station to minimize impacts of the site on the existing and potential uses and vice versa.

This alternative also assumes that the marina owners would be willing to sell the marina to the NPS.

### **Characteristics of the Site Concept Plan**

- The Education Center would be located in close proximity to the Columbus Landing site, providing direct views to the location and allowing for pedestrian access to the site.
- The Education Center parking would allow for the removal of the unauthorized parking and direct road access at the Columbus Landing site. Access would be limited to pedestrians.
- The Education Center and deck would have views of the Columbus Landing site, Salt River Bay, and oblique views of the ocean.
- The main sidewalk along the parking lot would terminate with a view through the MREC facility courtyard of the ocean beyond. The view would be through an arcade connecting the MREC buildings.
- The sidewalk that crosses the road would have a terminal view through an arcade of Salt River Bay and the interior of the island. The other end would terminate with a view of the ocean.
- The sidewalk between the dormitories and the cafeteria would have an open view of the ocean.

- When one turns onto the entry drive, the road is on axis with the Education Center. The view is framed by trees on either side, which then opens up.
- The dormitory building would have an open vista of the ocean and bay on three sides. The patio overlooks the ocean.
- The cafeteria and cafeteria patio would have an open vista of the ocean.
- Most of the MREC buildings would have views of Salt River Bay and the ocean.
- The dormitories and other facilities are in close proximity to one another. Both of these are also convenient to the cafeteria building.
- The Education Center is slightly set apart from the other facilities since it would be open to the public. The cafeteria is located close enough to allow for convenient pedestrian access.
- A drop-off area provides access to the MREC buildings including the dormitories.
- The ridge-top location would result in more breezes and may allow for the use of wind power although such a use would contribute to the visual impact of the development.
- Access to the wet lab and maintenance building would be by vehicle or pedestrian sidewalk.
- The wet lab and maintenance building is located within the 100-year flood boundary; all other buildings are located outside of the 100-year flood boundary.
- The site's location on a ridge top results in visual impacts. However, most facilities would be located on the inland side of the ridge to reduce the visual impact from the ocean. The very top of the hill would be left undeveloped.

Reforestation would screen views of the development to the west and help frame other views. A balance between maintaining important views and reestablishing native plants would be a priority.

### **2.1.3 Alternatives Considered but Dismissed**

#### **Other Islands in the Caribbean**

Since coral reef systems are linked throughout the Caribbean, other islands besides St. Croix were considered as alternative locations for the MREC. St. Croix was selected due to its central location in the Caribbean and its proximity to many nations within the region. 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 can serve as a baseline for comparative studies in the future. Additionally 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 their International Coral Health and Monitoring Program. Logistical support in terms of transportation, labor, housing, etc., available on the island is paramount to successful operations of a research, educational and service center.

#### **Former West Indies Laboratory**

Due to the constraints of operating a Marine Research Center and land acquisition challenges, potential options for the location of the Center are limited on the island of St. Croix. Some of the constraints include easy access from the Center to estuarine and ocean ecosystems by boat and land, access to clean seawater, and adequate docking and mooring for boats. Using the site of the Former West Indies Laboratory was considered as an alternative for the MREC. This site previously conducted extensive marine research and has adequate docking facilities for boats. This privately owned alternative was dismissed when NPS property became available.



#### 2.1.4 Selection of the Preferred Alternative

Selection of a preferred alternative was accomplished by using the “Choosing by Advantages” (CBA) process developed by Jim Suhr (Suhr 1999). CBA is a decision making process based on calculating and compiling the advantages of different alternatives for a variety of factors. By using the CBA process, the NPS was able to determine which of the three alternatives would be the best location for the MREC. The alternatives (or sites) were examined in detail, given the information available on existing conditions, and preliminary site plans were developed for each alternative. Among the elements evaluated were floodplains, topography, susceptibility to hurricanes and earthquakes, cultural and historic resources, and impacts to natural resources. The individual site plans attempted to mitigate impacts to these elements and accommodate the building program in an environmentally responsible manner while providing the means to compare the advantages of each alternative. The CBA process for determining the Preferred Alternative for the MREC is presented in Appendix A

In the CBA process, factors represent areas of concern (i.e., minimize impacts to wetlands, protect cultural landscape) that were expressed by the NPS technical advisors and park staff. High and low assessment criteria were established for each factor. High criteria describe very favorable or desirable environmental conditions. Minimum criterion generally reflect the minimum standards permitted by Federal Law or NPS policy. Advantages were determined by calculating the difference between attributes for each factor among the alternatives.

Elements of a “factor” are considered “attributes” in CBA parlance. For example, under the factor of “Minimizing Impacts to Water Resources,” the “attribute,” or measure, of the factor was determined to be the number of feet that the seawater intake line would need to traverse on the Bay floor to reach an acceptable intake point. The length of these lines would differ depending on where the MREC would be sited, and the advantage of an alternative is a shorter line, measured in feet.

The advantages of each factor were determined and these advantages were compared to one another, to determine which advantage was most important to this project, or “paramount.” The next step is to compare the other advantages to this “paramount advantage” to determine their importance relative to the paramount advantage and then to assign an appropriate score for each. After this exercise is completed, the scores of each alternative are calculated, and the alternative that scores the highest is considered the best alternative.

The factors developed for the CBA process were grouped under the following functions: Protecting Natural and Cultural Resources; Meeting the Needs of the MREC; Providing for Visitor Enjoyment; and Providing Benefits to the Local Community. For example, under the function (Protect Natural and Cultural Resources) the following advantage was concluded:

Minimize Impacts to Mangroves/Wetlands - This factor refers to the impact of the MREC to the mangroves and wetlands located at SARI. **Advantage:** This factor’s attributes were measured as acres. The West Site was considered to have the lowest impact to mangroves/wetlands.

#### Conclusion

The final steps in analyzing the alternatives involved a cost analysis as well as the CBA process. A preliminary estimate of probable costs based on schematic designs was prepared for each of the alternatives, which resulted in similar costs among alternatives. The factors or attributes

developed for the CBA process were to protect natural/cultural resources, meet the needs of the MREC, provide for visitor enjoyment, and provide benefits to the local community. CBA scores for each alternative were calculated, and the alternatives were ranked based on total CBA scores. The East Site Alternative scored the highest, so it was considered the preferred alternative for the MREC.

### **2.1.5 Selection of Environmentally Preferred Alternative**

The environmentally preferred alternative is determined by applying the criteria from Section 2.7(D) of NPS DO-12. These are the same criteria outlined in NEPA, which is guided by the Council of Environmental Quality (CEQ) regulations. CEQ regulations provide direction that “[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in Section 101(b) of NEPA. Generally, this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves, and enhances historic, cultural and natural resources.” [Question 6a, “Forty Most Asked Questions Concerning Center of Environmental Quality’s (CEQ) National Environmental Policy Act Regulations” (40 CFR 1500-1508), *Federal Register* Vol. 46, No. 55, 18026-18038, March 23, 1981].

Following comparisons of the Preferred Alternative (East Site Alternative), the South Site Alternative, and the West Site Alternative, the Preferred Alternative (East Site Alternative) has been selected as the environmentally preferred alternative. Although all three alternatives result in similar adverse impacts to the natural and human environment, implementation of the MREC at the Preferred Alternative (East Site Alternative) results in more beneficial impacts to the resources at the park.

The three action alternatives result in similar resource impacts from the proposed activities. The construction phase of the MREC, installation of the seawater supply pipeline, and maintenance dredging would result in short-term (ranging from 1 to 6 months) impacts to many of the resources at the park regardless of the alternative. Soils and sediments, air quality, noise, water quality, the coral reef/hardbottom substrate, fish, recreation, aesthetics, and visitor use at the park would result in minor-adverse (measurable or perceptible but would be localized within a relatively small area) impacts from these activities. All three alternatives are located within Tier 1 of the coastal zone resulting in short-term, minor adverse impacts; however, the project is expected to be consistent, to the maximum extent practicable with the Virgin Islands Coastal Zone Management Program (VICZMP). In the long-term (through the next 10 years), impacts occurring from the implementation of the MREC, would have minor, adverse effects to the 100-year floodplain, Coastal Barrier Resources System (CBRS) Areas, hydrology, air quality, noise, water quality, and energy requirements at the park regardless of the alternative. Maintenance dredging proposed for all three alternatives would have long-term, minor, adverse impacts to the bathymetry, seagrasses, and the benthic community at the park. The Preferred Alternative (East Site) could potentially have a long-term, minor, adverse visual effect on the cultural landscape of SARI and the South and West Site Alternatives could potentially have a long-term, moderate, adverse visual effect.

Some impacts occur only at the Preferred Alternative (East Site Alternative) and the South Site Alternative like construction of a boat dock and ramp which would result in short-term, minor, adverse impacts to the soils and sediments, water quality, fish, and mangroves/wetlands at these alternatives. Since mangroves are critical habitat, mitigation measures through plantings at a specified ratio of 3:1 would be required to partially offset the loss of mangrove habitat associated with the construction of the MREC.

Impacts that occur at the South and West Site Alternatives but not at the Preferred Alternative (East Site) include long-term, minor to moderate, adverse effects to the birds, mammals, and vegetation from implementation of the MREC. Forested (semi-deciduous) habitat, vegetated fields, and shrub habitat would be impacted due the MREC facilities, roads, and associated parking facilities. This would not be an adverse impact to the Preferred Alternative (East Site) because this alternative includes the replacement of non-native invasive plant species with appropriate native vegetation and revegetating disturbed areas (i.e., mud flats, bare areas, areas dominated by African guinea grass). Minor, long-term, adverse impacts to local communities would occur from increased vehicle traffic during the operational phase of the MREC for the South and West Site Alternatives. This would not be an adverse impact for the Preferred Alternative (East Site) since park vehicle traffic would be diverted from the Estate Judith's Fancy community to the proposed Haul Road.

Implementation of 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, contribute to the local economy by attracting more visitors to SARI, and contribute directly to the local economy by hiring permanent and part-time employees regardless of the alternative. However, for the West Site Alternative, there is a potential that the project would have a negative impact on the current businesses at the marina and on the use of the public boat slips, since the MREC would need to acquire the use of as much as ½ of the existing slips that are currently available to the boating community, which would result in a long-term, moderate adverse impact to some of the current boat slip users and long-term, major, adverse impact to the current business owners.

The long-term benefits to the natural and human environment from implementing the MREC at the Preferred Alternative (East Site) include:

- The coastal environment, Mangrove Lagoon, and salt pond at this site offers the public the opportunity for educational opportunities of environmentally sensitive environments.
- Provides the public with the opportunity to interpret archeology through a demonstration dig in the low lands to the north of Mangrove Lagoon.
- Creation of a "gateway into the park" through the use of the Haul Road as a park entrance road. This would be a benefit to the Estate Judith's Fancy community by diverting the current park traffic from the gated community to the proposed Haul Road.
- Provides for access to the public for recreational (i.e., swimming, beaching, snorkeling, walking, hiking, and camping by permit) opportunities that are completely contained on NPS lands and would not impact private lands adjacent to the beach environment.
- Has the lowest levels of fecal coliform detected at the park, which was found at Crescent Beach.
- Utility development at the East Site may be a benefit. The lack of utility infrastructure at this site would provide the NPS with the opportunity to design the MREC infrastructure independent of existing territorial utilities, which would not cause an additional burden on the existing system. Additionally, the utility infrastructure would be underground with no overhead poles which would reduce utility service, reduce hurricane impacts, and provide for the lowest profile on the landscape.
- Archeological concerns at the other alternatives. The East Site has been surveyed on several occasions, the West Site has had limited surveys conducted, and no archaeological surveys have been completed at the South Site. Due to the data collected



at the East Site, it has been determined that the MREC can be sited at this site safely around and above remaining archeology.

- Opportunity for mangrove restoration and rehabilitation of the peninsula. Non-native invasive plant species would be replaced with native vegetation and disturbed areas (i.e., mud flats, bare areas, areas dominated by African guinea grass) would be revegetated. These activities would also benefit the birds and wildlife at the site.
- Dredging in the Mangrove Lagoon would prevent the mouth of this lagoon from eventually becoming closed off to the bay due to siltation. This is being currently observed in the Mangrove Canal (see Figure 2-2), located immediately south of the Mangrove Lagoon. The mangrove trees that exist along the shoreline of the Mangrove Canal are being lost, potentially from the lack of flushing due to siltation that is occurring at the mouth of the canal. There is the possibility that the existing mangrove trees located along the shoreline of the Mangrove Lagoon could be lost as well if dredging does not occur to maintain flushing between the bay and the lagoon.

The No Action Alternative would not meet the management goals and objectives of this park unit. In addition, this alternative does not realize the provisions of the national environmental policy goals. Although the No Action Alternative would not create any additional disturbance, the existing conditions would continue without providing additional benefits to visitor use, the local economy, employment, and education on the sustainable utilization and conservation of marine resources. Additionally, the benefit that the MREC would provide to unique natural systems at SARI, especially the coral reefs and mangrove habitat would not be realized with the No Action Alternative.

Like all alternatives, the environmentally preferred alternative would not impair any park resources. In conclusion, although environmental impacts as a result of the three Project Site Alternatives are similar, it is anticipated that the Preferred Alternative (East Site) would have more benefits in the long-term on the biological and physical environment of SARI compared to both the South Site Alternative and the West Site Alternative. The Preferred Alternative (East Site) would meet park purposes and national environmental policy goals by improving and preserving the natural resources, and protecting and enhancing cultural resources. Thus, the Preferred Alternative (East Site) is the environmentally preferred alternative because it would be providing protection to natural and archaeological resources for which the park was established.

## **2.2 ABANDONED HOTEL DEMOLITION ALTERNATIVES**

Currently, a partially completed, abandoned hotel structure exists on the peninsula of the East Site, immediately adjacent to the Mangrove Lagoon in Salt River Bay (Figure 2-1). The hotel structure was part of a development project started in the late 1960s that was never completed; the hotel structure was abandoned following partial completion in the 1970s. During the original development of the hotel, approximately 14,500 cubic yards of land was excavated. The original hotel construction project included developing 74 acres of land as a multi-phase development project that included 288 hotel units, 300 condominium units, a 157-slip marina, and necessary support facilities (Sugar Bay Land Development, Ltd. 1986). The maximum building height of the hotel was set at four stories. The abandoned hotel structure was partially completed from building materials such as cinder blocks, concrete, piping, and rebar. The basement of the structure, at least two stories of the hotel, a tall steeple with a cross (potentially constructed as a viewing area), and an outdoor swimming pool was completed before the project was abandoned. Currently, the structure is deteriorating and presents a safety and environmental concern for SARI; a chain-link fence surrounds the abandoned hotel structure to discourage public access to the hotel site. The abandoned hotel structure was inspected for asbestos on August 25, 2006 by

Environmental Concepts (EC). Results of the asbestos analysis on the samples collected at the time of inspection revealed that the samples contained no asbestos (EC 2006).

The abandoned hotel can currently be accessed by going north on North Side Road (Route 75) to Hamilton Drive (Route 751).

### **2.2.1 No Action Alternative**

Under the No Action Alternative, the abandoned and partially completed hotel structure would remain on the site and not be demolished. Debris and discarded building materials located throughout the peninsula would not be removed preventing this area from being revegetated or rehabilitated to return the area to a more natural condition. The abandoned hotel would continue to deteriorate and would continue to present a safety and environmental concern for SARI.

### **2.2.2 Proposed Action**

The NPS proposes to demolish and remove the existing partially constructed hotel structure and abandoned building materials, construct a haul road, and return the developed area to a more natural, vegetated setting (Figure 2-6). The proposed action includes the following projects in chronological order of anticipated completion:

1. The NPS proposes to construct a Haul Road (eventually to become a park access/service road) from the abandoned hotel site around the lagoon to the beginning of the overgrown former access road (Figure 2-6). The Haul Road would continue south along the former access road to connect into Route 79. The Haul Road would be for equipment access and removal of debris from the hotel demolition site.
2. The NPS proposes to mechanically demolish the abandoned hotel structure.
3. Following demolition, the NPS proposes to reuse and recycle as much of the debris material as possible. If feasible, the concrete from the site would be crushed to construct the road bed for the Haul Road. Un-recyclable materials would be removed from the site.
4. The Haul Road would be improved and converted into a low traffic park access/service road and parking area for the east side of the park.
5. Finally, the site would be rehabilitated, revegetated, and returned to a more natural condition.

#### Haul Route

Debris from the hotel would be either recycled or disposed of, possibly at the Anguilla Municipal Landfill. Potential recyclable materials from the site would include the concrete slabs and crushed concrete remaining after demolition. Only necessary debris (i.e., rotting roofing materials, un-recyclable concrete) would be taken to the Anguilla Landfill. A solid waste disposal permit would be obtained from the VI Solid Waste Authority before demolition debris is transported to the landfill. Several local agencies and private companies have expressed an interest in reusing the concrete from the site. SARI would finalize the arrangements and the logistics for this recycling activity before demolition begins. The trucking route for the distribution of the recycled materials is unknown at this time but disposal of debris would be as follows from the site: Haul Road around the lagoon and continue south until it exits Park property, head south on Route 79, right on Route 75, right on Route 70, and left on Route 64 to Anguilla Landfill (Figure 2-7).









## Site Rehabilitation

Following demolition activities and debris removal, a small parking lot (10-15 vehicles) would be constructed on the west side of the peninsula mainly for park use and limited use by visitors (i.e., special use permit). From the parking lot a low traffic access/service road would continue around the lagoon and along the haul road to connect into Route 79 (Figure 2-6). The parking lot and access road would be constructed with pervious materials that blend with the predominant landscape tones. Permeable paved surfaces allow limited percolation of precipitation while providing better wear than unpaved surfaces. Finally, the NPS, in consultation with appropriate resource agencies, would rehabilitate the peninsula through revegetation of native plant species to return the area to a more natural condition.

According to Section 4.8.1 of NPS' *Management Policies 2006*, the Service's policy is to "allow natural geologic processes to proceed unimpeded." Such natural processes include but are not limited to erosion and sedimentation, and shoreline processes. In an effort to improve the long-term viability of SARI, the Proposed Action is a feasible alternative that would allow the current area to naturally return to its original setting through natural processes of wave action erosion and shoreline processes.

### **2.2.3 Selection of the Environmentally Preferred Alternative**

The proposed action best promotes the national environmental policy as expressed in Section 101(b) of NEPA by protecting, preserving, and enhancing the historic, cultural and natural resources.

The proposed action was determined as the environmentally preferred alternative due to the long-term beneficial impacts associated with the demolition of the abandoned hotel structure and associated projects. The implementation of the Proposed Action would result in short-term impacts to SARI's resources, but the long-term benefits of the proposed action far outweigh the short-term, adverse impacts anticipated during construction of the proposed action. The proposed action is therefore referred to as the environmentally preferred alternative for the remainder of this section.

The following discussion on how the environmentally preferred alternative was selected was based on the environmental consequences as presented in Chapter 5. See Chapter 5 for detail on the resource topics discussed below.

Short-term, adverse impacts to soils, air quality, and noise quality are anticipated during the demolition of the abandoned hotel and the road improvement activities. These demolition and improvement impacts would be short-term in nature, lasting only for the duration of the activity.

The environmentally preferred alternative is expected to create minor, short-term, adverse impacts to the water quality at SARI during the demolition and road improvement activities, lasting only for the duration of the activity. The following resources may be affected in the short-term due to minor increases in turbidity at Salt River Bay: seagrasses, aquatic species (fish and benthic species), critical habitat (mangroves), essential fish habitat (EFH), HAPC, or designated natural areas. However, there would be long-term beneficial impacts to all the above-mentioned resources due to improved water quality from the environmentally preferred alternative through the rehabilitation and revegetation of areas that are currently impervious surfaces, such as the abandoned hotel, discarded construction debris, and bare unvegetated areas. Revegetating these areas would reduce current runoff into the bay.

Long-term, moderate, beneficial impacts to floodplains, coastal barriers, and Tier 1 of the coastal zone would occur because abandoned building material would be removed, impervious surfaces (such as the hotel) would be replaced with pervious surfaces, and the peninsula would be rehabilitated and naturally revegetated. These activities would ultimately improve the area and allow it to function as a floodplain and a coastal area.

Minor, adverse impacts to NPS-defined estuarine wetlands and terrestrial, vegetated habitat would be affected by activities associated with the hotel demolition, including roadway improvement activities and the removal of debris on the peninsula. No direct impacts to mangrove wetlands are anticipated as a result of the proposed action. Based upon the mitigation strategy, impacts to the existing wetlands and terrestrial vegetation are expected to be short-term and have a long-term beneficial effect through rehabilitating the peninsula to a more natural setting. Existing, non-native invasive plant species such as African guinea grass and tan tan would be removed and replaced with native vegetation species. The replacement of non-native invasive species with native plant species would have a long-term beneficial impact on the terrestrial wildlife species and other vegetation species that inhabit the area as well as the greater island of St. Croix. Non-native invasive plant species threaten the biodiversity of fragile island ecosystems such as St. Croix.

The environmentally preferred alternative would have a short-term, minor indirect impact on the avian and wildlife species that currently utilize the habitat. There would be a short-term loss of available habitat at the site during construction activities, but an increase in approximately 0.5 acres of improved habitat would be created as a result of the Proposed Action. It is expected that these species would become re-established at the site after completion of the project. Overall, the Proposed Action would provide a long-term, beneficial impact to avian and wildlife species due to the increase of available, quality vegetated habitat for avian species.

The environmentally preferred alternative would have a long-term beneficial impact to the aesthetics at SARI. Aesthetics would be altered from current conditions; however, the unfinished remains of the abandoned hotel represent a visual intrusion on SARI's cultural landscape. Demolition of the hotel shell would be a visual improvement enhancing the viability of the resources within SARI as well as the viewshed to the surrounding communities.

The human environment, including park operations and visitor experience would be subjected to minor, short-term impacts during demolition and road improvements. The environmentally preferred alternative would remove the deteriorating abandoned hotel structure that poses a safety hazard for the public. Removing the hotel would have a long-term positive impact on visitor safety and would not impair any park resources.

#### **2.2.4 Alternatives Considered but Dismissed**

Completing or finishing construction of the abandoned hotel structure or building a new structure on the footprint of the hotel site was considered as an alternative in the initial stages of this project, but was dismissed due to significant, adverse impacts to the environment. Adverse impacts to Tier 1 of the coastal zone, water quality in the Mangrove Lagoon and Salt River Bay, the adjacent forested mangrove wetlands that fringe the Mangrove Lagoon, and the aesthetic viewshed/landscape of the site would occur as a result of building a new structure on the footprint of the site. Additionally, it was found that the building could not be re-used because the structure is currently deteriorating and presents a safety problem. The existing abandoned hotel is located on fastland, but the site is located adjacent to land created by placement of fill material that was



dredged from the Mangrove Lagoon. Waterfront areas that have undergone construction on filled (reclaimed land) land are vulnerable to impacts from earthquakes (IRF 1993). These areas have a greater chance of liquefaction and ground settling. Buildings constructed on loose alluvial or man-made fill soils along the waterfront are at risk of destruction should an earthquake occur (Geoscience Associates 1984). Therefore, due to safety issues and adverse environmental impacts associated with the hotel's close proximity to reclaimed land, this alternative was considered in the initial planning stages, but was dismissed from further study.