

ITEM 21:

Consider a Management Plan for Rookery Bay National Estuarine Research Reserve, which includes Rookery Bay Aquatic Preserve and Cape Romano-Ten Thousand Islands Aquatic Preserve.

LOCATION:

Collier County

APPLICANT:

Office of Resilience and Coastal Protection (RCP)

STAFF REMARKS:

Background

Rookery Bay National Estuarine Research Reserve (RBNERR) is located southeast of the City of Naples in Collier County, on the southwest coast of Florida. RBNERR is an excellent example of a subtropical mangrove forested estuary and has national and international significance as the western edge of the Everglades ecosystem but is adjacent to one of the fastest developing coastal areas of the United States.

The NERR System is a network of protected areas established for long-term research, education, and stewardship. The present day RBNERR was selected for inclusion into the system by a committee of scientists, environmental educators, and coastal managers because it met the overall needs of a relatively pristine habitat for scientific research and environmental education opportunities. The selection was supported by citizens and legislators and nominated by the governor and cabinet of the State of Florida. Final designation was made in September 1978.

Under the Aquatic Preserve Resolution of 1969, and then in Chapter 258, Part II, Florida Statutes, aquatic preserves are set aside to be maintained in essentially the natural condition for the benefit of future generations. Rookery Bay Aquatic Preserve was designated in 1976, then expanded in 1973 and 1985, and Cape Romano-Ten Thousand Islands Aquatic Preserve was designated in 1970.

RBNERR contains approximately 110,000 acres, including 37,344 acres leased to RCP. The boundary also encompasses the submerged lands of the two aquatic preserves and Ten Thousand Islands National Wildlife Refuge, which is managed by the U.S. Fish and Wildlife Service. RBNERR also manages 3,700 acres owned by the National Audubon Society.

The Florida Division of Historical Resources has documented 114 historical structures and archeological sites that fall within RBNERR and which are managed by the reserve, including prehistoric native American burial mounds, shell middens, and homesteads.

Management Plan Overview

The management plan proposes the following restoration projects and facility improvements:

- Restoration Projects
 - Continuing the Fruit Farm Creek hydrological restoration to address more than 200 acres of dead or impaired mangrove forest.
 - Hydrological restoration along the Henderson Creek by rerouting a service road to restore natural sheet flow.

- Conversion of an agricultural field now infested with invasive to a stormwater pond which will relieve flooding elsewhere in and outside of the reserve.
- Improving several low-water crossings along Powerline Road.
- Invasive removal on Cannon, Sea Oat, and Dickmans islands.
- Hydrological restoration to tidally reconnect Marco Shores Lake.
- Hydrologic restoration of Collier Boulevard.
- Culverts and elevated wildlife crossings on Shell Island Road.
- Facility Improvements
 - Renovation and expansion of the Ten Thousand Islands Field Station dock.
 - Renovation and extension of the Shell Island Road Dock.
 - Construction of an additional Shell Island Road Dormitory incorporating LEED certification.
 - Conversion of Keewaydin and Cannon Island docks to floating docks.
 - Expansions at the Environmental Learning Center(ELCO) and improving the resilience of the ELC and adjacent administration building.
 - Hardening the water quality and weather monitoring infrastructure.
 - Reconstruction of the ¾ mile Briggs Center boardwalk.
 - Developing a joint RBNERR-Florida International University center for research and education.

Major accomplishments since the last management plan include the following:

- Treating 2,868 acres with prescribed fire and 13,319 for exotics plants.
- Establishing boat and kayak tours through an ecotour operator which has reached more than 14,000 guests.
- Developing an intern program to monitor sea turtle nests in Cape Romano which has monitored 1,251 nests producing 52,140 hatchlings since 2016.
- Research on American crocodiles, Burmese pythons, and sharks.
- The beginning of the Fruit Farm Creek mangrove restoration project.

Public Involvement

A public meeting was held online on Tuesday, March 22, 2022, and an advisory committee meeting was held at the Rookery Bay Reserve on Friday, March 25, 2022, to obtain public input about the RBNERR draft management plan.

STAFF RECOMMENDATION:

Approve the management plan.

ARC RECOMMENDATION:

() **APPROVE**

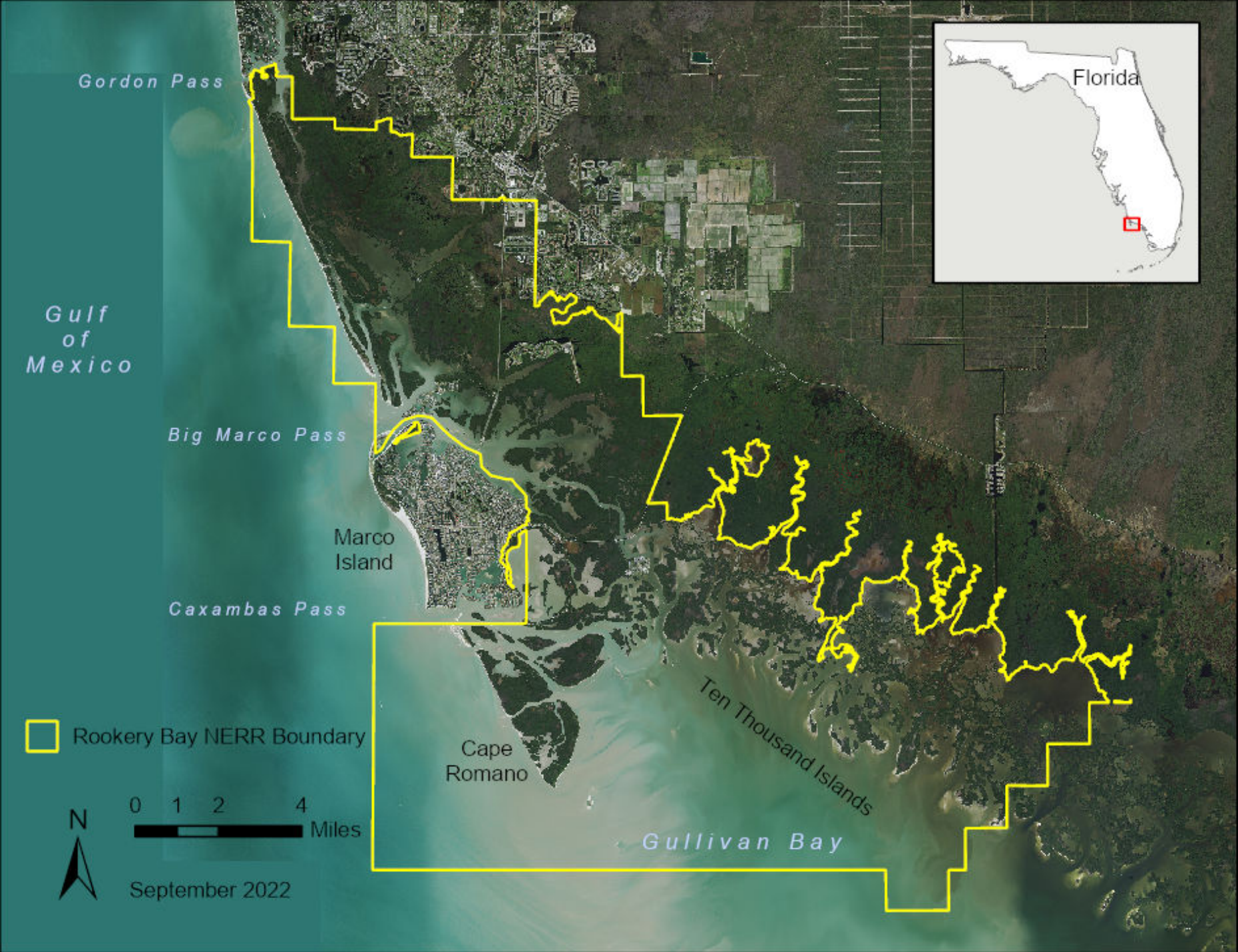
() **APPROVE WITH MODIFICATIONS:** _____

() **DEFER**

() **WITHDRAW**

() **NOT APPROVE**

() **OTHER:** _____



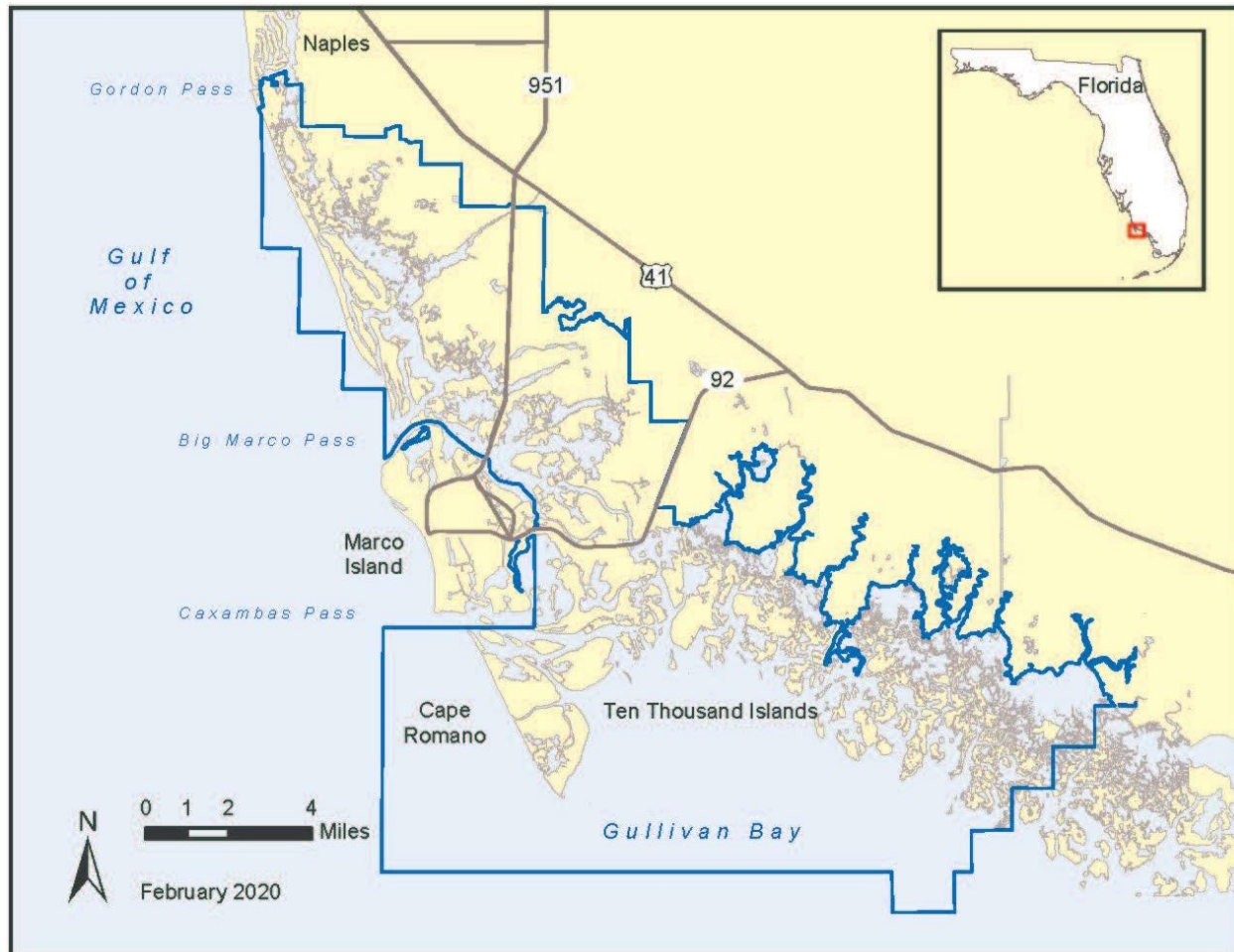


FIGURE 3: LOCATION AND BOUNDARIES OF ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE

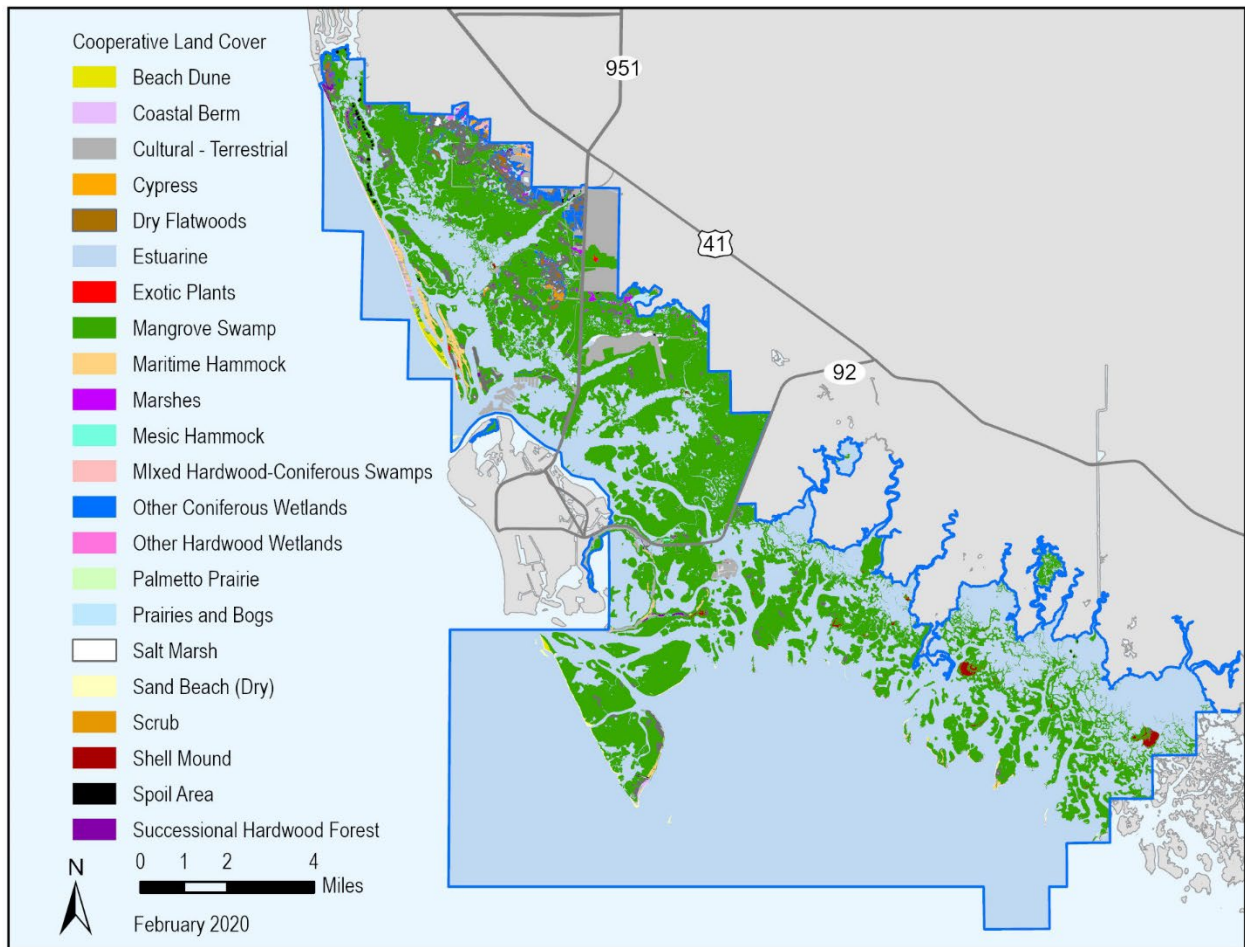


FIGURE 16: COOPERATIVE LAND COVER HABITAT AT ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE

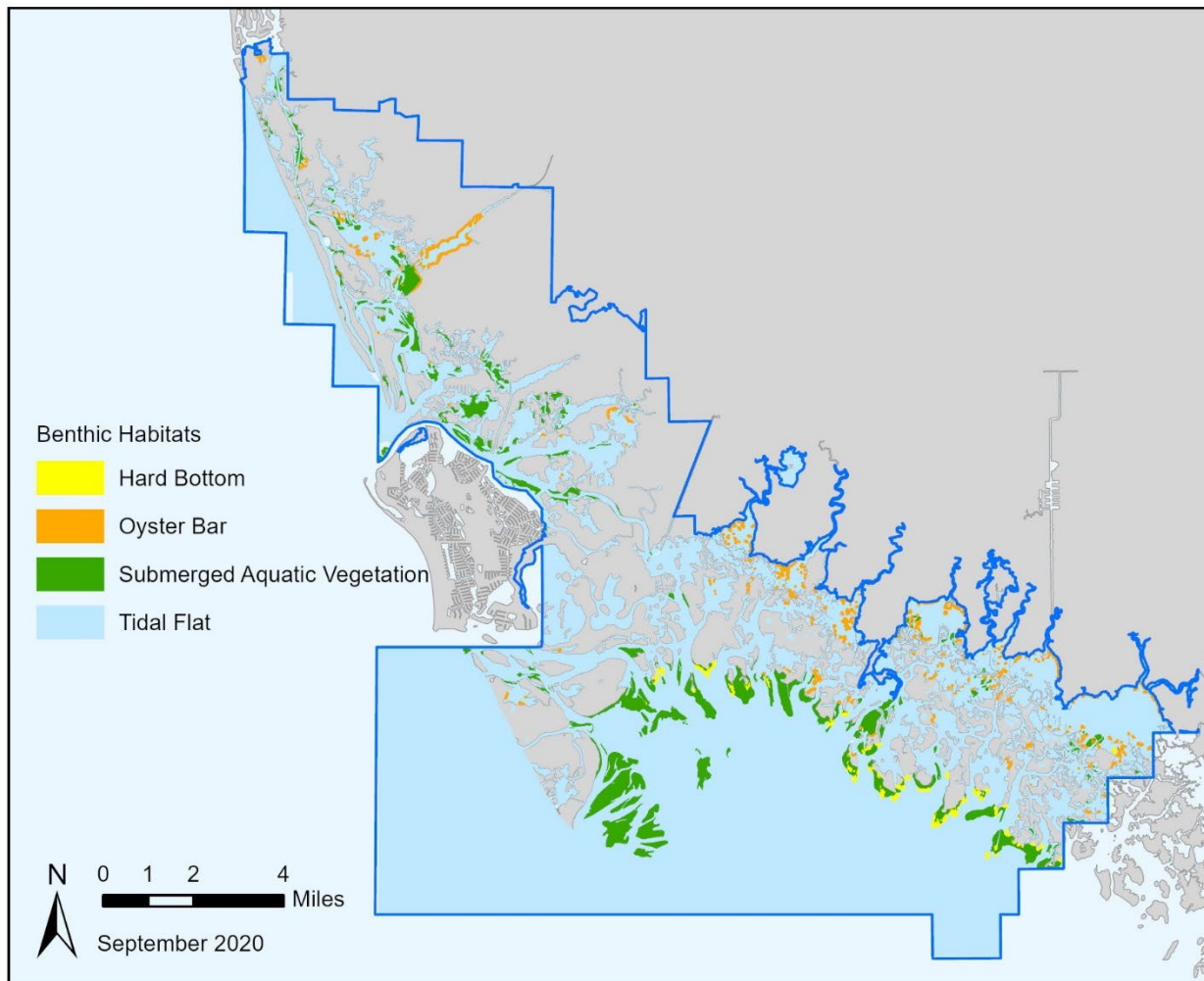


FIGURE 17: SUBMERGED BENTHIC HABITAT AT ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE

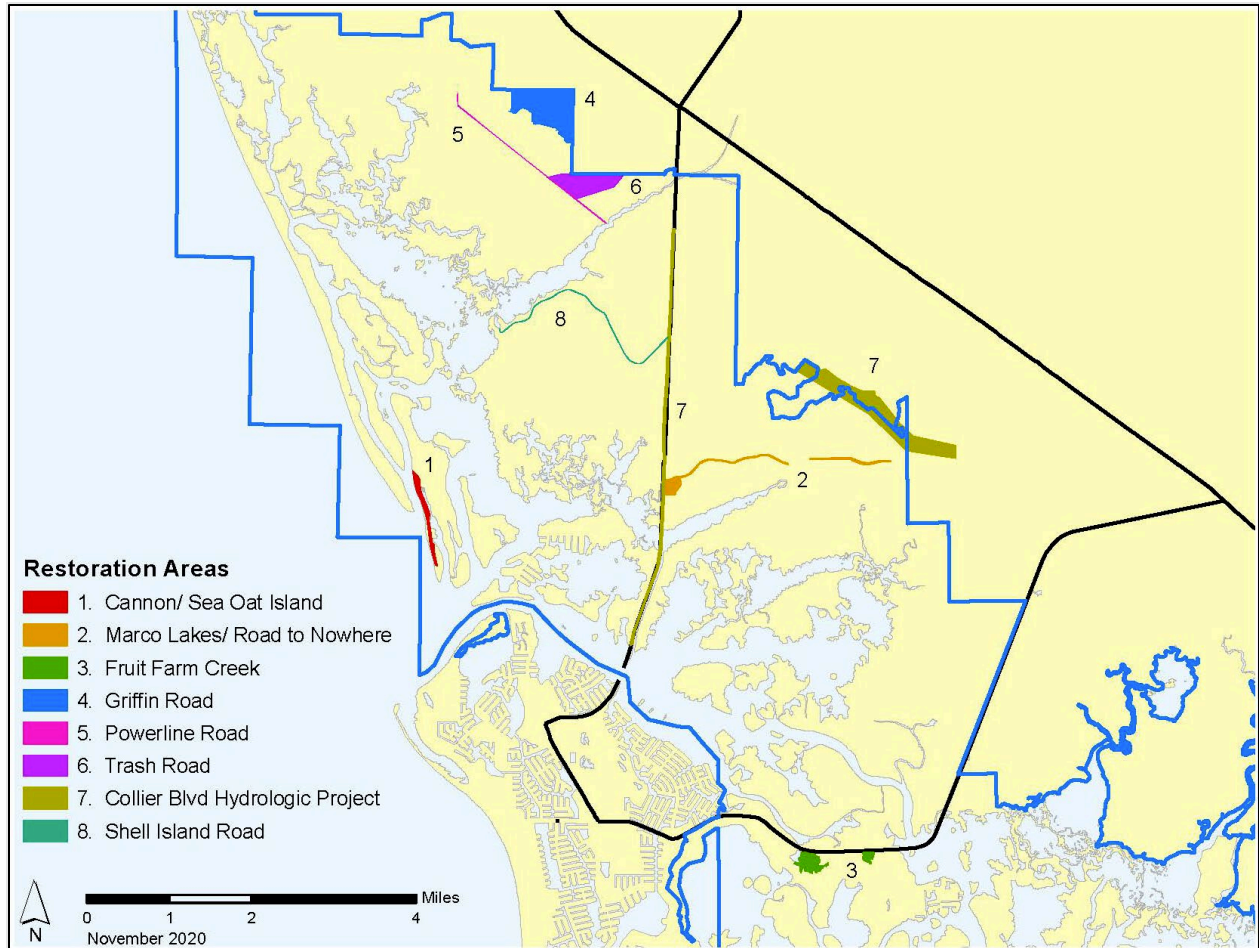


FIGURE 29: AREAS PLANNED FOR HABITAT RESTORATION AT ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE

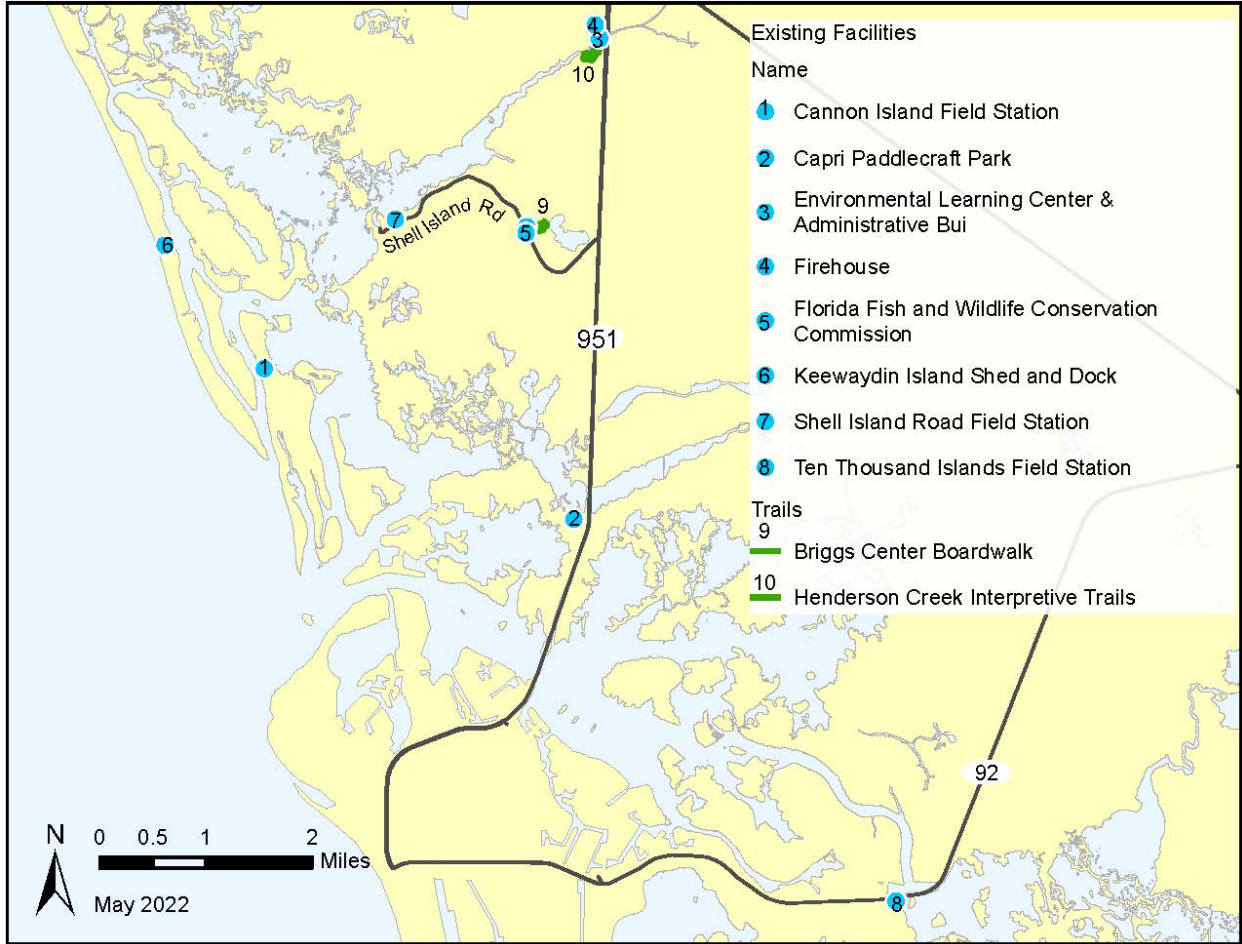


FIGURE 30: FACILITY LOCATIONS AT ROOKERY BAY NATIONAL ESTUARINE RESEARCH RESERVE