

## APPENDIX C: NORTH CAROLINA NERR CORE AND BUFFER AREA DESCRIPTIONS AND SITE MAPS

### Guidelines for Establishing Proposed Boundaries for NERRs

Boundaries for Reserve components must include "an adequate portion of the key land and water areas of the natural system to approximate an ecological unit and to ensure effective conservation."

These areas must be discrete enough to be effectively managed, but large enough to protect a natural area that will facilitate long-term research and monitoring projects. To help focus management efforts, site component boundaries encompass two zones: key land and water areas (core areas) and buffer zones.

Core areas are defined as: "*critical estuarine ecological units for research purposes, encompassing a full range of significant physical, chemical, and biological factors contributing to the diversity of fauna, flora, and natural processes occurring within the estuary.*"

The core area is "*so vital to the functioning of the estuarine ecosystem that it must be under state control sufficient to ensure the long term viability of the Reserve for research on estuarine processes... [These areas] should encompass resources that are representative of the total ecosystem which, if compromised, could endanger the research objectives of the Reserve.*" Subtidal and intertidal sound communities encompass typical core habitats within the Reserve (e.g., sound waters, mud/sand flats, salt marshes -- including supratidal marsh areas).

A buffer zone is defined as an "*area adjacent to or surrounding the core and on which the integrity of the core depends. This area protects the core and provides additional protection for estuarine dependent species.*" Within the NERNERR, buffer areas include ocean beaches, dunes, shrub thicket, maritime forest, and dredge material areas.

Early in the planning process for the North Carolina Reserve, site surveys were conducted to determine proposed boundaries for each component. Acquisition strategies to establish adequate state control have been followed to provide long-term protection for Reserve resources within these boundaries. Types of acquisitions have included land donations, bargain sales and fee simple purchases. Condemnation was necessary in a few instances when: 1) the value of a key tract was in irreconcilable dispute and funding was liable to be reverted or 2) there were convoluted title circumstances. Site-specific core and buffer information is discussed in more detail in the individual component descriptions in the introduction of the management plan. Maps of the core and buffer areas of each component can be found in Figures 1-4.

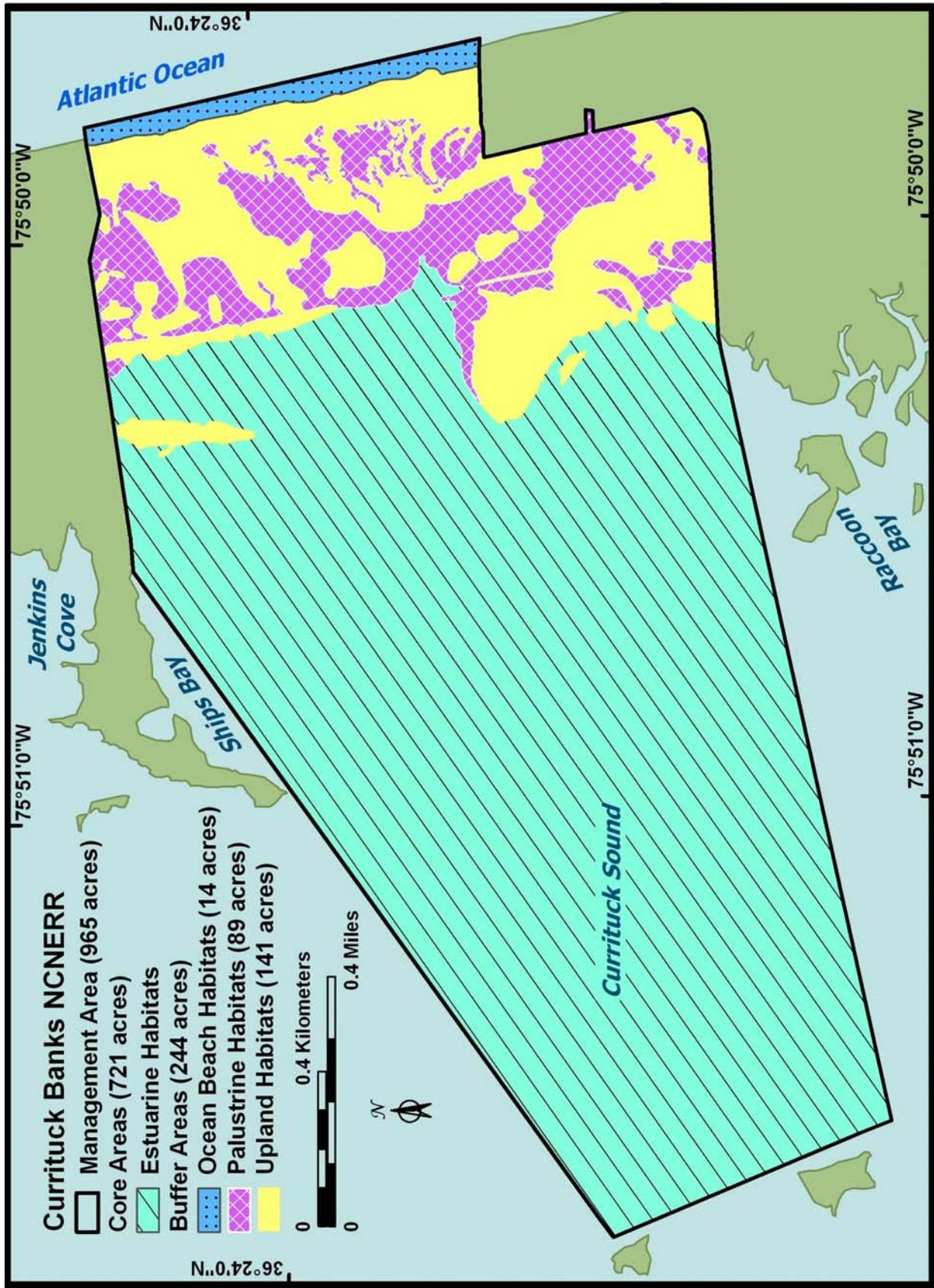


Figure 1: Core and buffer areas of the Currituck Banks NERR component

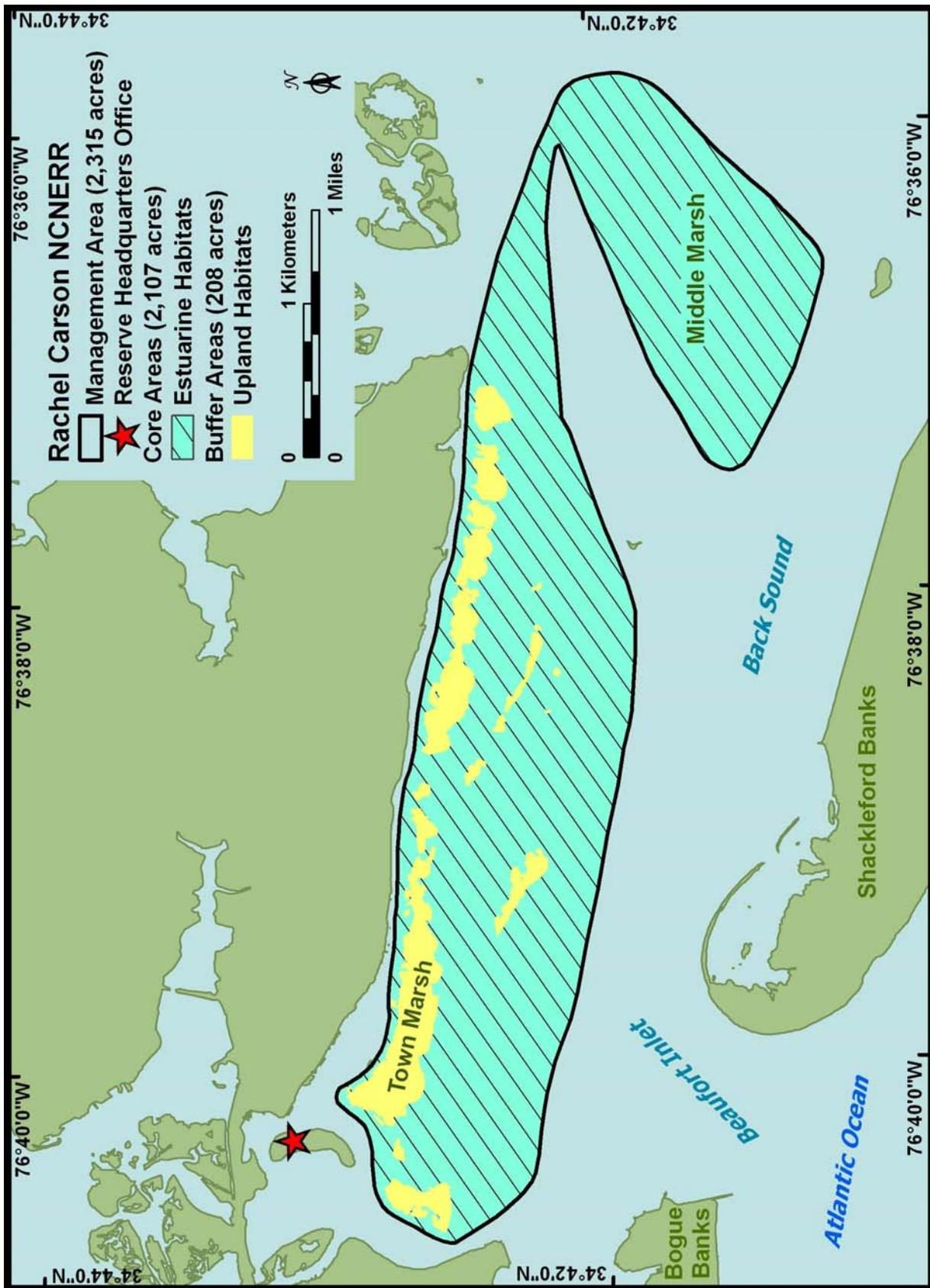


Figure 2: Core and buffer areas of the Rachel Carson NERR component

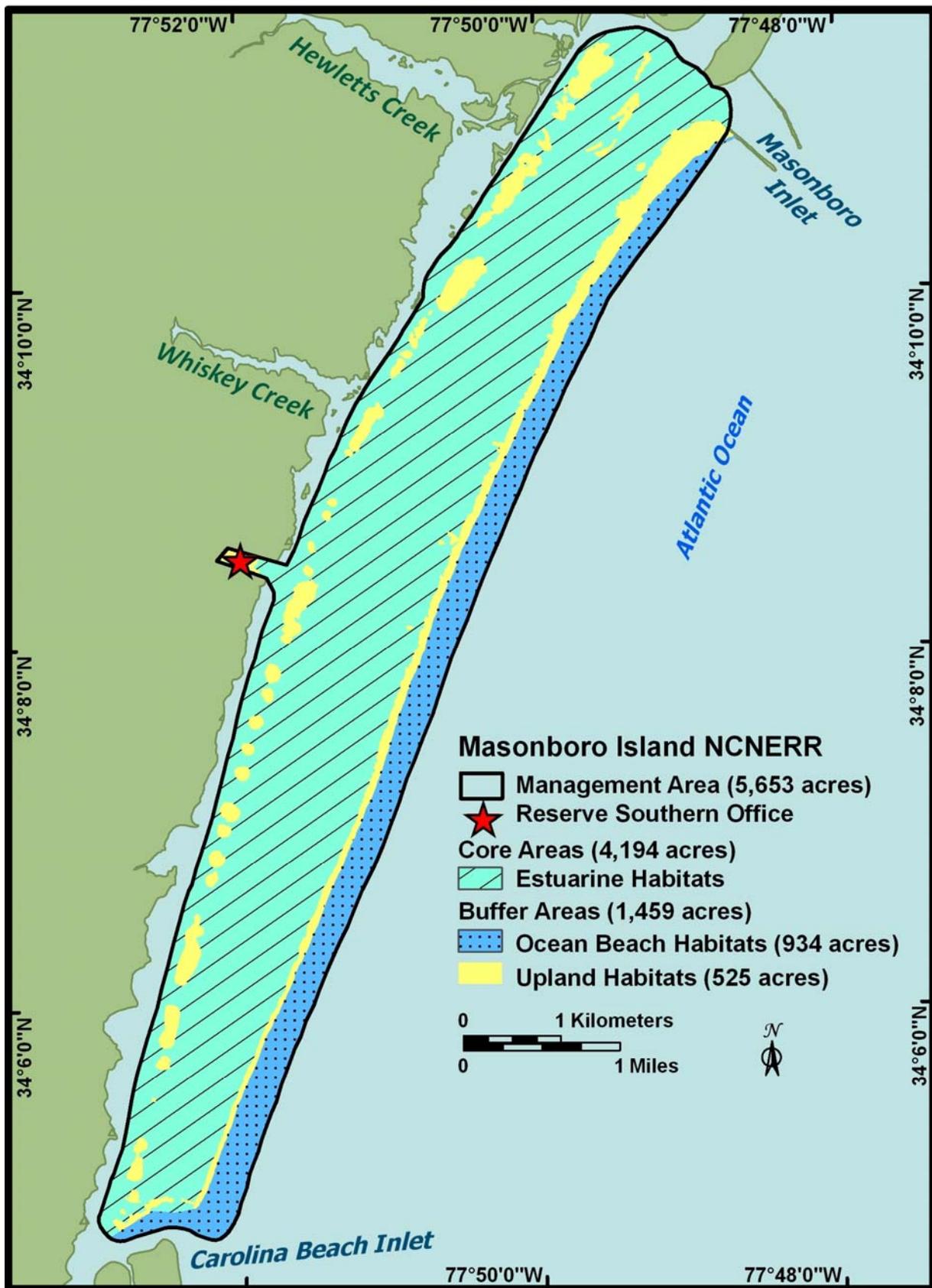


Figure 3: Core and buffer areas of the Masonboro Island NERR component

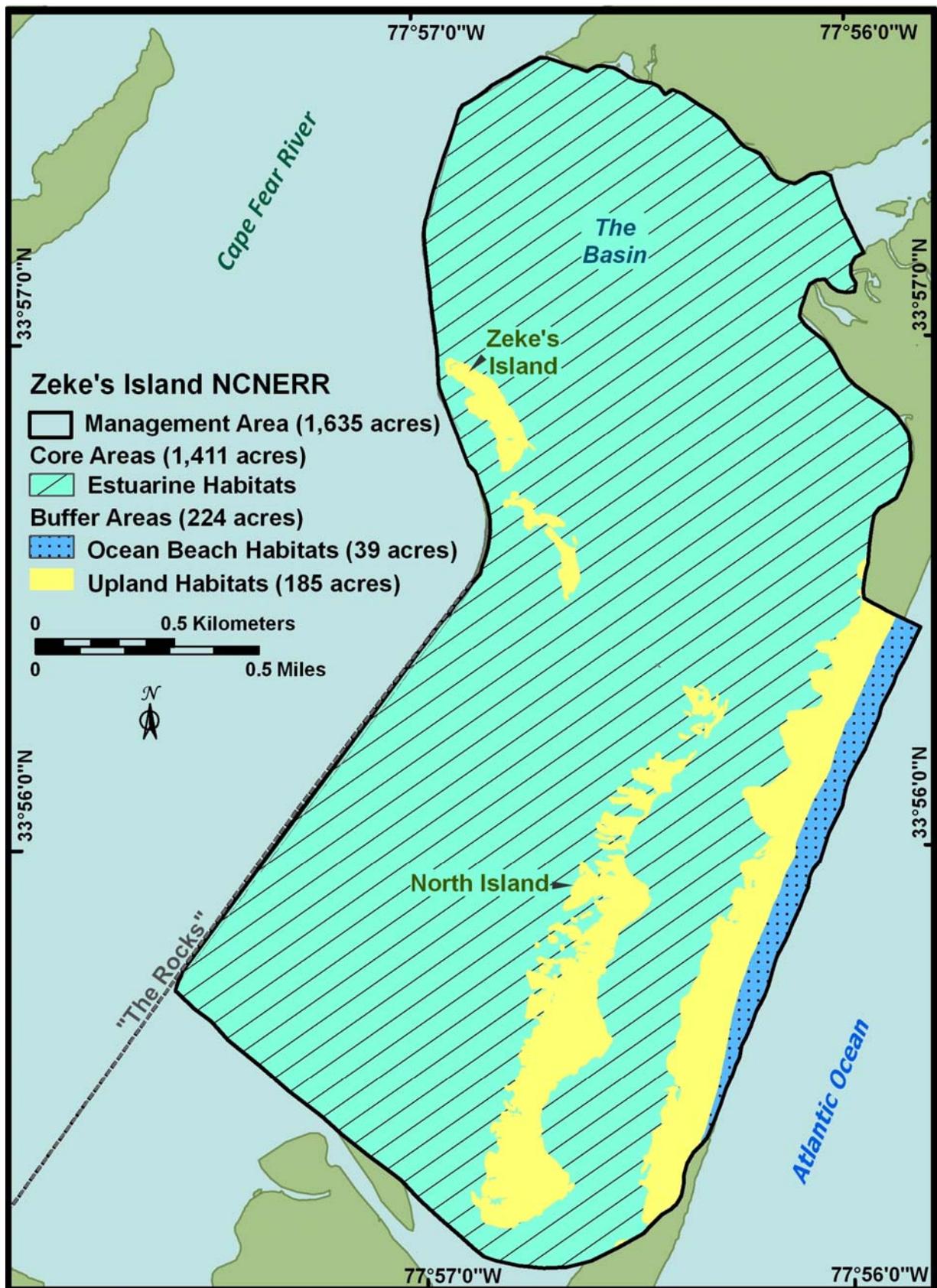


Figure 4: Core and buffer areas of the Zeke's Island NERR component

