

## Proposed Use

The applicant seeks permission to access Marsh Island and Bird Key-Bulls Bay for the commercial harvest of horseshoe crabs during the horseshoe crab spawning season which occurs annually from April through June. Aerial images of Marsh Island and Bird-Key Bulls Bay are located at Figures 6 and 7. The Service must analyze this request in light of federal law and the policies of the Service.

### Cape Romain National Wildlife Refuge

Cape Romain National Wildlife Refuge (Refuge) was established in 1932 as a migratory bird refuge, encompassing a 22-mile segment of the coast of South Carolina (Figure 1). The Refuge is designated as a Western Hemispheric Shorebird Reserve Network of International Importance as part of the Cape Romain-Santee Delta Region (Figure 2). This area annually supports over 100,000 migratory shorebirds. The Refuge averages 25% of South Carolina's nesting Wilson's plovers (*Charadrius wilsonia*) and 42% of the nesting American oystercatchers (*Haematopus palliatus*) (WHSRN 2019). In addition, the Refuge is used by 22 species of shorebirds and eight species of sea birds at various times of the year for nesting, roosting, and foraging. The islands in the Refuge support between 42% to 100% of several species of seabirds nesting in the entire State of South Carolina (Table 1). The nesting birds use the ends of all the islands in the Refuge as well as the entirety of White Banks, Marsh Island, and the ephemeral islands, such as Bird Key-Bulls Bay that appears periodically off the north tip of Bulls Island. Seabirds nest in tightly packed colonies and are particularly susceptible to human disturbance. Human disturbance lowers the reproductive success rate of gulls, terns, skimmers, and alcids (Carney and Sydeman 1999). Impacts to reproductive success include egg and nesting mortality and nest evacuation (Rodgers and Smith 1995). A study of the long-term trends in colonial seabirds in South Carolina suggests that one of the top management activities that would benefit the success of seabird breeding colonies would be limiting human access to the colony islands (Jodice et al. 2007).

Table 1 - 2020 Count of Seabirds Nesting in SC

<b>SPECIES</b>	<b>Cape Romain NWR</b>	<b>OTHER</b>	<b>South Carolina TOTAL</b>	<b>% on Cape Romain NWR</b>
Black Skimmer ( <i>Rynchops niger</i> )	375	116	491	76%
Least Tern ( <i>Sterna antillarum</i> )	284	395	679	42%
Brown Pelican ( <i>Pelecanus Occidentalis</i> )	684	4,851	5,535	12%
Gull-billed Tern ( <i>Sterna nilotica</i> )	147	35	182	81%
Common Tern ( <i>Sterna hirunda</i> )	9	0	9	100%
Forster's Tern ( <i>Sterna forsteri</i> )	10	0	10	100%
Royal Tern ( <i>Sterna maxima</i> )	6,175	2,042	8,217	75%

Sandwich Tern ( <i>Sterna sandvicensis</i> )	1,914	488	2,402	80%
<b>TOTAL</b>	9,598	7,927	17,525	54.0%

Two shorebird species that utilize the Refuge, the rufa red knot (*Calidris canutus rufa*) and the piping plover (*Charadrius melodus*), are listed as threatened under the Endangered Species Act, 16 U.S.C. §§ 1531-1543. The Refuge includes critical habitat for the piping plover. A map showing the location of piping plover critical habitat within the Refuge is located at Figure 3. The critical habitat units include the beaches of Lighthouse Island, North and Middle Raccoon Key, and the south end of Bulls Island. Wintering Piping plover populations are present in the critical habitat in the Refuge from July through May.

The Service has proposed critical habitat within the Refuge for the rufa red knot. Maps showing the relevant portions of the proposed critical habitat are located at Figures 4 and 5. The Service prepared a draft Rufa Red Knot Recovery Plan that outlines recovery actions based on the needs of the species (U.S. Fish and Wildlife Service. 2021). One of those actions in the draft Recovery Plan, Action 2.3: Limit disturbance from human activities, is identified as a Priority 1a action, which is an action that must be taken to prevent extinction or to prevent the species from declining irreversibly. Rufa red knot use the Refuge throughout the year, with the highest use occurring in the spring (March – May) and fall (August – October). These birds use the Refuge’s resources, such as the eggs of spawning horseshoe crabs, to quickly replenish their body condition and rebuild fat stores for the next leg of their northbound migration to their breeding areas.

### **Analysis of Appropriateness of Proposed Use**

The Service evaluates this application in accordance with its policies codified in 603 FW 1. In accordance with that policy, a proposed use is appropriate only if (1) it is a wildlife-dependent recreational use of the Refuge, (2) the use contributes to the fulfillment of a refuge’s purposes, the mission of the National Wildlife Refuge System, or a refuge management plan, or (3) an evaluation of the factors outlined in 603 FW 1.11(A)(3)(a)-(j) reveal that it is appropriate.

#### **Factor One: Is it a wildlife-dependent recreational use of the Refuge**

Wildlife-dependent recreational uses are recreational hunting, fishing, wildlife observation and photography, or environmental education and interpretation uses of a unit of the National Wildlife Refuge System. 16 U.S.C. § 668ee(2). The applicant is not seeking access to the Refuge for a recreational use. Rather, the applicant seeks access to the Refuge for the commercial harvest of horseshoe crabs. Because the access is requested for a commercial, not recreational, purpose, the proposed use is not appropriate under this factor.

#### **Factor Two: Does the proposed use contribute to the fulfillment of the Refuge’s purposes, the mission of the National Wildlife Refuge System, or its management plan**

The Refuge was established under the Migratory Bird Conservation Act. Refuges created under this authority were established for numerous reasons including (1) “as an inviolate sanctuary, or for

any other management purpose, for migratory birds,” 16 U.S.C. § 715d, and (2) “to conserve and protect migratory bird and other species of wildlife that are listed as endangered species or threatened species and to restore or develop adequate wildlife habitat.” 16 U.S.C. § 715i. The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats for the benefit of present and future generations of Americans. 16 U.S.C. § 668dd(a)(2). Finally, in the Refuge’s Comprehensive Conservation Plan (CCP), the Service outlined the importance of the Refuge to seabirds and shorebirds and states that “[u]nregulated public use of refuge waters means lower survival and reproductive success to all vulnerable species. Providing undisturbed nesting, roosting, and foraging habitat is the most important role for the management of shorebirds within Cape Romain NWR” (USFWS 2010).

The proposed use would cause a disturbance to the shorebirds and seabirds during peak nesting, roosting, and foraging activities. The proposed use does not contribute to the purpose of the Refuge, the purpose of the National Wildlife Refuge System, nor any of the management objectives in the CCP. Therefore, it is not appropriate under this factor.

### **Factor Three: Evaluation of the proposed use in light of the FWS Appropriate Refuge Uses Policy**

This factor requires the refuge manager to evaluate the proposed use in light of ten criteria specified in its Appropriate Refuge Uses Policy, 603 FW 1.11(A)(3)(a)-(j). The relevant criterion for the evaluation of the application under this factor, is criterion (b) which evaluates whether the proposed use complies with applicable law.

The two areas that the applicant seeks to access are Marsh Island and Bird Key-Bulls Bay. The applicant seeks to access these areas during the horseshoe spawning season, which occurs annually from April to June. Marsh Island serves as crucial nesting, roosting, and foraging habitat for shorebirds and seabirds, including the threatened rufa red knots. Adverse effects from environmental disruptions, including flight, avoidance, or interference with movement, use up energy that could be used for reproduction and growth. Disturbance is also observed as the leading cause of egg and chick mortality from exposure to heat and/or predation from other avian species. “Direct and indirect disturbance can degrade the stopover site quality, where direct disturbance displaces foraging or roosting shorebirds” (Brown et al. 2001). Because of the importance of Marsh Island to birds that utilize the Refuge, it is closed each year from February 15 through September 15 to all public access. 50 C.F.R. § 26.34. The entire horseshoe crab spawning season occurs during this closure. Therefore, access onto Marsh Island does not comply with federal law and is not appropriate.

The second area the applicant seeks to access is Bird Key-Bulls Bay. The island is ephemeral and is used either for nesting, roosting, and foraging, depending on the size of the island during the year. In 2017, when the island was large and high in elevation, it supported 175 seabird nests that successfully hatched. Currently, the ephemeral island hosts thousands of roosting and foraging shorebirds and seabirds due to the remote nature and lack of public use. The Service identified a list of actions for seabird conservation in the Refuge’s CCP. One action is to “post, rope and close to the public all potential nesting habitat on the refuge” and “[p]rovide undisturbed nesting,

roosting, and foraging habitat for migrating and wintering populations of shorebirds” (USFWS 2010). In accordance with the CCP, Bird Key-Bulls Bay is closed annually from April through June. The proposed use occurs entirely during this closure period. Therefore, access onto Bird Key-Bulls Bay also does not comply with federal law and is not appropriate.

### **Conclusion**

The Service evaluates this application for access to the areas of Marsh Island and Bird Key-Bulls Bay in accordance with its policies codified in 603 FW 1. The proposed use in the application is not appropriate under any of the factors listed above. If the Service were to allow access to the requested areas for the commercial harvest of horseshoe crabs during the spawning season, it would be in direct violation of closures imposed under federal law. Therefore, the application for access to Marsh Island and Bird Key-Bulls Bay during the horseshoe crab spawning season, from April through June, should be denied.

## References

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Figure 1. Map of Cape Romain National Wildlife Refuge



Figure 2. Cape Romain – Santee Delta Region WHSRN Site

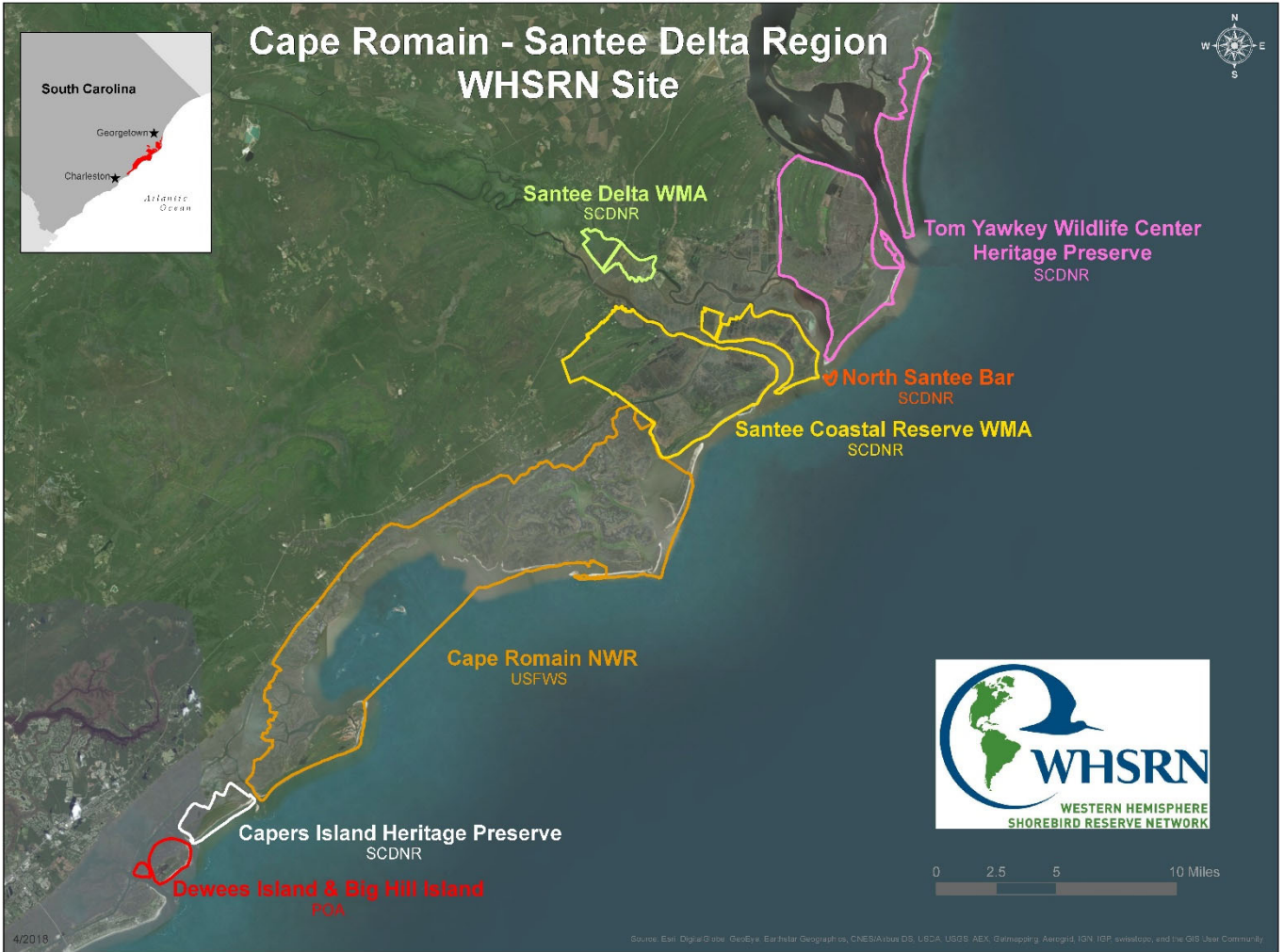




Figure 3. Location of Critical Habitat for Piping Plover in Cape Romain National Wildlife Refuge.

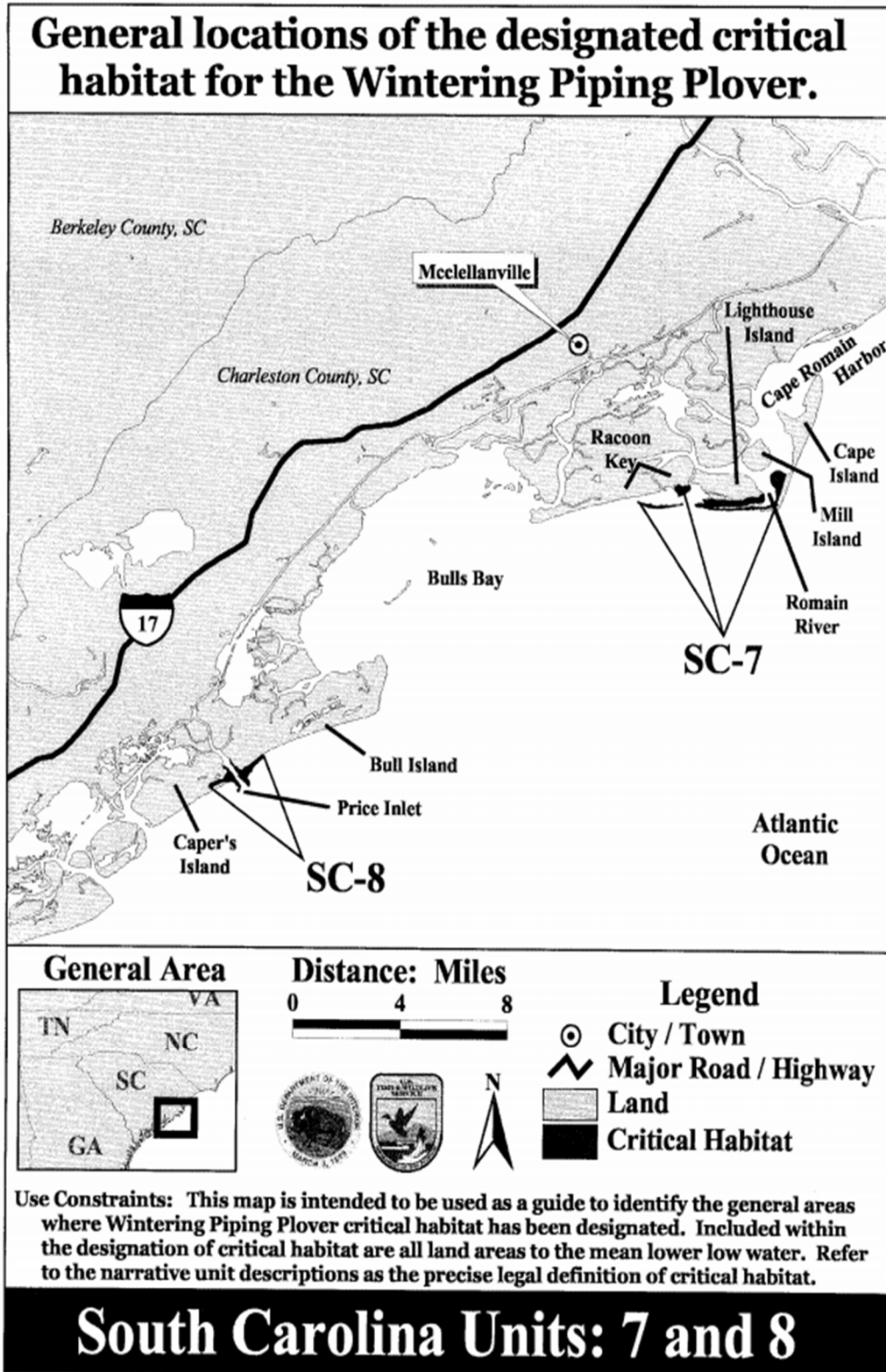




Figure 4. Proposed Red Knot Critical Habitat in Cape Romain National Wildlife Refuge Bird Key-Bulls Bay

**Critical Habitat for Rufa Red Knot**  
**SC-9 Bulls Island Beach and SC-10 Capers Island Beach;**  
**Charleston County, South Carolina**

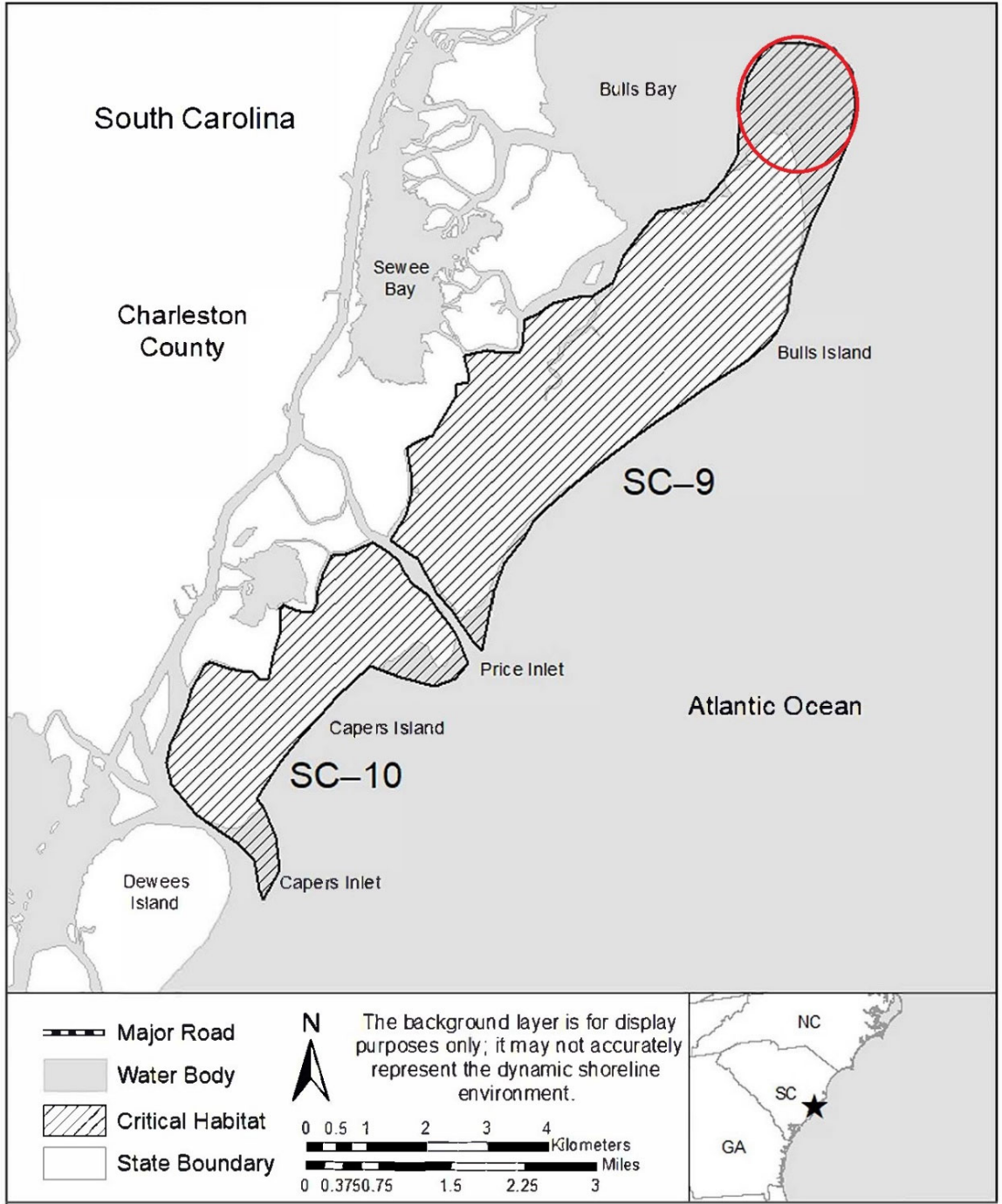


Figure 5. Proposed Red Knot Critical Habitat in Cape Romain National Wildlife Refuge Marsh Island

**Critical Habitat for Rufa Red Knot**  
**SC-7 Raccoon Key Complex and White Banks Beaches and**  
**SC-8 Marsh Island; Charleston County, South Carolina**

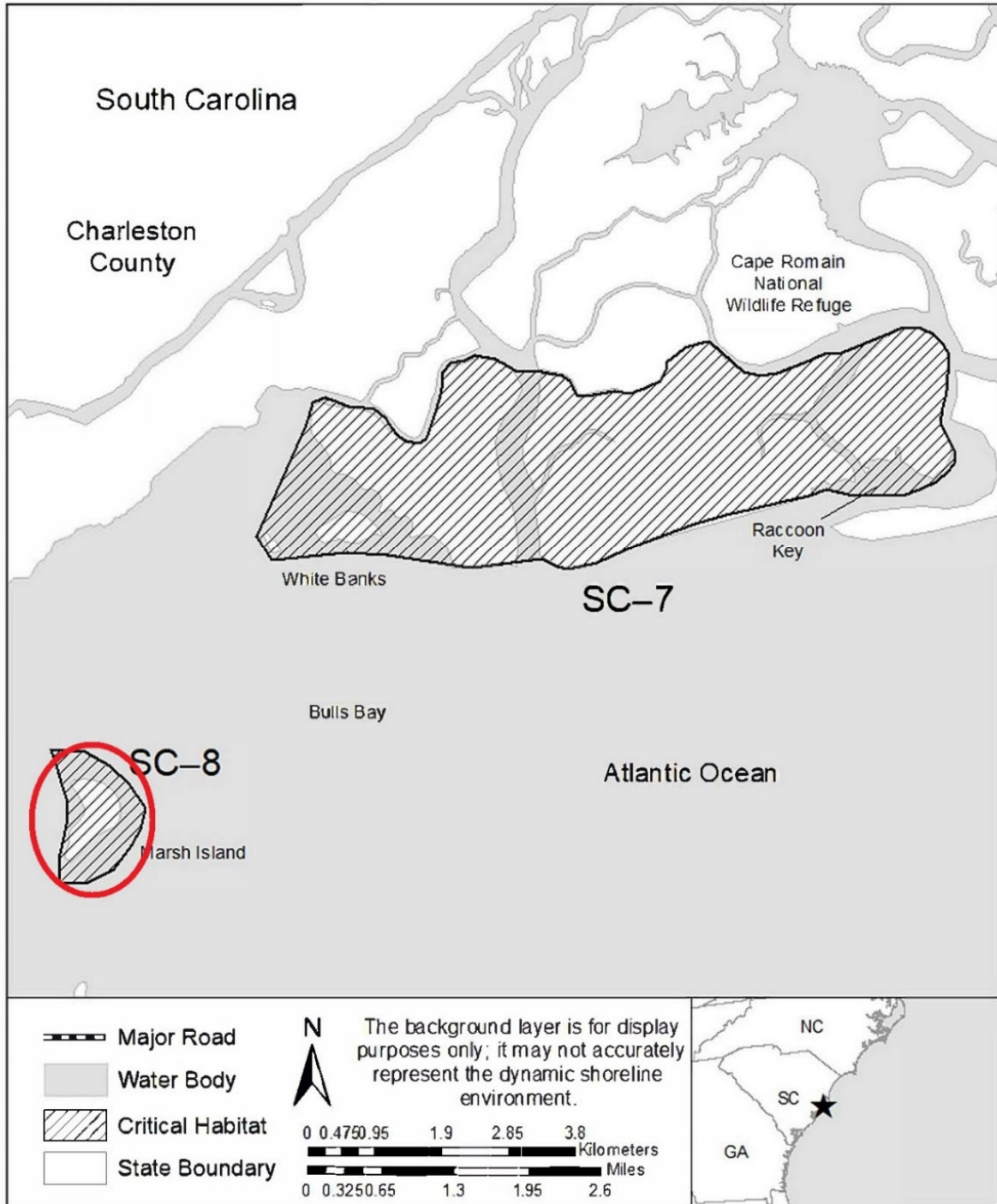


Figure 6. Areas in Special Use Permit Request for Horseshoe Crab Harvest Marsh Island





Figure 7. Areas in Special Use Permit Request for Horseshoe Crab Harvest Bird Key-Bulls Bay

