

## **Negotiated Rulemaking Committee**

**5<sup>th</sup> meeting**

**June 17-18, 2008**

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- Waterbird researcher with USFWS and USGS since 1978
- Research Professor of Environmental Sciences at UVA since 1996
- Former President of the Waterbird Society
- Former Editor of the journal, *Waterbird*
- Chairman of the USGS science task force (2005) to develop monitoring and management protocols for CAHA threatened and endangered species

# Ground-nesting colonial waterbirds of Cape Hatteras National Seashore, NC

Black Skimmer

Common Tern

Forster's Tern (marsh nester)

Gull-billed Tern

Least Tern

Royal Tern

Sandwich Tern



Black Skimmer (*Rynchops niger*)

Royal (*S. maxima*) and Sandwich (*S. sandvicensis*)  
terns



Common Tern (*Sterna  
hirundo*)





Least Tern (*Sterna  
antillarum*)

Photo: Dan Thompson

Gull-billed Tern (*Sterna nilotica*)



# Population status of colonial waterbirds in coastal NC

*Black Skimmer* – recent declines from 820 pr (1995) to 620 prs in 2004

*Common Tern*- decline from 2100 pairs (1993) to 570 in 2004

*Gull-billed Tern*- “Threatened in NC” - declining from 620 pairs (1977) to 260 pairs in 2001

*Least Tern* – increase from 1925 pr (1977) to 2408 pr (2004)

*Royal Tern* – decline from peak of 35000 pairs (1973) to recent, but may be stable from mid 1990s (14000 plus) to present

*Sandwich Tern*- increase from ca. 2000 pairs (NC) in 1977 to 5200 pairs in NC-SC combined

## Colony site – habitat requirements for terns-skimmers



- Remote locations – islands, rocks, shell bars
- Proximity to inlets or bays for feeding
- Absence of predatory mammals-human habitation
- Social attraction – often multispecies colonies

## COLONY SPECIES ASSOCIATIONS:

Royal Terns – Sandwich Terns

Common Terns – Black Skimmers

Common Terns -Black Skimmers - Gull-billed Terns

Least Tern (solitary)



# Early Management Guidelines for Colonial Waterbirds within National Seashores

From: Buckley,PA and FG Buckley. 1976. Guidelines for the Protection and Management of Colonial Waterbirds. National Park Service, Northeast Region, Boston MA.

- Restrict foot travel within 1000 ft of active colonies
- Enforce strict pet regulations
- Seasonal closures: “close off entire areas to all ORVs...”
- “Restrict essential ORVs to carefully marked tracks during critical periods”
- “Prohibit night use of area by visitors”

## Recommended sign-posting distances for terns and skimmers in the mid-Atlantic region <sup>1</sup>



| Species     | "First Flush Distance"<br>(M +/- 1 SD) | Recommended Buffer* |
|-------------|--|---------------------|
| Blk Skimmer | 130(50)                                | 200                 |
| Com. Tern   | 142(81)                                | 200                 |
| Least Tern* | 64                                     | 100                 |
| Royal Tern* | 106(83)                                | 100                 |
| Waders      | N/A                                    | 100                 |

<sup>1</sup> From: Erwin, RM. 1989. Responses to human intruders by birds nesting in colonies: experimental results and management guidelines. Colonial Waterbirds 12: 104-108.

\* During the pre-hatching nesting phase: larger distances needed during chick phases

# Recommended buffer distances for terns and skimmers at Cape Hatteras <sup>1</sup>



| Species     | Buffer Distance (m) |
|-------------|---------------------|
| Blk Skimmer | 200                 |
| Com. Tern   | 200                 |
| Least Tern  | 100                 |
| Royal Tern  | 200 *               |

<sup>1</sup> From: Cohen, J., RM Erwin, JB French, J. Marion, and JM Meyers. 2005. Synthesis of management, monitoring, and protection protocols for threatened and endangered species of special concern at Cape Hatteras National Seashore, North Carolina. USGS Patuxent Wildlife Research Center report to the National Park Service.

**In summary, with a multi-species complex sharing resource space, a standard rule should be to adopt the value of the most sensitive species**



Least Tern (*Sterna  
antillarum*)

Photo: Dan Thompson