



Analysis of shorebirds, turtles, and economic costs
of the consent decree in the
Cape Hatteras National Seashore Recreational Area

Responding to misleading statements
by the Southern Environmental Law Center



Introduction

On August 21, 2009, the Southern Environmental Law Center (SELC) sent a letter to Congressman Walter Jones with copies to 14 other members of the U.S. House of Representatives. The letter had an enclosure titled, “Species Rebounding Under Consent Decree.”

The SELC charts for sea turtles and various birds featured columns of data for 2008 and 2009 highlighted in red. The implication was that the consent decree was responsible for increases during these years. While some numbers cited may technically be correct, they are often out of context or omit other relevant facts causing the reader to draw the wrong conclusion.

This analysis examines the misrepresentations made by the SELC and sets the record straight about the actual impact of the consent decree in the Cape Hatteras National Seashore Recreational Area.

Background

The Cape Hatteras National Seashore Recreational Area is a sandbar extending into the Atlantic Ocean 30 miles from the mainland. As a vulnerable area exposed to severe weather conditions, it is not likely to ever be a poster child example of successful breeding results for protected species.

The National Park Service implemented an Interim Management Strategy in 2007 for the Cape Hatteras National Seashore Recreational Area. This plan was carefully prepared and went through a very public process including an Environmental Assessment under the National Environmental Policy Act (NEPA), a biological review by the U.S. Fish & Wildlife Service, an ESA Section 7 Consultation, and a public comment period. The provisions of the consent decree were never subject to these reviews.

A consent decree was implemented on May 1, 2008 after the Audubon Society and Defenders of Wildlife, represented by the Southern Environmental Law Center filed suit against the National Park Service. Dare County North Carolina intervened in the case and reluctantly accepted the decree rather than risk complete closure of the area beaches. It was a classic case of choosing the lesser of two evils.

We encourage legislators to support H. R. 718 and S.1557, which would return control of the Cape Hatteras National Seashore Recreational Area back to the National Park Service Interim Management Strategy. This Plan provides protection for shorebirds and sea turtles and gives reasonable access to our nation’s first national seashore.

In this analysis the following abbreviations are used: (in alphabetical order)

CHNSRA	Cape Hatteras National Seashore Recreational Area
NCWRC	North Carolina Wildlife Resources Commission
NPS	National Park Service
SELC	Southern Environmental Law Center
USF&W	U.S. Fish & Wildlife

BIRDS

- **The first full breeding season for birds under the consent decree has just been completed.**

Only now, after the summer of 2009, can we accurately examine the first full year under the consent decree and compare the results to prior years.

- 2008 was NOT the first full year under the consent decree. When the consent decree went into effect on May 1, 2008, the birds for the 2008 breeding season were already in place at the CHNSRA.
- Again, SELC chooses not to divulge this crucial fact. If they told you the truth that the 2008 breeding season was well underway when the consent decree began, they would not be able to claim credit for the increases of 2008.

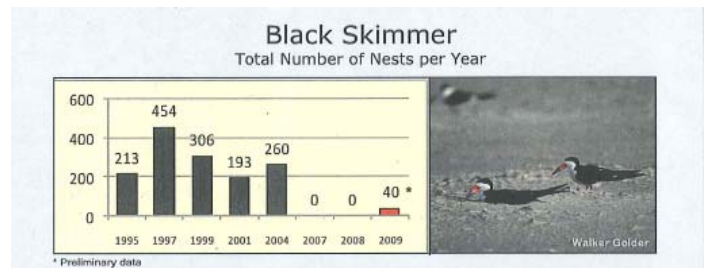
- **Piping Plover**

- When the consent decree went into effect on May 1, 2008, breeding pairs of piping plover were already in the CHNSRA in greater numbers.
- The increased numbers were the result of prior management policies of the NPS under the Interim Plan and not the product of the consent decree as SELC implies and would like you to believe.
- The numbers of fledged chicks (*to become capable of flight and leave the nest*) in 2008, and 2009 under the consent decree, was less than the number of fledged chicks under the 2007 Interim Plan.
- In fact the number of breeding pairs in 2009 was below that of 2008 and the number of fledged chicks declined as well. (Chart Attached)
- Thus, the first full year of the consent decree has not produced any increased numbers of fledged piping plover chicks.
- Weather and predation have been and will always be the primary factors involved in fledge rates at the CHNSRA.

- **American Oystercatchers**

- Vital fact to remember about American Oystercatchers – they do not reach breeding age until they are four years old. Accordingly, any 2008 increases in breeding pairs is the direct result of prior management policies, and not the consent decree.
- Again, it is important to note that the breeding pairs of American Oystercatchers were already at CHNSRA when the consent decree went into effect in 2008.
- When you have increased breeding pairs you can expect increased numbers of fledged chicks and this occurred in 2008. However, the first full year of the consent decree (2009) has produced fewer fledged chicks than 2008. (dropping to 13 from 17) (charts attached)
- Again, weather and predation are the driving factors for breeding success at the CHNSRA and always will be.

SELC claims – “Likewise, colonial waterbirds (a group of shorebird species that nest together in colonies) are rebounding, laying far more nests in both 2008 and 2009 than they did in 2007, with one species (black skimmers) returning to nest at Cape Hatteras in 2009 after becoming locally extirpated in 2007.



SELC chart on Black Skimmers

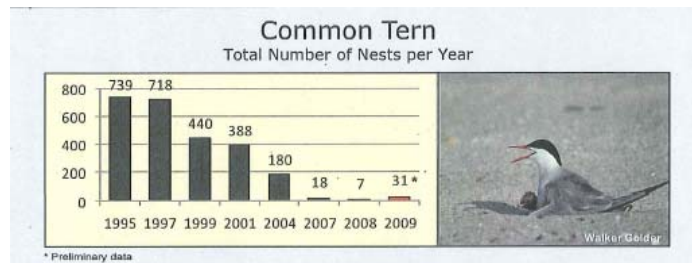
The Facts –

- **Black Skimmers** - The SELC chart shown above is possibly the most misleading of all.
 - It totally ignores hundreds of breeding pairs of Black Skimmers at the Pea Island National Wildlife Refuge which is bordered on both ends by CHNSRA land.
 - It disregards a colony of Black Skimmers on Cora June Island located just 500 meters off Hatteras Island. This colony has contained over 100 birds in both 2008 and 2009. Photographs taken during 2009 at Pea Island reveal between 250 and 300 nesting Black Skimmers.
 - SELC claims Black Skimmers became “locally extirpated in 2007.” Their chart shows none of birds at the CHNSRA in 2008 as well. SELC is intentionally distorting the picture by not including the birds at the Pea Island National Wildlife Refuge and Cora June Island. They also ignore the North Carolina Wildlife Resource Commission bird survey of 2007 showing 78 pair of breeding Black Skimmers on Cora June Island. “Locally extirpated in 2007” is not accurate.

- **Least Tern**

- The Least Tern is a species which is showing increases in numbers throughout North Carolina. Their numbers in the CHNSRA are a reflection of a population rebound across the state.
- In fact, according to the 2007 North Carolina Wildlife Resources Commissioner statewide survey, the third largest colony of these birds was on the rooftop of the Belk Department store in a busy shopping center in Kill Devil Hills.

SELC chart on Common Terns

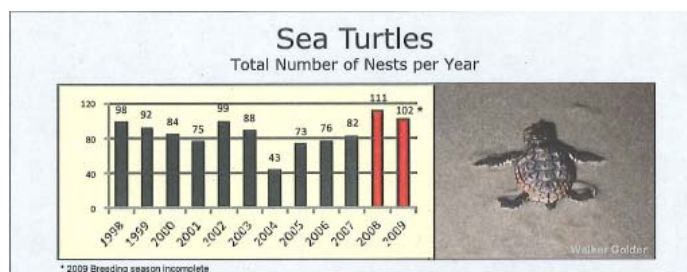


- **Common Tern**

- Common Tern numbers are down across the entire state of North Carolina and the CHNSRA was no exception. Local counts reflect a state-wide trend.
 - Not counted on the SELC chart listed above are the 60 Common Terns at the Pea Island National Wildlife Refuge and Cora June Island just off Hatteras Island in 2009.
 - Again, by selectively narrowing the area counted, the SELC is not divulging the whole picture about Common Terns.
- SELC would have you believe that Least Terns, Common Terns, and especially Black skimmers have been “extirpated” from CHNS as the result of recreational activities.
 - Yet the statewide bird surveys by the North Carolina Wildlife Resource Commission for 1993, 1995, 1997, 1999, 2001, 2004 and 2007 show that not a single nesting site has been used in each survey year by any of these birds. This includes islands for these birds that are managed by the Audubon Society. (charts attached)
 - These colonial waterbirds change nesting sites with great regularity and do so even at sites where there is no recreational activity.
 - For SELC to suggest that the consent decree has allowed these birds to return to the CHNSRA is not consistent with their nesting patterns.

SEA TURTLES

SELC claims – “In the two years under the Consent Decree, sea turtles also rebounded.”



SELC chart on Sea Turtles

The Facts –

- While sea turtles showed an increase in the number of nests for 2008, as reflected in the SELC chart, they omit important facts necessary to put the numbers in proper scientific perspective. SELC fails to tell the entire story –
 - Increased turtle nests have also occurred in the Pea Island National Wildlife Refuge, which is bordered on both ends by CHNSRA land.
 - The state of North Carolina also had increased numbers of sea turtle nests
 - Matthew Godfrey, sea turtle biologist with the N.C. Wildlife Resources Commission said, “The state will likely end 2008 with somewhere around 840 nests – well above the 715 average North Carolina has seen in the past decade.”
 - In fact, the entire east coast of the United States had increased turtle nests.
 - Godfrey continued, “But a bumper crop of loggerhead sea turtle nests this year in North Carolina, and across the Southeast, has officials hoping protective measures that started in the 1980s are finally starting to bear fruit.”

Thus, the increase in sea turtle nests throughout the east coast is unrelated to the consent decree.

During the Reg-Neg process the above listed facts were pointed out to SELC, yet they see fit to hide this important information from you.

- The 2009 sea turtle nesting season finished with 104 nests or less than 2008 due, in part, to the fact that sea turtles only nest every two or three years. Thus, the available supply of potential nesting females changes each year. Matthew Godfrey has stated that 2009 nesting across North Carolina is again above the average of the past decade.
- The key to understanding sea turtles is not in the number of nests laid, but whether the number of nests that survive to hatch is up or down.

- Contrary to USF&W relocation protocols used on the nearby Pea Island Wildlife Refuge, the consent decree for the CHNSRA does not support moving nests away from the ocean. This has caused CHNSRA to lose over 46% of nests laid here in the last 11 years (most sea turtles nesting on the beaches of CHNSRA are USF&W listed threatened species).

The first “Recovery Objective” of the 2009 “Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea turtle” is to “Ensure the number of nests in each recovery unit is increasing and this increase corresponds to an increase in the number of nesting females.” This is very difficult, if not impossible, to do when you lose 46% of the nest laid.

- The consent decree is focused on bird protection and is only related to turtles with regard to the perceived problem of nighttime lights and night driving. However, the real problems are –
 - Loss of nests due to high tides from weather events
 - Failure to relocate nests
 - Predation

There are many effective and easy solutions to turtle problems which are would be more effective than a ban on night driving. In order to have a positive impact on sea turtle survival, one must address the real problems and not just create window dressing.

COST OF THE CONSENT DECREE

- SELC would rather you not know the financial costs in implementing the consent decree.
 - Mike Murray, Superintendent of the CHNSRA said last year that as of 8/6/2008 the NPS had spent over \$316,000.00 above and beyond what the Interim Plan would have cost.
 - Also add \$100,000.00 awarded to the environmental group Plaintiffs in the consent decree to pay their legal fees. SELC does not care what the cost is to taxpayers, as long as they get paid their legal fees.
 - Considering the additional costs for 2009 and 2010 plus the award for legal fees, the total will likely exceed one million dollars for no gain in bird populations.

ECONOMIC IMPACT – CAMPGROUND OCCUPANCY

- Campground Occupancy – a reliable indicator of economic impacts of the consent decree
 - Camping is popular among visitors to the CHNSRA. Therefore, the occupancy rates in the NPS campgrounds are a reliable indicator of the economy impact of the consent decree.

- Two campgrounds are in portions of the CHNSRA that have had substantial beach closures as a result of the consent decree. These were the NPS campgrounds at Oregon Inlet and Cape Point.
- Two other campgrounds are in areas with minimal beach closures. These were the NPS campgrounds at Frisco and Ocracoke.
- The 2009 figures for the number of camping sites occupied are not available, but 2007 and 2008 show that the two campgrounds with large bird closures experienced a decline of 24.8% while the campgrounds with no closures nearby experienced only a 10.8% decline. (occupancy charts attached)
- An aerial photo of the NPS campground at Cape Point, taken on July 8, 2009, shows only 12 of the 202 available campsites in use during a traditionally busy week immediately following the July 4th holiday. (photo attached)

MOST POPULAR AREAS WERE CLOSED

- SELC says “a maximum of 13.7 miles of the seashore’s 67 miles of beach were temporarily off limits to ORVs for wildlife protection.” What they do not say is that these 13.7 miles include the most popular recreational areas in the seashore, namely, Oregon Inlet, Cape Point, Hatteras Inlet and South Point on Ocracoke. All of these areas were closed to all human activity from May until the end of July.
 - SELC shows a complete lack of concern to the visitors, voting public, local merchants and government by calling the crucial time period of May until the end of July, as “temporary.” This is the peak tourist season and crucial for the tourism based economy.

PREDATION AND WEATHER

- Predation and weather are the controlling factors for reproductive success for all species.
 - NPS has been trapping mammals at the CHNSRA since 2002. So far, 828 animals have been trapped thru 2008. These include raccoons, otters, fox, mink, possum, muskrat, cats and others. In 2008, and not related to the consent decree, NPS hired a full time trapper who has been retained for 2009.
 - Not being trapped are ghost crabs and predator birds that have been documented as having taken piping plover eggs and chicks, as well as an untold number of sea turtle eggs and hatchlings. Removing predators may or may not have increased productivity in recent years. As seen on attached charts, losses of Piping Plover and American Oystercatchers chicks increased significantly in 2009.

Piping Plover (PIPL) Summary:

	Total Nests	Total Breeding Pairs	Total Nests Hatched	Total Nests Lost	Total Eggs	Total Eggs Hatched	Chicks Lost	Fledged Chicks
Year 2009	9	9	6	3	42	19	13	6
Year 2008	13	11	8	5	43	22	15	7

Consent decree started 5/1/08 after breeding pairs on site.

All nests and chicks were lost to weather or predators.

American Oystercatchers (AMOY) Summary: (includes Green Island)

	Total Breeding Pairs	Total Nests	Total Nests Hatched	Total Nests Lost	Total Eggs Hatched	Chicks Lost	Fledged Chicks
Year 2009	23	31	15	16	31	18	13
Year 2008	23	32	13	19	24	7	17

Consent decree started 5/1/08 after breeding pairs on site.

All nests and chicks were lost to weather or predators.

Sea Turtle Summary:

	<u>Sea Turtle Nests</u>	<u>Digs</u>	<u>Sea Turtle FALSE Crawls</u>	Ratio of False Crawls to Nests
Year 2009	104	0	101	0.98:1
Year 2008 **	112	0	103	.92:1
USF&W normal				1:1

** Source is page 6 of 2008 CHNS 2008 Sea Turtle Annual Report

NPS Campground sites occupied per NPS

Consent Decree went into effect May 1, 2008

NPS OREGON INLET CAMPGROUND (Oregon Inlet spit closed May to Late July 2008)

MONTH / YEAR					%
	2007	2008	2009	CHANGE	CHANGE
January	Closed	Closed	N	0	
February	Closed	Closed	o	0	
March	Closed	Closed	t	0	
April	not used	not used		0	
May	not used	not used	A	0	
June	1,973	1,121	v	(852)	-43.2%
July	1,983	1,508	a	(475)	-24.0%
August	1,768	1,708	i	(60)	-3.4%
September	not used	not used	l	0	
October	not used	not used	a	0	
November	Closed	Closed	b	0	
December	Closed	Closed	l	0	
			e		
TOTALS	5,724	4,337		-1,387	-24.2%

NPS CAPE POINT CAMPGROUND (Cape Point closed May to late July 2008)

MONTH / YEAR					%
	2007	2008	2009	TOTALS	CHANGE
January	Closed	Closed	N	0	
February	Closed	Closed	o	0	
March	Closed	Closed	t	0	
April	Closed	Closed		0	
May	not used	Closed	A	0	
June	695	335	v	(360)	-51.8%
July	861	692	a	(169)	-19.6%
August	846	768	i	(78)	-9.2%
September	not used	Closed	l	0	
October	Closed	Closed	a	0	
November	Closed	Closed	b	0	
December	Closed	Closed	l	0	
			e		
TOTALS	2,402	1,795		-607	-25.3%

Cape Point campground was closed in April, May, Sept and Oct. of 2008 so only June, July and Aug. were used for a fair comparison.

June, July and August average for Oregon Inlet & Cape Point

-24.8%

NPS Campground sites occupied per NPS

NPS FRISCO CAMPGROUND (no closures in immediate area)

MONTH / YEAR				%	
	2007	2008	2009	TOTALS	CHANGE
January	Closed	Closed	N	0	
February	Closed	Closed	o	0	
March	Closed	Closed	t	0	
April	not used	not used		0	
May	not used	not used	A	0	
June	1,536	1,289	v	(247)	-16.1%
July	2,100	1,694	a	(406)	-19.3%
August	1,821	1,694	i	(127)	-7.0%
September	not used	not used	l	0	
October	not used	not used	a	0	
November	Closed	Closed	b	0	
December	Closed	Closed	l	0	
			e		
TOTALS	5,457	4,677		-780	-14.3%

NPS OCRACOCKE CAMPGROUND (no closures in immediate area)

MONTH / YEAR				%	
	2007	2008	2009	TOTALS	CHANGE
January	Closed	Closed	N	0	
February	Closed	Closed	o	0	
March	Closed	Closed	t	0	
April	not used	not used		0	
May	not used	not used	A	0	
June	2,395	2,264	v	(131)	-5.5%
July	2,610	2,370	a	(240)	-9.2%
August	2,252	2,090	i	(162)	-7.2%
September	not used	not used	l	0	
October	not used	not used	a	0	
November	Closed	Closed	b	0	
December	Closed	Closed	l	0	
			e		
TOTALS	7,257	6,724		-533	-7.3%

June, July and August average for Frisco & Ocracoke

-10.8%

NPS Cape Point Campground

Photo taken July 8, 2009

12 occupied campsites out of 202 available
during the traditionally busy week following the July 4th holiday



Photo by Donny Bowers

Information from NCWRC on colonial water bird counts 1993 - 2007

BLACK SKIMMER

Location of nests	Survey Years						
	1993	1995	1997	1999	2001	2004	2007
Beach Northside Hatteras Inlet	10	39	362	6	0	13	0
Big Foot Island	3	76	4	0	0	0	0
Bogue Inlet, West	0	0	0	0	7	0	0
Bottle Run Point	0	58	0	0	0	0	0
Cape Lookout Point	18	25	1	0	0	68	0
Cape Point	206	30	0	2	0	0	0
Carolina Beach Inlet, South	24	8	0	0	0	0	0
Clark Reef	0	0	0	0	0	0	38
Clam Shoal	0	0	0	11	8	11	0
Cora June Island	0	0	0	0	0	0	78
Core Banks Beach, Drum Inlet, North	0	0	2	0	0	0	0
Core Banks Beach, Drum Inlet, South	10	0	22	0	4	0	0
Core Banks Beach, OP Davis	68	0	3	0	0	0	0
Core Banks, Cape Point	0	0	0	0	29	0	0
Drum Inlet, North	0	0	0	0	0	0	169
Ferry Slip Island	2	0	0	0	0	0	0
Fort Fisher Beach	0	0	16	37	0	0	0
Fort Fisher North Beach	0	0	0	4	0	0	0
Hatteras Beach Site 1	0	74	0	0	0	0	0
Mason Inlet, Northside	10	0	0	0	40	0	0
Mason Inlet, Southside	0	0	0	0	0	55	66
Masonboro Island Beach	0	0	1	0	0	0	0
Masonboro Island, John's Creek	0	0	0	12	0	0	0
Masonboro Island, Old Cabbage Inlet	0	0	0	0	41	0	0
Natural Shoal Ocracoke Inlet	4	30	0	0	0	0	0
New Drum Inlet, Shoal	54	181	0	0	0	0	0
New Dump Island	0	0	0	35	38	11	16
New Topsail Inlet, Northside	18	0	0	0	0	0	10
Newstump Point	88	0	0	0	0	0	0
Ocracoke Inlet Beach, North	0	70	92	298	193	247	0
Old-House Channel, Island MN	0	98	0	0	0	0	0
Old-House Channel, Island L	0	0	25	0	0	0	0
Old Topsail Inlet, North	0	0	7	24	0	0	0
Oregon Inlet Beach, South	0	0	6	177	74	0	0
Oregon Inlet, Island B	0	0	0	20	0	0	0
Oregon Inlet Shoal	0	0	0	0	2	82	10
Parnell Island	0	0	0	0	0	0	135
Pea Island Beach, Cedar Hammock	0	0	0	14	0	0	0
Pea Island Beach, Pole Shed	0	0	0	0	71	0	0
Phillips Island	0	0	0	0	0	21	0
Rich Inlet, Northside	0	42	17	23	67	87	30
Rich Inlet, Southside	4	0	0	0	0	0	0
Sand Dollar Island	0	0	0	18	0	0	0
Sand Shoal Island	309	0	0	0	0	0	0
Shackleford Point	157	35	0	0	0	0	0
Shell Castle Island, West	0	0	4	0	0	5	0
South Pelican Island	87	0	8	0	0	0	0

Swash Inlet, Beach	0	25	0	0	0	0	0
Tubbs Inlet, Southside	0	1	0	0	0	0	0
Tump Island	0	0	0	0	8	14	0
UNI, Back Sound 4	0	12	0	0	11	8	0
UNI, Bogue Inlet	0	6	0	0	1	0	0
UNI, Entrance Bogue Inlet 1	0	0	0	0	0	1	3
UNI, SC Line	0	9	0	0	0	0	0
Wells Island	12	0	0	0	0	0	0
TOTALS	1084	819	570	681	594	623	555

Least Tern Nesting in the state of North Carolina per NCWRC surveys

Location	1993	1995	1997	1999	2001	2004	2007
Atlantic Beach Food Lion	0	0	0	0	90	179	106
Avon, Ramp 34	0	72	0	10	0	18	24
Bald Head, River Beach	3	0	0	0	2	0	0
Bald Head, North	0	0	0	60	0	0	0
Bald Head, South Beach	0	0	35	0	0	0	0
Beach Northside Hatteras Inlet	50	255	128	4	0	105	1
Beach Northside Oregon Inlet	0	0	0	0	0	10	0
Bear Inlet Colony	0	15	0	0	0	0	0
Bird Shoal	0	0	0	0	0	4	0
Big Foot Island	0	64	0	0	0	0	0
Bogue Inlet, East	0	54	21	0	0	0	0
Bogue Inlet Shoal	0	0	0	0	0	37	0
Bogue Inlet, West	0	0	5	0	114	57	2
Brant Island	0	0	0	0	0	5	0
Browns Inlet, North	25	0	0	0	0	0	0
Buxton Washout	0	0	0	0	0	69	0
Cape Lookout Point	242	103	8	0	0	86	9
Cape Point	404	53	0	41	50	0	13
Cape Point, South Beach	98	3	53	18	0	0	13
Carolina Beach Inlet, North	0	0	14	13	1	0	0
Carolina Beach Inlet, South	242	461	0	0	0	0	0
Carteret General Hospital	0	0	0	0	3	0	0
Cedar Island Ship Point	0	0	0	0	1	0	0
Cedar Island Ferry Terminal	0	22	0	20	0	7	0
Clam Shoal	0	0	0	0	23	0	0
Clark Reef	0	0	0	0	0	0	105
Cora June Island	0	0	0	0	0	0	55
Core Banks Beach, Drum Inlet, North	0	0	75	0	12	16	0
Core Banks Beach, Drum Inlet, South	3	38	13	0	14	16	22
Core Banks Beach, OP Davis	225	21	8	0	4	0	0
Core Banks, Cape Point	0	0	0	0	27	0	0
Core Banks, Power Squad Spit	61	0	6	0	2	1	13
Core Beach, Cape Lookout	0	0	0	0	5	18	0
Craven Community College	0	0	0	0	0	0	14
Crystal Coast Convention Center	0	0	0	0	0	0	10
Currituck Beach Overwash, NWR	0	0	0	0	0	2	0
Drum Inlet, North	0	0	16	0	8	0	214
Emerald Plantation Shopping Center	0	0	0	0	50	205	296
Fort Fisher Beach	130	0	0	4	3	0	3
Hatteras Beach Site1	0	36	0	0	29	0	0
Hatteras Beach Site 6	58	0	18	13	0	60	43
Hatteras Beach Site 7	0	0	0	6	10	2	63
Hatteras Inlet shoal	0	17	0	0	0	0	0
Hatteras Ramp 30	0	0	5	0	0	2	5
Hatteras, Ramp 43	0	0	0	0	0	6	31
Hutaff middle	0	0	0	0	53	0	0
ICW dredge island marker R58	0	0	0	0	0	0	10

Least Tern Nesting in the state of North Carolina per NCWRC surveys

Location	1993	1995	1997	1999	2001	2004	2007
ICW dredge island marker G53	0	0	0	0	1	0	0
ICW dredge island Saunders creek	0	0	0	0	0	2	0
ICW, dredge island south of Surf City	0	0	0	0	1	12	16
Kill Devil Hills Belk	0	0	0	0	0	0	261
Lewis Creek	34	0	0	0	0	0	0
Lockwood Folly Inlet, East	0	0	1	0	0	0	0
Mad Inlet, Northside	4	0	0	0	0	0	0
Mason Inlet, Northside	10	60	9	0	50	0	0
Mason Inlet, Southside	0	0	0	0	0	338	206
Masonboro Island Beach	0	0	9	0	26	18	2
Masonboro Island, John's Creek	0	0	0	95	52	0	0
Masonboro Island, Old Cabbage Inlet	0	0	0	23	21	0	0
Middle South Core Banks Beach	0	0	0	0	0	0	12
Morehead City Food Lion	0	0	0	0	0	25	12
Nags Head, Outer Banks Mall	0	13	96	299	458	150	0
Natural Shoal Ocracoke Inlet	0	23	0	0	0	0	0
New Bern Embarq Building	0	0	0	0	0	0	104
New Bern Food Lion Hwy 70E	0	0	0	20	16	10	10
New Bern Furniture Fair	0	0	0	17	0	0	0
New Chadwick Bay Inlet	0	0	41	9	12	0	0
New River Inlet, Northside	1	4	0	7	0	2	6
New Topsail Inlet, Northside	70	0	6	1	40	65	196
North of Ocracoke Beach	0	0	8	0	0	0	0
Ocracoke Beach	0	0	0	0	4	0	0
Ocracoke Inlet Beach, North	0	28	48	244	146	14	1
Ocracoke Inlet Beach, South	256	0	0	0	16	35	37
Old Drum Inlet, North	0	0	0	0	0	39	15
Old Dump Island	0	0	0	0	0	0	10
Old Topsail Inlet, North	0	0	19	238	81	93	31
Onslow Beach Lifeguard Tower	0	0	8	8	4	0	0
Onslow Beach Overwash	0	0	13	0	5	0	20
Oregon Inlet Beach, South	0	285	92	40	75	309	50
Pea Island Beach, Cedar Hammock	0	0	0	7	0	1	11
Pea Island Beach, Pole Shed	0	0	0	65	36	12	113
Radio Island, South	0	30	0	0	0	0	0
Rich Inlet, Northside	0	186	0	0	88	125	23
Rich Inlet, Southside	100	9	0	0	0	12	0
Roanoke Sound, Island D	0	0	0	0	0	0	122
Sand Bag Island	0	0	0	0	2	0	0
Shackleford Point	7	0	0	0	0	0	0
Shallotte Sound	0	1	0	0	0	0	0
Shallotte Inlet, West	0	0	0	0	0	3	0
Sheep Island, Brunswick	0	3	0	0	0	0	0
South Pond, Pea Island	151	0	0	0	0	0	0
Staples Morehead City	0	0	0	0	0	0	4
Sunset Beach, Development Site	0	0	0	0	0	30	0

Least Tern Nesting in the state of North Carolina per NCWRC surveys

Location	1993	1995	1997	1999	2001	2004	2007
Swash Inlet, Beach	0	84	55	0	8	7	45
Tubbs Inlet, Southside	0	1	0	0	0	0	0
Twin Rivers Mall, New Bern	0	12	60	0	47	60	0
UNI, Bogue Sound 7	0	0	0	0	0	36	0
UNI, Cape Fear dredge island marker R42	0	0	0	0	5	0	0
UNI, Entrance Bogue Inlet 1	2	3	0	0	34	20	307
UNI, Entrance Bogue Inlet 2	11	0	0	0	0	0	0
UNI, Mason Inlet 2	0	4	0	0	0	0	0
UNI, New River Channel 1	1	0	0	2	0	0	0
UNI, New River Channel 2	0	33	0	7	0	22	14
UNI, New River Channel 3	0	0	0	0	13	0	0
UNI, Pea Island, North Pond 2	0	0	1	0	0	0	0
Upland Diked, South of Annex	0	0	2	0	0	0	0
Wilmington Oleander Mall	0	0	9	0	0	0	147
Wilmington, Old Navy	0	0	0	0	0	63	0
North Carolina Grand TOTALS	6,174	5,983	4,876	5,269	5,744	6,416	6,841

Information from NCWRC on colonial water bird counts 1993 – 2007

SITENAME	Common tern						
	1993	1995	1997	1999	2001	2004	2007
Beach Northside Oregon Inlet	0	0	0	0	0	0	1
Beach Northside Hatteras Inlet	9	189	702	3	0	11	0
Big Deep Marsh Island	0	0	0	0	0	3	0
Big Foot Island	4	143	60	0	0	0	3
Bottle Run Point	14	107	0	0	0	0	0
Bogue Inlet, East	0	0	2	0	0	0	0
Bogue Inlet, West	0	0	0	0	33	1	0
Cape Lookout Point	78	30	0	0	0	28	2
Cape Point	376	268	0	2	0	0	4
Cape Point, South Beach	0	0	0	5	0	0	0
Carolina Beach Inlet, South	14	6	0	0	0	0	0
Chainshot Island	0	0	0	0	0	1	4
Clam Shoal	0	0	0	119	169	47	0
Clark Reef	0	0	0	0	0	0	99
Cockle Marsh Island	0	0	0	0	0	3	0
Cora June Island	0	0	0	0	0	0	79
Core Banks, Cape Point	0	0	0	0	4	0	0
Core Banks, Power Squad Spit	0	0	0	0	0	0	4
Core Banks Beach, Drum Inlet, North	0	0	1	0	0	0	0
Core Banks Beach, Drum Inlet, South	2	0	5	0	0	0	0
Core Banks Beach, OP Davis	0	0	1	0	0	0	0
Dot Island	0	0	0	0	0	1	0
Drum Inlet, North	0	0	0	0	0	0	71
Ferry Slip Island	3	0	0	0	0	0	0
Great Island	10	0	0	0	0	0	2
Harbor Island	5	0	0	0	0	0	0
Hatteras Beach Site 1	0	236	0	0	1	0	0
Hog Island	38	0	0	0	0	0	0
Hutaff middle	0	0	0	0	2	0	0
Judith Island Point	88	0	0	0	0	0	0
Little Deep Marsh Island	0	0	0	0	0	0	1
Mason Inlet, Northside	2	0	1	0	20	0	0
Mason Inlet, Southside	0	0	0	0	0	3	27
Masonboro Island Beach	0	0	1	0	3	0	0
Middle Marsh, North	4	1	0	8	0	3	0
Middle Marsh, South	0	0	0	0	0	1	0
Morehead City Ports Authority	0	0	0	0	0	0	2
Morgan Island	1	0	0	0	1	0	0
Natural Shoal Ocracoke Inlet	1	10	0	0	0	0	0
New Drum Inlet, Shoal	96	178	0	0	0	0	0
New Dump Island	0	0	0	8	53	13	2
New Topsail Inlet, Northside	0	0	0	0	0	0	2
Newstump Point	53	0	0	0	0	0	0
North River Marsh	0	17	0	0	0	0	0
North Rock Island	13	0	26	49	0	0	43
Ocracoke Inlet Beach, North	0	46	16	430	387	169	13
Old Dump Island	0	0	0	0	0	0	1

Information from NCWRC on colonial water bird counts 1993 - 2007

SITENAME	Common tern						
	1993	1995	1997	1999	2001	2004	2007
Old-House Channel, Island MN	0	318	0	0	0	0	0
Old Topsail Inlet, North	0	0	28	55	4	0	0
Old-House Channel, Island L	0	0	10	0	0	0	0
Oregon Inlet Beach, South	16	0	16	186	95	6	0
Oregon Inlet Shoal	0	0	0	0	186	196	87
Parnell Island	0	0	0	0	0	0	33
Pea Island Beach, Cedar Hammock	0	0	0	6	0	0	0
Pea Island Beach, Pole Shed	0	0	0	1	41	0	0
Phillips Island	0	0	1	0	0	4	0
Rich Inlet, Northside	0	25	24	12	32	15	0
Rich Inlet, Southside	14	5	0	0	0	0	0
Sand Dollar Island	0	0	0	3	1	0	0
Sand Shoal Island	253	0	0	0	0	0	0
Shackleford Point	391	25	0	0	0	0	0
Sheep Island, Carteret	0	3	0	0	0	0	3
Shell Castle Island, West	0	0	40	0	4	49	3
Shell Island	6	0	15	0	0	0	0
South Pelican Island	33	0	0	0	0	0	0
South Pond, Pea Island	46	0	0	0	0	0	0
Swan Island	0	0	0	0	20	0	0
Swash Inlet, Beach	0	7	2	0	0	0	0
Tump Island	13	0	0	0	55	3	0
UNI, Back Sound 1	0	43	0	0	0	0	0
UNI, Back Sound 2	0	4	0	0	0	0	0
UNI, Back Sound 4	0	3	0	0	18	2	0
UNI, Back Sound 5	0	0	0	0	0	1	5
UNI, Barden Inlet Channel	0	1	0	0	0	2	1
UNI, Bogue Inlet	0	2	0	0	1	0	0
UNI, Bogue Sound 8	0	0	0	0	0	6	0
UNI, Bogue Sound 9	0	0	0	0	0	1	0
UNI, Entrance Bogue Inlet 1	0	0	0	0	0	1	3
UNI, Hatteras Ferry Channel 1	41	0	0	0	0	0	0
UNI, Old Dump, South 2	0	0	0	0	0	0	3
UNI, Swansboro 6	0	0	0	1	0	0	0
Wainwright Island	0	0	1	0	0	0	0
Wells Island	498	0	0	0	0	0	0
Whitehurst Island	0	32	0	0	1	0	0
TOTAL	4115	3694	2949	2887	3132	2574	2505