

-Submitted Via Electronic filing-

Outer Banks Preservation Association
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September 13, 2013

Public Comments Processing
Attn: FWS-R4-ES-2012-0103
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
MS 2042-PDM
Arlington, VA 22203

Re: Comments in Response to Proposed Rule to Designate Specific Areas in the Terrestrial Environment as Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle (*Caretta caretta*) under the Endangered Species Act of 1973 – 78 FR 18000 (March 25,2013), 78 FR 42921 (July 18, 2013)

To Whom It May Concern:

The Outer Banks Preservation Association, Inc. (OBPA) serves as a public voice for concerned citizens and beach user groups interested in preserving the traditional way of life prevalent on the Outer Banks of North Carolina. Our members come from across the country and predominately from states along the eastern seaboard. The Proposed Rule will impact the entire southeastern U.S. and Gulf shorelines either directly or indirectly. Our members have a keen interest in this proposal and its potential impact on beach access and utilization throughout the region. We offer these comments on their behalf.

The rule proposed by the U.S. Fish and Wildlife Service (Service) considers all beaches in North Carolina, South Carolina, Georgia, Florida, Alabama and Mississippi as potential candidates for designation as terrestrial critical habit within the Northwest Atlantic Distinct Population Segment (DPS). These beaches are identified in 184 different segments ranging in length from 0.2 km to 90.0 km. Total length for all beach segments considered is 2,464 km. Ninety segments totaling 1,189.9 km are being proposed for critical habitat.

We support the designation of terrestrial Critical Habitat Units (CHU) for the threatened Loggerhead sea turtle. We believe the designation of any CHU must be based on the proper application of regulations established by the Endangered Species Act (ESA). Most importantly, the Service must base its recommendation for each CHU on the best available science (including a thorough analysis of the best available historical data) and on an accurate assessment of the CHU's importance to the survival of the

species. It must also give proper consideration to economic and social impacts due to any CHU designation it makes.

The current proposal will accomplish many of the goals and responsibilities of the Service but has shortcomings in a number of areas that must be addressed. Below we offer comments in four different areas of concern. These areas are Threat Assessment, Population Distribution, Population Trends, and Economic and Social Impact. Following the comments for each of these four areas, we have recommended ten actions the Service should take before the rule is finalized.

Threat Assessment:

The 2009 Loggerhead Sea Turtle Status Review included a risk assessment of sources identified as potential threats within the life cycle of the species. (appendix A). The assessment concluded that terrestrial threat sources affecting the eggs/hatchlings (up to 1 year in age) and nesting females’ life stages ranged between low risk and very low risk for the overall survival rate of the species.

Threat Source	Eggs/Hatchlings	Nesting Females
Destruction / modification of habitat	Low	Very Low
Overuse for commercial, recreational, scientific, or education	Very Low	Very Low
Disease or predation	Low	Very Low
Other natural or manmade factors	Low	Very Low

This assessment was made before the historic DPS wide increase in nests which has occurred in the 2009 – 2013 time frame.

Conversely, the assessment concluded that the most significant non-natural risks to the species occur during the juvenile/adult neritic (medium risk) and oceanic (medium/high risk) life stages.

The Service did not adequately recognize the low threat assessment for the terrestrial environment when it identified the beach segments proposed for CHU. As a result, many beaches that are not critical to the survival of the species were included in the proposal. The low threat levels assessed indicate that resource management processes already in place in the terrestrial environment are very effective. Critical Habitat designation will not improve the survival rate to mature sexual adults.

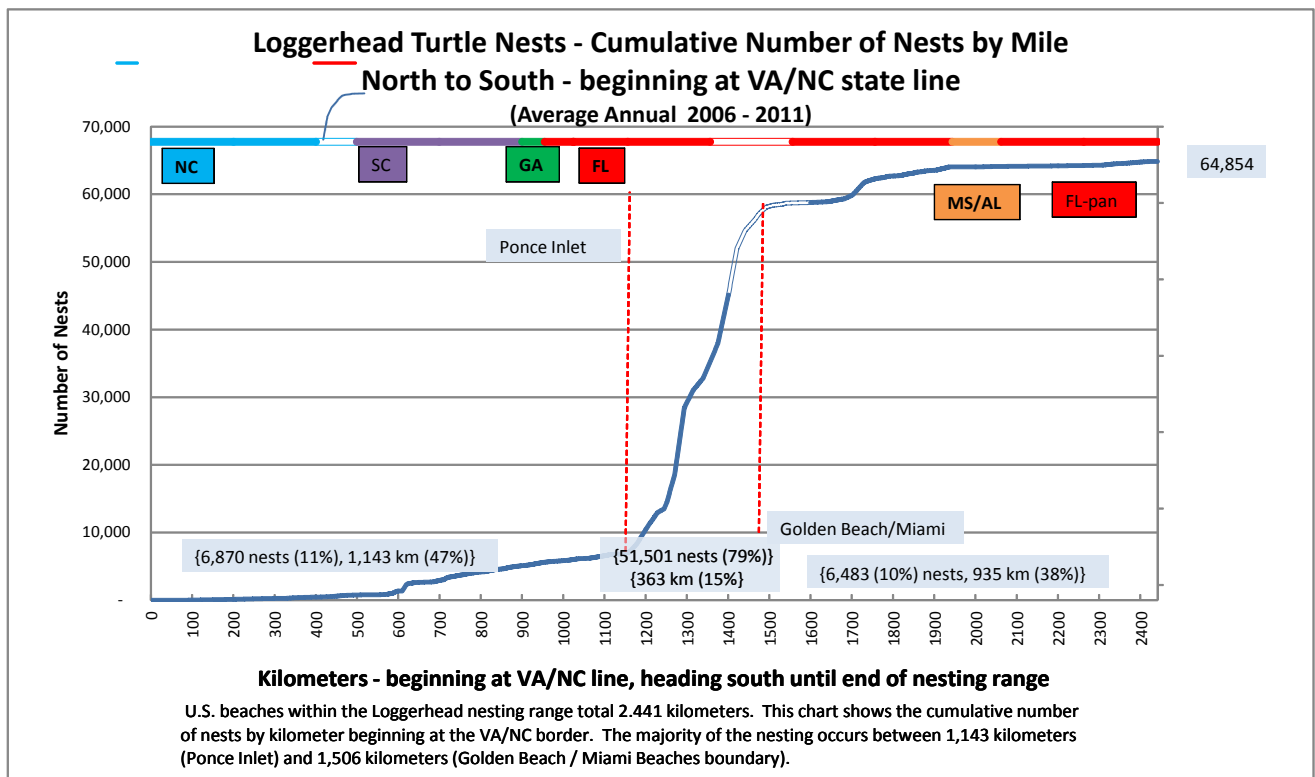
The identification of beaches which should be designated as Critical Habitat should be driven by which beaches are currently critical to the survival of the species due to their contribution. Identification should not be made on the expectation that a location’s contribution will significantly increase due to reduced threat levels as a result of designation.

Population Distribution:

“Table 1 – Proposed Critical Habitat Units for the Loggerhead Sea Turtle by Recovery Unit” published in the proposed rule (78 FR 18018) documents the location of the 90 proposed CHUs. The table lists proposed CHUs extending south from the Virginia – North Carolina state line to the tip of the Florida peninsula (Key West), from the northernmost beach segment on the west coast of the Florida Peninsula (Longboat Key) south to the Dry Tortugas, and finally from Mississippi to the easternmost Florida panhandle beach segment (Bald Point/Alligator Point) within consideration.

When Table 1 data are merged with similar data for beach segments not proposed for CHU and with historical nesting data for all beach segments, considerable insight into the historical nesting distribution and relative importance of each beach segment within the DPS to the species survival can be gained. Appendix C presents this data compilation.

The following chart was prepared utilizing the data in Appendix C. Clearly the section of beach that is most important to the survival of the species occurs between Ponce Inlet and the northern boundary of Miami. This stretch accounts for 79% of all nesting activity but only 15% of the total length of DPS beaches. It is likewise clear that beaches on the extreme north end and on the northern Gulf of Mexico parts of the DPS have very little impact on the total nesting activity and survival of the species.

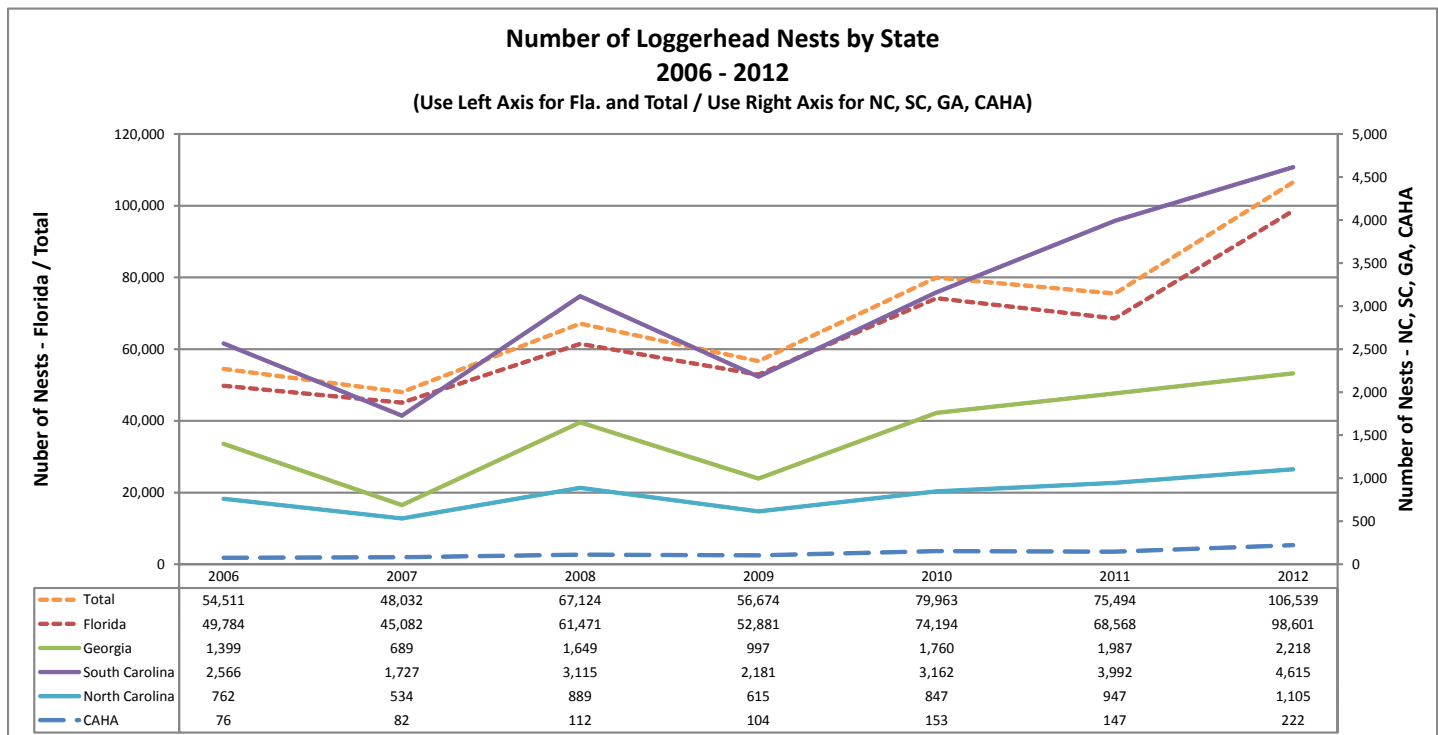


Population Trends:

The previous chart was prepared using average nesting activity for 2006 through 2011 which was the time period used by the Service to conduct its analysis (see appendix C). During the six year period, total nest counts ranged from a low of 48,032 in 2007 to a high of 79,963 in 2010 and averaged 64,854. Nests in 2011 were down slightly to 75,494. An unprecedented increase in nesting activity occurred in 2012 with a total count of 106,539. Preliminary data reports for 2013 indicate another record year is likely.

Analysis of the year-to-year nesting statistics validate the geographic distribution presented in the previous chart is typical. The chart below presents trend lines for each state for the 6 years used by the Service plus data for 2012.

Year to year changes in nesting activity are highly correlated between the geographic regions within the DPS. The beaches which are critical to nesting in lower nesting years are the same beaches critical to nesting in the higher nesting years.

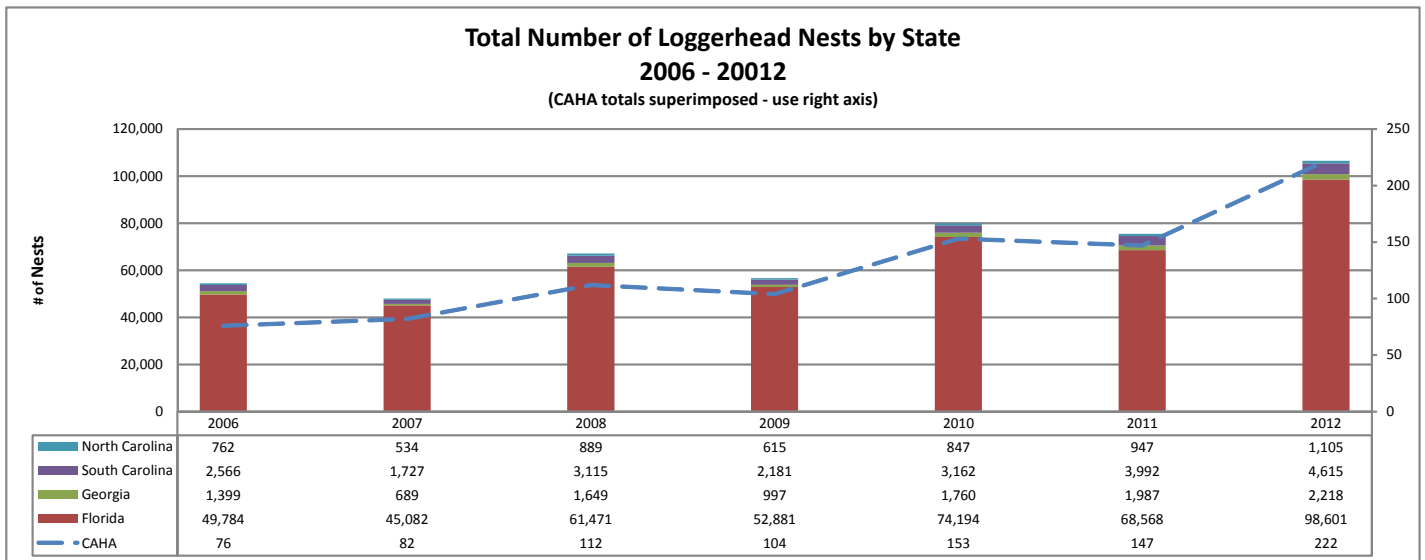


The above chart also highlights as expected the importance of Florida to the species. The Florida nest counts are so much larger than counts for other states that its data must be plotted against one scale (on the left) and all other states against a different scale (on the right).

The Florida trend line is identical in shape to the total trend line since over 90% of all nesting occurs in Florida. When analyzed statistically, the correlation coefficients for all states show a very high correlation to the total NC - .90, FL- 1.0, SC - .93, GA - .89 (1.0 = perfect correlation). Cape Hatteras National Seashore Recreational Area (CAHA) is also included on the chart because some organizations have proposed that it be designated as a CHU. The correlation coefficient for CAHA is .99. When the timeline is expanded to 2000 – 2012 with potentially less reliable data, the correlation coefficients remain in the high range (NC - .80, FL - 1.0, SC - .72, GA - .67, CAHA - .76).

The high correlation in annual nesting events between the different states leads to the conclusion that universal factors rather than factors specific to individual beach locations are responsible for the year to year fluctuations in nesting activity.

The following chart further highlights the importance of Florida, and the relative insignificance of all other locations to Loggerhead nesting activity. In this instance, the Cape Hatteras National Seashore Recreational Area is charted against the scale on the right. Some organizations attribute the growth in nests in CAHA since 2008 to the implementation of new protection measures due to the 2008 Consent Decree and the 2012 ORV management plan and rule. The reality is that nesting trends in CAHA follow the nesting trends occurring throughout the DPS.



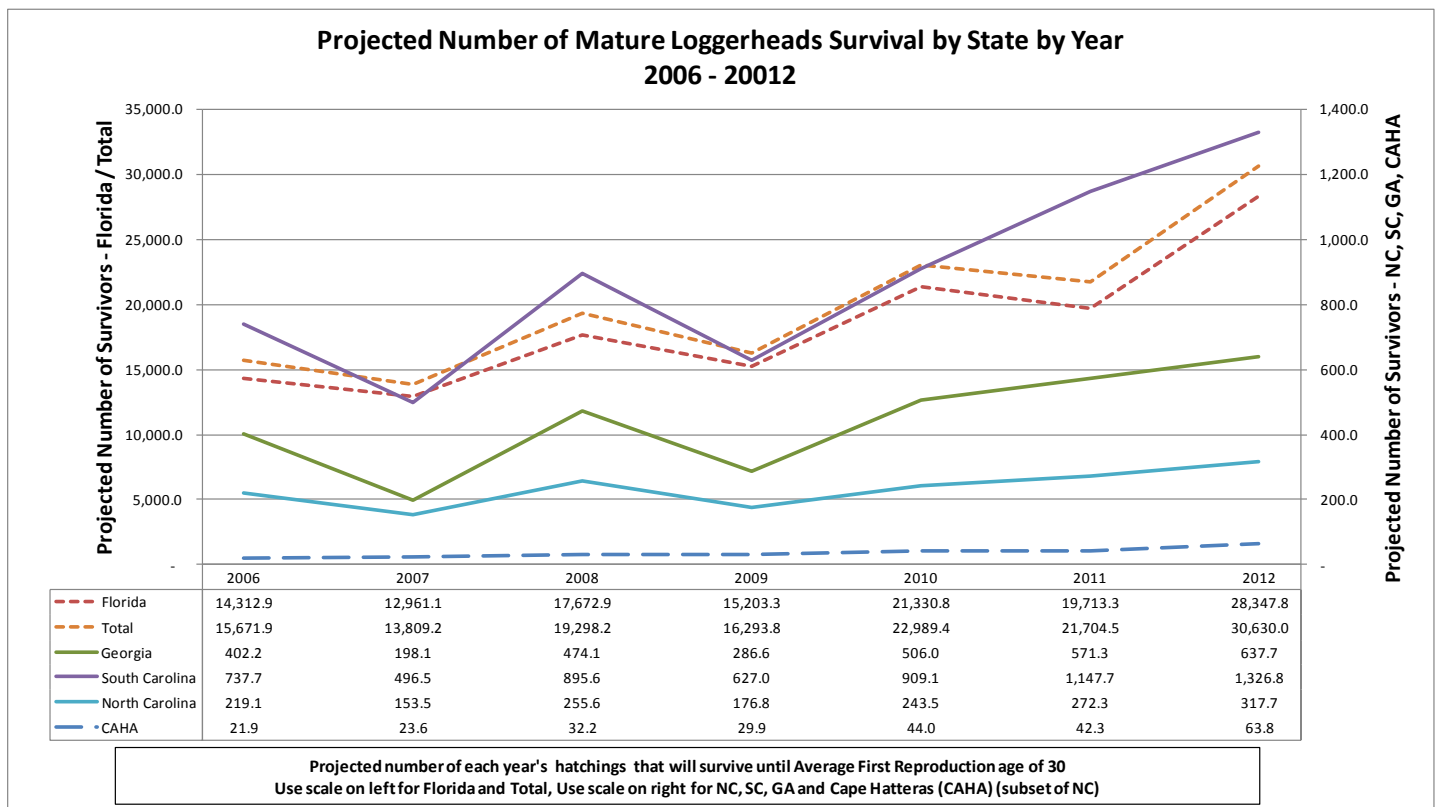
To add perspective, the number of loggerhead nests in North Carolina, South Carolina and Georgia pales in significance when compared to Florida. North Carolina had 343 more nests in 2012 than in 2007, CAHA had 146 more nests (222 versus 76). Florida had 48,817 more nests in 2012. (1)

Other characteristics of the Loggerhead turtle’s life cycle make it even more unlikely that current terrestrial resource management practices are responsible for the impressive increase in nesting in CAHA as well as the entire DPS. The 2009 Status Review (Table 1) reported that the average first reproduction (AFR) or nesting for a female loggerhead occurs at 30 years of age. It further reports that the average remigration interval (years between nesting) at 3 years and the average number of clutches

for a nesting female at 5. The Status Review also reports that the average clutch size is 115 eggs. Using other information on the table, the average number of eggs required to yield one survivor until sexual maturity is optimistically 399.

A number of conclusions could be inferred from this information:

- (1) Females nesting in 2012 are not the same ones that nested in 2011
- (2) Approximately 21,000 females were responsible for the 106,539 clutches in 2012
- (3) Approximately 11,000 females were responsible for the 56,674 clutches in 2009
- (4) Females nesting in 2012 are on average more than 30 years old
- (5) Females nesting in 2012 likely either nested last in 2009 or are first time nesting
- (6) As many as 10,000 female sea turtles reached sexual maturity in 2012
- (7) Potential increases in the adult female population suggested by recent nesting trends are likely a result of either terrestrial protection measures instituted 30 years ago, or higher survival rates of juveniles and adults in the marine environment.
- (8) North Carolina beaches, including those of Cape Hatteras do not materially contribute to the surviving male or female adult population of loggerheads.



Admittedly, these conclusions are a result of a simple analysis of the statistics. However, the scientific data provided in the various Service's publications clearly point in this direction. Further, the data

reinforce our positions that it is unrealistic to expect that the designation of a beach segment as Critical Habitat will lead to higher nesting densities and that only beach segments that are clearly critical to the survival of the species should be designated CHUs.

Economic and Social Impact:

The Draft Economic Statement is a completely inadequate attempt to quantify the financial impact of the proposal on the public.

The Service devoted several pages to the Draft Economic Impact Analysis (DEA) notice of the reopening of the comment period for the proposed rule (July 18, 2013, FR vol. 78, page 42921) and its conclusion that proposal would not have a significant economic impact. The assessment of economic impact to the public is misleading at best or full of errors at worst.

The Service took great care in the notice to point out that

“Critical habitat designation will not affect activities that do not have any Federal involvement; designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the loggerhead is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they fund, permit, or implement that may affect the species. If we finalize this proposed critical habitat designation, consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process.”(FR-78 p. 42925)

The Service discussion in the notice made several attempts to downplay the likelihood of material negative impacts on state and county governments and local businesses as a result of the proposal. “The DEA estimates total potential incremental economic impacts in areas proposed as critical habitat over the next 10 years (2014 to 2023) to be approximately \$1,200,000 (\$150,000 annualized) in present-value terms applying a 7 percent discount rate.”(FR-78 p. 42924)

These Service statements defy common sense. The public bears the full burden of the financial impact of action taken as a result of the proposal by any Federal, state, county or local government agency, large or small business, or individual citizen. The Service statements might lead one to assume that the resource management policies and procedures already enforced for the species are so thorough that no changes will be required. This is an unrealistic expectation.

The Service minimizes the potential financial impact of CHU designation on a variety of coastal projects that occur regularly across the DPS. These projects include coastal and inlet management activities such as dredging and beach re-nourishment, hurricane recovery activities, infrastructure projects (e.g. bridges).

A likely outcome of the proposal will be changes to governmental projects that will add costs beyond what would otherwise be required and unnecessary delays in project completion. Designation will likely require costly biological assessments, additional permitting, modifications to engineered designs and greater monitoring of projects. Also likely, is that organizations similar to the ones that file the Critical Habitat suits against USFWS and NMFS will be emboldened by the rule to file lawsuits against Federal, state and local governments for perceived violations of Critical Habitat.

The Service has also not adequately addressed the social implications of Critical Habitat designation in its proposal. Recreational activities are the most significant uses of the beaches within the DPS. If the designation of CHUs leads to project delays, cost overruns, lawsuits, etc., tourism in affected areas will suffer and communities and local businesses will be directly impacted.

The decision to designate a beach segment as a CHU must be made with an accurate assessment of the associated economic and social costs, and it must be made with complete confidence that the importance of the segment to the survival of the species justifies that designation.

Recommendations:

1. Add seven beach segments and eliminate 23 beach segments as proposed CHUs.

- Seven beach segments, all located in Florida should be added to the list proposed for critical habitat due to the high concentration of historical nesting activity at these locations and / or the proximity of these segments to other high density segments proposed for critical habitat. These segments have an average nest density of 55.3/km and account for 10% of total nests.
- Twenty-three beach segments, eight in North Carolina, two in Mississippi, three in Alabama and ten in Florida should be removed from the list proposed for critical habitat due to the low concentration of historical nesting activity at these locations and / or their distance from high density segments. These segments have an average nest density of 2.7/km and account for 1.6% of total nests.
- The specific beach segments recommended to be excluded from or included to the Service's proposal are identified in appendix B.
- The net effects of the changes would be:
 - 1)Number of Critical Habitat units would drop from 90 to 74.
 - 2)Critical Habitat Length of Units would drop from 1,189.9 km (48%) to 927.9 km (38%).
 - 3)Average annual nesting event included in Critical Habitat units would increase from 55,204 (86%) to 60,691 (94%).
- These changes would increase the coverage of historical nesting activity but reduce the area that would be subjected to additional regulations and management processes as a result of CHU designation.

2. Reassess low density beaches for possible exclusion from designation.

- Recommendation 1. identified 23 segments that should be excluded due to the low number of nests / low density they produce. Many of the remaining 67 proposed CHUs have somewhat higher nesting levels but are still insignificant to the total population. These proposed CHUs should be carefully reviewed to consider if designation is appropriate when potential negative economic and social impacts are properly considered.

3. Political boundaries such as states should not be used to determine the designation of CHUs.

- The process used by the Service to determine which beach segments to propose for CHU designation was executed at the state level rather than for the entire DPS. Each state identified the highest density beaches within its political boundaries and proposed CHUs as if the state was a DPS independent from the other states. This process led to some low population / low density beaches being proposed for CHU and other high population / high density beaches being excluded.
- Critical Habitat designation for the Loggerhead Turtle should not be influenced by the state in which a beach segment is located. The Northwest Atlantic has been scientifically identified as a Distinct Population Segment (DPS). While state identification helps in the collection and context in the presentation of the nesting data for the DPS, it represents arbitrary political boundaries that have no relevance to the importance or lack of importance of any beach segment to the overall survival of the species.
- Recommendation 1. takes this artificiality out of the process and focuses on which beach segments truly matter in the survival of the species.

4. Improve the collection, management, analysis and reporting of nesting data throughout the DPS.

- The actual coverage of nesting activity is likely higher in both the FWS proposal and the recommendations here due to the inclusion of four beach segments in South Carolina for which historical nesting data are not available. These segments are adjacent to other segments that have medium to high nesting densities suggesting that the total nests in CHUs (as well as the total population) could be understated by as much as 1,000 nests.
- Basic data used in the development process should be compiled, prepared and presented in ways that the public can evaluate proposals and reports. In this instance, information about beach segments not chosen for designation and average nest counts and nesting density for CHU and non-CHU beach segments were not provided in the proposal. We requested this information from USFWS through a Freedom of Information Act request. We thank the North Florida Ecological Services Office for their quick response to this request which allowed us to gain a better understanding of the historical statistics that played a huge role in the proposal. However, 18 different documents had to be compiled, consolidated and scrubbed to clearly see the full

picture. (A copy of a consolidated data schedule prepared from the USFWS documents is attached.)

- Ongoing reporting of statistical data should be maintained and presented in a manner that allows the public to understand the progress towards goals established in the Loggerhead Recovery Plan and the estimated impact of the Critical Habitat designation. The data must be managed consistently across all CHU and non-CHUs in the DPS. The 2009 Status report and the rule proposal should have more clearly present data of this nature to assist readers in their interpretation and understanding.

5. Exemptions under section 4(a)(3)(B) should not alter the collection, management, analysis and reporting of nesting data.

- The objective of the ESA is to ensure the recovery of the species, regardless of where the population exists. While CHU designation may not be required under section 4(a)(3)(B), the importance of Cape Canaveral Air Force Station and Patrick Air Force base (including Jetty Park through Cocoa Beach) to the species cannot be ignored. These beach segments are in the heart of the most important stretch of beach critical to the nesting of Loggerhead turtles in the world.
- The Service concluded that Integrated Natural Resources Management Plans (INRMP) for these military installations (as well as others in the DPS) will provide benefit to the loggerhead sea turtle and the installations are exempt from critical habitat designation.
- Due to the significance of these units, their exclusion from designation will mislead the public on the true status of the total terrestrial habitat of the species in any data presentation or analysis.
- Procedures must be in place to include data for these beach segments whenever any Critical Habitat and species recovery analyses, reports, presentations or discussions occur.
- At a minimum, the Service should report three classifications for the beach segments that comprise the whole: Critical Habitat Units, INRMP units, and non-Critical Habitat Units.

6. Exemptions under section 4(b)(2) for St. Johns, Volusia, and Indian River Counties should not be made.

- The existence of an HCP that provide a benefit for the conservation of the Loggerhead turtle does not make these beach segment any more or less critical to the survival of the species. Either these beaches are or are not critical. Many of the issues discussed for 4(a)(3)(b) exemptions equally apply here. If the Service's contentions that no new protective measures are required as a result of designation, these counties are less likely to be affected than other critical habitat locations. On the other hand, designation will help insure that all CHUs are managed consistently to a minimum standard.

7. The Cape Hatteras National Seashore Recreational Area (CAHA) should not be designated at Critical Habitat.

- As discussed previously in this document, one or more organizations have proposed that additional beach segments in North Carolina, including CAHA, be designated as Critical Habitat.
- CAHA, as well as Cape Lookout (CALO) to its south, are far beyond the historical nesting range that has proven critical to the species. Neither of these beaches have historically had a sufficient number of nests or density to warrant designation. Foreseeable events are unlikely to ever change this conclusion. The Service correctly excluded CAHA and CALO in the proposed designation.
- The data (some of which is referenced in recommendation 1) do not justify CHU designation. The Service should dismiss the recommendation made by others to make this designation.

8. High Density nesting beaches should not be excluded from designation due to reasons such as “urbanization, erosion, and/or invasion of exotics which have made the habitat less suitable for nesting”.

- Several very high nesting density beaches were excluded due to these reasons, including
 - 1) Vero Beach 1,727 nests annually ; 23.8 km; 72.6/km density
 - 2) Hillsboro Inlet 1,010 nests annually ; 18.3 km; 55.2/km density
- Exclusion of these and other beach segments due to similar reasons defies common sense. The nests on these two beaches alone exceed the historical number of nests in either North Carolina or Georgia.
- Preventing the loss of these nests would be a much better use of Service resources than managing extensive low density beaches that will never attain these nesting levels.
- Recommendation 1 above reflects this recommendation.

9. The Service should consistently implement resource management programs throughout the DPS that proactively improve the likelihood of nest/hatchling survival while simultaneously improving public access.

- Severe weather events and predation negatively impact nest/egg/hatching survival much more than any human activity. The Service must consider ways to mitigate these risks.
- Nest relocation is a technique used inconsistently within the DPS to improve the odds of eggs survival until hatch. Relocation of nests from locations that are at high risk from weather or other natural events (e.g. tidal over wash) has been used successfully at numerous beaches. Nest relocation has also been especially successful in locations where the landscape has been altered by man. Many arguments against relocation have been presented. It remains a fact that an egg that does not hatch is less desirable than egg that does. If weather events become more severe and frequent as predicted due to climate change, it will be incumbent upon the Service to design and institute more aggressive proactive nest management programs. Serious consideration should be given to developing a comprehensive relocation program to maximize nest survival

rates. The Service should insure that nest relocation is consistently and appropriately applied throughout the DPS to maximize successful hatches.

- Predator control measures are used inconsistently within the DPS. Protocols are often established independently by the local offices of Federal or State agencies with varying levels of coordination with other locations. The Service should define and institute best practices for predator control across the DPS.

10. The Service should prepare an environmental impact statement in compliance with the requirements of the National Environmental Policy Act before making a final decision.

Thank you for the opportunity you have given the public to provide these comments and recommendations.

Respectfully,

David M. Scarborough
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Treasurer@obpa-nc.org

cc: The Honorable Richard Burr
United States Senate
Washington, DC 20510

The Honorable Kay R. Hagan
United States Senate
Washington, DC 20510

The Honorable Walter B. Jones
House of Representatives
Washington, DC 20515

References

- Proposed Rule – 78 FR 18000 (March 25, 2013)
- Proposed Rule – 78 FR 42921 (July 18, 2013)
- “Loggerhead Sea Turtle (*Caretta caretta*) 2009 Status Review Under the Endangered Species Act”
- “Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (*Caretta caretta*) Second Revision” 2009
- Cape Hatteras National Seashore Sea Turtle Monitoring 2012 Annual Report
- <http://www.seaturtle.org>
- <http://myfwc.com/media/2078432/LoggerheadNestingData.pdf>
- <http://georgiawildlife.com/node/3139>
- <http://www.dns.sc.gov/seaturtle/nest.htm>
- FWS -2013 – 01271 - supporting documents for the Proposed Rule obtained from USFWS in response to a FOIA request (list attached)

FWS 2013-01271 - Scarborough, Outer Banks Preservation Association
Data call: Proposed Terrestrial Critical Habitat for
Northwest Atlantic Population of Loggerhead Sea Turtles - Master Index

Release Codes: R - Released DR - Discretionary Release D - Deliberative (Exp. 5, 5 USC 552 (b)(5)) AC - Attorney/Client Privilege (Exp. 5, 5 USC 552 (b)(5))

AWP - Attorney Work Product (Exp. 5, 5 USC 552 (b)(5)) PPI - Personal Privacy Information (Exp. 6, 5 USC 552 (b)(6)) RE - Redacted

COPY - Copyrighted (17 USC 107) STAT - Statutory (Exp. 3, 5 USC 552 (b)(3)) COM - Commercial - Trade Secret (Exp. 4, 5 USC 552 (b)(4))

Key: WO - Washington Headquarters RO - Regional Office FO - Field Office

Reference File Line #	File Name	# of Pages	Record Date	Release Code	Description
Public					
1	Critical_Habitat_Selection.pdf	2	2012	R	Draft discussion paper on Northern Recovery Unit selection process
2	Florida Critical Habitat Exercise.pdf	3	2012	R	FWC Fish and Wildlife Research Institute statewide mean analysis.
3	critical habitat exercise.pdf	6	2013	R	Data analysis on core areas and adjacent locations.
4	20130117_Alabama_Florida Critical Habitat Exercise.pdf	33	1/17/2013	R	Data analysis for Alabama and Florida combined.
5	Florida_Critical_Habitat_(Beaches)_-_Central_Eastern_Florida_1-17-2013.pdf	1	1/17/2013	R	Florida - Central Eastern - mean nesting and density analysis
6	Florida_Critical_Habitat_(Beaches)_-_Central_Western_Florida_1-17-2013.pdf	1	1/17/2013	R	Florida - Central Western - mean nesting and density analysis
7	Florida_Critical_Habitat_(Beaches)_-_Florida_Panhandle_1-17-2013.pdf	1	1/17/2013	R	Florida - Panhandle - mean nesting and density analysis
8	Florida_Critical_Habitat_(Beaches)_-_Northeast_Florida_1-17-2013.pdf	1	1/17/2013	R	Florida - Northeast - mean nesting and density analysis
9	Florida_Critical_Habitat_(Beaches)_-_Southeast_Florida_1-17-2013.pdf	1	1/17/2013	R	Florida - Southeast - mean nesting and density analysis
10	Florida_Critical_Habitat_(Beaches)_-_Southwest_Florida_1-17-2013.pdf	1	1/17/2013	R	Florida - Southwest - mean nesting and density analysis
11	Georgia_Critical_Habitat_(Beaches)_-_1-30-2013.pdf	1	1/30/2013	R	Georgia mean nesting and density analysis
12	North_Carolina_Critical_Habitat_(Beaches)_-_1-30-2013.pdf	1	1/30/2013	R	North Carolina mean nesting and density analysis
13	South_Carolina_Critical_Habitat_(Beaches)_-_1-30-2013.pdf	2	1/30/2013	R	South Carolina mean nesting and density analysis
14	Summary_of_Critical_Habitat_(Beaches)_-_Peninsular_FL_RU_1-30-2013.pdf	3	1/30/2013	R	Summary analysis of Peninsular Florida
15	20130718_NC_nesting_numbers.pdf	1	7/18/2013	R	Data analysis for North Carolina
MS Nesting Selection					
16	20120424_email_NPS_FWS_nesting in MS.pdf	2	4/24/2012	R	Email discussion thread regarding Mississippi Islands and shorelines relative to loggerhead nesting in that state.
17	GUIS MS Sea Turtle Nesting 1990 -2001.pdf	1	9/1/2012	R	Gulf Islands National Seashore, Mississippi District overflight summary of loggerhead sea turtle nesting from 1990 through 2001
18	20130826_memo_FWs_Selection for MS.pdf	1	8/26/2013	R	Memo to File: Selection of loggerhead terrestrial critical habitat in MS for Northern Gulf of Mexico Recovery Unit.
Total Number of Pages:		62			

Northwest Atlantic DPS

	Destruction/modification of habitat		Overuse for commercial, recreational, scientific, or education		Disease or predation		Other natural or manmade factors		All sources (besides regulatory measures and natural threats)
Lifestage	Magnitude of the population level effect (High, Medium, Low, Very Low)	Trend of threat (Increasing, Decreasing, Stable, Unknown, N/A)	Magnitude of the population level effect (High, Medium, Low, Very Low)	Trend of threat (Increasing, Decreasing, Stable, Unknown, N/A)	Magnitude of the population level effect (High, Medium, Low, Very Low)	Trend of threat (Increasing, Decreasing, Stable, Unknown, N/A)	Magnitude of the population level effect (High, Medium, Low, Very Low)	Trend of threat (Increasing, Decreasing, Stable, Unknown, N/A)	Cumulative Magnitude of the level effect within the life stage (2 options)
Eggs/hatchlings	L	I	VL	S	L	S	L	I	Max value: 0.31 High/low range: 0.31/0.03
Neritic juveniles	L	I	L	S	L	I	M	I	Max value: 0.50 High/low range: 0.50/0.13
Oceanic juveniles	VL	I	VL	S	VL	S	M/H	S/I	Max value: 0.28 High/low range: 0.28/0.10
Neritic adults	L	I	L	S	L	I	M	I	Max value: 0.50 High/low range: 0.50/0.13
Oceanic adults	VL	I	VL	S	VL	S	M/H	S/I	Max value: 0.28 High/low range: 0.28/0.10
Nesting females	VL	S	VL	S	VL	S	VL	S	Max value: 0.04 High/low range: 0.04/0.00

Threat Level:

VL: Very Low (0.00-0.01)

L: 1-10% (0.01-0.1)

M: 10-20% (0.1-0.2)

H: >20% (0.2-0.25)

Actual numbers provided if known

Table Source:

"Loggerhead Sea Turtle (Caretta Caretta) 2009 Status Review Under the U.S. Endangered Species Act" and attached threats matrices found at"

<http://www.nmfs.noaa.gov/pr/species/statusreviews.htm>

http://www.nmfs.noaa.gov/pr/species/turtles/loggerhead_threats.xls

Appendix A

Recommended Changes to Critical Habitat Units Designated in Proposed Rule

	<u>km</u>		<u>nests</u>		<u>density</u>
Total Critical Habitat in Proposed Rule	1,189.9	48.3%	55,205.0	85.5%	45.6
Total Non-Critical Habitat	1,274.1	51.7%	9,391.0	14.5%	7.6
Total of Beaches in DPS	2,464.0	100.0%	64,596.0	100.0%	26.5

Recommended Additions to Proposed Critical Habitat Units

FL - Ponce Inlet through New Smyrna Beach	17.5		243.0		13.9
FL - Cape Canaveral Air Force Station	21.0		1,766.0		84.1
FL - Jetty Park through Cocoa Beach	15.2		491.0		32.3
FL - Patrick Air Force Base	7.0		998.0		142.5
FL - Vero Beach to Ft. Pierce Inlet	23.8		1,727.0		72.6
FL - Hillsboro Inlet to Port Everglades	18.3		1,010.0		55.2
FL - Port Everglades through Golden Beach	15.2		286.0		18.8
Total Proposed Additions to CHU designation	118.0	4.8%	6,521.0	10.1%	55.3

Recommended Exclusions from Proposed Critical Habitat Units

Logg-T-NC-01 : NC - Bogue Banks, Carteret County	38.9		34.0		0.9
Logg-T-NC-02 : NC - Bear Island, Onslow County	6.6		19.0		3.7
Logg-T-NC-03 : NC - Topsail Island, Onslow and Pender Counties	35.0		86.0		2.4
Logg-T-NC-04 : NC - Lea-Hutaff Island, Pender County	6.1		6.0		1.0
Logg-T-NC-05 : NC - Pleasure Island, New Hanover County	18.6		45.0		2.4
Logg-T-NC-06 : NC - Bald Head Island, Brunswick County	15.1		70.0		4.8
Logg-T-NC-07 : NC - Oak Island, Brunswick County	20.9		116.0		5.7
Logg-T-NC-08 : NC - Holden Beach, Brunswick County	13.4		27.0		2.1
Logg-T-FL-17 : FL - Long Key, Monroe County	4.2		17.0		3.1
Logg-T-FL-18 : FL - Bahia Honda Key, Monroe County	3.7		14.0		3.0
Logg-T-FL-40 : FL - Perdido Key (incl. Gulf Islands National Seashore)	20.2		19.0		0.8
Logg-T-FL-41 : FL - St Joe Beach and Mexico Beach	18.7		29.0		1.2
Logg-T-FL-42 : FL - St. Joseph Peninsula	23.5		170.0		6.7
Logg-T-FL-43 : FL - Cape San Blas	11.0		22.0		2.1
Logg-T-FL-44 : FL - St. Vincent Island	15.1		50.0		3.1
Logg-T-FL-45 : FL - Little St George Island	15.4		78.0		5.3
Logg-T-FL-46 : FL - St. George Island	30.7		148.0		4.9
Logg-T-FL-47 : FL - Dog Island	13.1		27.0		2.3
Logg-T-MS-01 : MS - Horn Island, Jackson County	18.6		na		na
Logg-T-MS-02 : MS - Petit Bois Island, Jackson County	9.8		na		na
Logg-T-AL-01 : AL - Mobile Bay-Little Lagoon Pass Baldwin County	28.0		45.0		1.6
Logg-T-AL-02 : AL - Gulf State Park-Perdido Pass, Baldwin County	10.7		8.0		0.7
Logg-T-AL-03 : AL - Perdido Pass-Florida-Alabama line, Baldwin County	3.3		5.0		1.2
Total Proposed Exclusions from CHU designation	380.6	15.4%	1,035.0	1.6%	2.7

Total Critical Habitat after Recommendations	927.3	37.6%	60,691.0	94.0%	65.4
Total Non-Critical Habitat after Recommendations	1,536.7	62.4%	3,905.0	6.0%	2.5
Total of Beaches in DPS	2,464.0	100.0%	64,596.0	100.0%	26.2

Appendix B

Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment

Seq. Beach ID	All Beach Units (CHU and non-CHU) CHU ID and Description - defined in Table 1 - Proposed Rule Non-CHU Description - (USFWS Supporting Documents - Proposed Rule)		Critical Habitat Units - Lengths and Ownership defined in Table 1 Loggerhead Sea Turtle Terrestrial Habitat Propose Rule						All Beach Units (CHU and non-CHU) Lengths and Nesting Data (USFWS Supporting Documents - Proposed Rule)					All Beach Units (CHU and non-CHU) Yearly Nests Counts (USFWS Supporting Documents - Proposed Rule)							
	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total					
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011
Northern Recovery Unit																					
North Carolina																					
1		VA line to Oregon Inlet								90.0	55.9	10.2	0.1	0.2	4	10	9	7	8	23	
2		Hatteras Island								84.4	52.4	87.8	1.0	1.7	59	59	103	80	110	116	
3		Ocracoke Island								25.9	16.1	30.0	1.2	1.9	23	25	24	31	48	29	
4		North Core Banks								30.4	18.9	45.2	1.5	2.4	58	19	34	61	45	54	
5		South Core Banks								45.6	28.3	62.2	1.4	2.2	55	43	53	68	78	76	
6		Shackleford Banks								14.2	8.8	17.0	1.2	1.9	14	8	12	11	30	27	
7	LOGG-T-NC-01:	Bogue Banks, Carteret County	38.9	(24.2)	-	-	4.6	(2.9)	34.3	(21.3)	39.1	24.3	34.3	0.9	1.4	34	27	31	35	52	27
8	LOGG-T-NC-02:	Bear Island, Onslow County	6.6	(4.1)	-	-	6.6	(4.1)	-	-	5.1	3.2	19.2	3.7	6.0	10	17	25	8	18	37
9		Onslow Beach								11.8	7.3	45.8	3.9	6.2	36	27	63	35	47	67	
10	LOGG-T-NC-03:	Topsail Island, Onslow and Pender Counties	35.0	(21.8)	-	-	-	-	35.0	(21.8)	36.1	22.4	86.2	2.4	3.8	94	62	89	58	104	110
11	LOGG-T-NC-04:	Lea-Hutaff Island, Pender County	6.1	(3.8)	-	-	0.5	(0.3)	5.6	(3.5)	5.9	3.7	5.7	1.0	1.6	12	-	9	2	10	1
12		Figure Eight Island								7.3	4.5	13.5	1.8	3.0	6	5	22	10	13	25	
13		Wrightsville Beach								7.5	4.7	2.3	0.3	0.5	4	4	2	1	1	2	
14		Masonboro Island								12.1	7.5	19.8	1.6	2.6	23	22	15	6	17	36	
15	LOGG-T-NC-05:	Pleasure Island, New Hanover County	18.6	(11.5)	-	-	6.8	(4.2)	11.8	(7.3)	19.1	11.9	45.3	2.4	3.8	50	25	71	27	40	59
16	LOGG-T-NC-06:	Bald Head Island, Brunswick County	15.1	(9.4)	-	-	5.8	(3.6)	9.3	(5.8)	14.7	9.1	70.0	4.8	7.7	63	50	104	36	72	95
17	LOGG-T-NC-07:	Oak Island, Brunswick County	20.9	(13.0)	-	-	-	-	20.9	(13.0)	20.5	12.7	116.0	5.7	9.1	151	95	167	83	104	96
18	LOGG-T-NC-08:	Holden Beach, Brunswick County	13.4	(8.3)	-	-	-	-	13.4	(8.3)	12.7	7.9	27.2	2.1	3.4	28	18	37	23	27	30
19		Ocean Isle								9.4	5.8	18.3	1.9	3.1	26	8	11	25	17	23	
20		Sunset Beach								6.3	3.9	9.7	1.5	2.5	12	10	8	8	6	14	
		North Carolina State Totals	154.6	(96.1)	-	-	24.3	(15.1)	130.3	(81.0)	498.2	309.6	765.7	1.5	2.5	762	534	889	615	847	947
South Carolina																					
21		Waits Island								4.4	2.7	11.6	2.8	4.5	NS	17	13	7	2	19	
22		North Myrtle Beach/Briarcliffe Acres								16.5	10.3	16.0	1.0	1.5	-	1	5	2	11	21	
23		City of Myrtle Beach								19.6	12.2	16.0		#####	-	5	16	4	3	16	
24		Myrtle Beach State Park and Long Bay								3.2	2.0	2.5	1.0	1.6	-	2	7	1	1	4	
25		Surfside Beach								3.2	2.0	5.0	1.6	2.5	3	1	3	1	1	5	
26		Garden City Beach								8.0	5.0	3.5	0.4	0.7	-	7	2	-	1	6	
27		Huntington Beach State Park								5.0	3.1	11.0	2.3	3.7	14	3	10	7	9	23	
28		Litchfield Beach								2.0	1.2	16.5	2.6	4.1	17	8	14	9	9	42	
29		Pawleys Island								5.9	3.7	15.2	2.7	4.4	10	10	22	9	16	24	
30		DeBordieu Beach								4.3	2.7	19.8	5.2	8.4	18	18	21	19	12	31	
31		Hobcaw Barony								3.3	2.1	22.2	6.6	10.7	31	18	17	19	17	31	
32	LOGG-T-SC-01:	North Island, Georgetown County	13.2	(8.2)	-	-	13.2	(8.2)	-	-	13.8	8.6	158.0	12.3	19.8	NS	NS	NS	NS	26	158
33	LOGG-T-SC-02:	Sand Island, Georgetown County	4.7	(2.9)	-	-	4.7	(2.9)	-	-	4.9	3.0	175.0	34.0	54.7	NS	NS	33	24	66	175
34	LOGG-T-SC-03:	South Island, Georgetown County	6.7	(4.2)	-	-	6.7	(4.2)	-	-	6.3	3.9	123.5	19.8	31.9	102	85	169	97	138	150
35	LOGG-T-SC-04:	Cedar Island, Georgetown County	4.1	(2.5)	-	-	4.1	(2.5)	-	-	2.9	1.8			#####	NS	NS	NS	NS	NS	NS
36	LOGG-T-SC-05:	Murphy Island, Charleston County	8.0	(5.0)	-	-	8.0	(5.0)	-	-	8.2	5.1			#####	NS	NS	NS	NS	NS	NS
37	LOGG-T-SC-06:	Cape Island, Charleston County	8.3	(5.1)	8.3	(5.1)	-	-	-	-	9.6	6.0	923.7	96.1	154.7	1,027	531	1,114	750	1,045	1,075

Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment

Seq. Beach ID	All Beach Units (CHU and non-CHU) CHU ID and Description - defined in Table 1 - Proposed Rule Non-CHU Description - (USFWS Supporting Documents - Proposed Rule)		Critical Habitat Units - Lengths and Ownership defined in Table 1 Loggerhead Sea Turtle Terrestrial Habitat Propose Rule								All Beach Units (CHU and non-CHU) Lengths and Nesting Data (USFWS Supporting Documents - Proposed Rule)					All Beach Units (CHU and non-CHU) Yearly Nests Counts (USFWS Supporting Documents - Proposed Rule)						
	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total						
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011	
38	LOGG-T-SC-07:	Lighthouse Island, Charleston County	5.3	(3.3)	5.3	(3.3)	-	-	-	-	5.1	3.2	190.5	36.2	58.3	195	178	211	141	177	241	
39	LOGG-T-SC-08:	Raccoon Key, Charleston County	4.8	(3.0)	4.8	(3.0)	-	-	-	-	5.0	3.1		#####		NS	NS	NS	NS	NS	NS	
40		Bull Island								11.3	7.0	120.2	11.8	19.0	NS		116	105	109	138	133	
41		Capers Island								5.7	3.5	5.0	0.8	1.3	NS	NS	NS	NS	NS	11	5	
42		Dewees Island								4.4	2.7	15.0	3.8	6.0	21	NS	7	18	16	15	13	
43		Isle of Palms								11.6	7.2	24.8	2.3	3.8	15		23	27	19	23	42	
44		Sullivan's Island								6.2	3.9	2.7	0.6	1.0	-		3	3	4	2	4	
45		Morris Island								6.4	4.0	4.0	0.8	1.4	NS	NS	NS	NS		1	4	
46	LOGG-T-SC-09:	Folly Island, Charleston County	11.2	(7.0)	-	-	-	-	11.2	(7.0)	11.0	6.8	50.5	4.7	7.5	51	NS	20	62	35	53	82
47	LOGG-T-SC-10:	Kiawah Island, Charleston County	17.0	(10.6)	-	-	-	-	17.0	(10.6)	17.9	11.1	188.8	14.0	22.5	201	98	231	128	219	256	
48	LOGG-T-SC-11:	Seabrook Island, Charleston County	5.8	(3.6)	-	-	-	-	5.8	(3.6)	6.2	3.9	47.5	7.7	12.4	64	16	62	37	68	38	
49	LOGG-T-SC-12:	Botany Bay Island and Botany Bay Plantation, Charleston County	6.6	(4.1)	-	-	4.0	(2.5)	2.6	(1.6)	6.3	3.9	249.8	41.9	67.4	214	112	379	196	273	325	
50	LOGG-T-SC-13:	Interlude Beach, Charleston County	0.9	(0.6)	-	-	0.9	(0.6)	-	-	0.9	0.6	10.0	5.0	8.0	NS	NS	NS	NS		13	10
51	LOGG-T-SC-14:	Edingsville Beach, Charleston County	2.7	(1.7)	-	-	-	-	2.7	(1.7)	2.9	1.8	64.3	21.3	34.2	90	57	46	64	58	71	
52	LOGG-T-SC-15:	Edisto Beach State Park, Colleton County	2.2	(1.4)	-	-	2.2	(1.4)	-	-	2.4	1.5	69.8	32.4	52.1	71	65	50	65	103	65	
53	LOGG-T-SC-16:	Edisto Beach, Colleton County	6.8	(4.2)	-	-	-	-	6.8	(4.2)	7.2	4.5	60.3	7.8	12.6	50	NS	66	49	75	80	42
54	LOGG-T-SC-17:	Pine Island, Colleton County	1.2	(0.7)	-	-	1.2	(0.7)	-	-	0.8	0.5		#####		NS	NS	NS	NS	NS	NS	
55	LOGG-T-SC-18:	Otter Island, Colleton County	4.1	(2.5)	-	-	4.1	(2.5)	-	-	3.9	2.4	72.0	16.9	27.2	NS	NS	NS	NS		5	72
56	LOGG-T-SC-19:	Harbor Island, Beaufort County	2.9	(1.8)	-	-	-	-	2.9	(1.8)	2.9	1.8	31.7	8.7	14.0	28	18	21	25	30	68	
57		Hunting Island								7.5	4.7	74.0	11.5	18.5	62	64	60	80	110	68		
58		Fripp Island								4.8	3.0	33.5	8.6	13.8	31	14	35	27	25	69		
59		Pritchards Island								4.3	2.7	53.3	12.3	19.7	66	26	34	NS	21	87		
60	LOGG-T-SC-20:	Little Capers Island, Beaufort County	4.6	(2.9)	-	-	-	-	4.6	(2.9)	4.5	2.8	39.0	8.7	13.9	NS	NS	NS	NS		39	39
61	LOGG-T-SC-21:	St Phillips Island, Beaufort County	2.3	(1.4)	-	-	-	-	2.3	(1.4)	2.4	1.5	18.0	17.5	28.1	NS	NS	7	14	NS	3	18
62	LOGG-T-SC-22:	Bay Point Island, Beaufort County	4.3	(2.7)	-	-	-	-	4.3	(2.7)	4.6	2.9	67.0	14.0	22.5	NS	NS	NS	NS		35	67
63		Hilton Head Island								23.6	14.7	206.5	9.6	15.4	185	112	200	180	238	324		
64		Daufuskie Island								8.0	5.0	49.2	8.4	13.6	NS	NS	19	62	31	65	69	
65		Turtle Island								0.6	0.4		#####		NS	NS	NS	NS	NS	NS		
66		Oyster Bed Island								0.2	0.1		#####		NS	NS	NS	NS	NS	NS		
South Carolina State Totals			127.7	(79.3)	18.4	(11.4)	48.9	(30.4)	60.4	(37.5)	299.7	186.2	3,266.9	10.9	17.5	2,566	1,727	3,115	2,181	3,162	3,992	
Georgia																						
67		Tybee Island								7.0	4.3	9.0	1.3	2.1	10	11	6	8	10	9		
68	LOGG-T-GA-01:	Little Tybee Island, Chatham County	8.6	(5.3)	-	-	8.6	(5.3)	-	-	2.6	1.6	8.0	3.1	5.0	7	3	3	3	16	16	
69	LOGG-T-GA-02:	Wassaw Island, Chatham County	10.1	(6.3)	9.8	(6.1)	-	-	0.3	(0.2)	10.8	6.7	123.3	11.4	18.4	141	63	120	91	160	165	
70	LOGG-T-GA-03:	Ossabaw Island, Chatham County	17.1	(10.6)	-	-	17.1	(10.6)	-	-	17.7	11.0	209.7	11.9	19.1	202	64	224	104	216	448	
71	LOGG-T-GA-04:	St Catherines Island, Liberty County	18.4	(11.5)	-	-	-	-	18.4	(11.5)	20.1	12.5	123.3	6.1	9.9	124	51	146	102	151	166	
72	LOGG-T-GA-05:	Blackbeard Island, McIntosh County	13.5	(8.4)	13.5	(8.4)	-	-	-	-	14.4	8.9	206.2	14.3	23.0	227	104	261	142	249	254	
73	LOGG-T-GA-06:	Sapelo Island, McIntosh County	9.3	(5.8)	-	-	9.3	(5.8)	-	-	9.9	6.2	97.0	9.8	15.8	82	63	153	71	79	134	
74		Little St. Simons Island								10.9	6.8	77.8	7.1	11.5	58	36	113	52	111	97		
75		Sea Island								8.7	5.4	68.8	7.9	12.7	64	52	74	75	87	61		
76		St. Simons Island								4.1	2.5	2.2	0.5	0.9	1	3	1	2	5	1		

Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment

Seq. Beach ID	All Beach Units (CHU and non-CHU) CHU ID and Description - defined in Table 1 - Proposed Rule Non-CHU Description - (USFWS Supporting Documents - Proposed Rule)		Critical Habitat Units - Lengths and Ownership defined in Table 1 Loggerhead Sea Turtle Terrestrial Habitat Propose Rule								All Beach Units (CHU and non-CHU) Lengths and Nesting Data (USFWS Supporting Documents - Proposed Rule)					All Beach Units (CHU and non-CHU) Yearly Nests Counts (USFWS Supporting Documents - Proposed Rule)					
	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total					
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011
77		Jekyll Island									14.7	9.1	122.7	8.3	13.4	137	47	166	71	139	176
78	LOGG-T-GA-07:	Little Cumberland Island, Camden County	4.9	(3.0)	-	-	-	-	4.9	(3.0)	4.9	3.0	43.3	8.8	14.2	23	15	47	27	54	94
79	LOGG-T-GA-08:	Cumberland Island, Camden County	29.7	(18.4)	25.2	(15.7)	-	-	4.5	(2.8)	28.4	17.6	322.2	11.3	18.2	323	177	335	249	483	366
		Georgia State Totals	111.5	(69.3)	48.4	(30.1)	34.9	(21.7)	28.1	(17.5)	154.2	95.8	1,413.5	9.2	14.8	1,399	689	1,649	997	1,760	1,987
		Northern Recovery Unit Totals									952.0	591.6	5,446.1	5.7	9.2	4,727	2,950	5,653	3,793	5,769	6,926
		Northern Recovery Unit - Critical Habitat Totals	393.7	(244.7)	66.8	(41.5)	109.2	(67.9)	217.7	(135.3)	391.7	243.4	4,076.4	10.4	16.7	3,664	2,087	4,263	2,698	4,266	5,050
		Northern Recovery Unit - Non Critical Habitat Totals									560.3	348.1	1,369.7	2.4	3.9	1,063	863	1,390	1,095	1,503	1,876

Peninsular Florida Recovery Unit

Florida																					
80		Florida/Georgia border to Nassau Sound									18.4	11.4	121.5	6.6	10.6	97	63	132	92	199	146
81		Nassau Sound to St. Johns River									12.3	7.6	44.8	3.7	5.9	43	4	43	29	58	92
82		St. Johns River through Hanna Park									4.2	2.6	21.8	5.2	8.4	25	6	20	20	36	24
	LOGG-T-FL-01:	South Duval County Beaches—Old Ponte Vedra, Duval and St Johns Counties																			
83			25.2	(15.6)	-	-	-	-	25.2	(15.6)	26.4	16.4	130.7	5.0	8.0	98	79	91	76	253	187
	LOGG-T-FL-02:	Guana Tolomato Matanzas NERR—St Augustine Inlet, St Johns County	24.1	(15.0)	-	-	7.2	(4.4)	17.0	(10.6)	24.3	15.1	228.3	9.4	15.0	102	125	180	138	489	336
84			22.4	(14.0)	1.4	(0.9)	5.6	(3.5)	15.4	(9.6)	25.4	15.8	55.7	2.2	3.5	16	45	51	46	92	84
85		St Augustine Inlet—Matanzas Inlet, St Johns County																			
	LOGG-T-FL-04:	River to Sea Preserve at Marineland—North Peninsula State Park, F lagler and Volusia Counties																			
86			31.8	(19.8)	-	-	6.1	(3.8)	25.7	(16.0)	39.6	24.6	400.3	10.1	16.3	279	274	470	286	624	469
87		Ormond-by-the-Sea—Granada Blvd, Volusia County	11.1	(6.9)	-	-	-	-	11.1	(6.9)	11.3	7.0	145.2	12.9	20.7	102	167	172	102	189	139
88		Daytona Beach to Ponce Inlet									28.9	18.0	116.5	4.0	6.5	86	97	110	163	117	126
89		Ponce Inlet through New Smyrna Beach									17.5	10.9	242.5	13.9	22.3	192	249	336	162	286	230
90		Canaveral National Seashore North, Volusia County	18.2	(11.3)	18.2	(11.3)	-	-	-	-	18.1	11.2	1,225.5	67.7	109.0	935	949	1,530	966	1,563	1,410
	LOGG-T-FL-07:	Canaveral National Seashore South—Merritt Island National Wildlife Refuge (NWR)—Kennedy Space, Brevard County	28.4	(17.6)	28.4	(17.6)	-	-	-	-	29.9	18.6	2,895.8	96.9	155.9	2,206	2,131	3,213	2,554	3,850	3,421
91											21.0	13.0	1,765.5	84.1	135.3	1,825	1,195	1,780	1,601	2,292	1,900
92		Cape Canaveral Air Force Station									15.2	9.4	490.8	32.3	52.0	365	432	562	368	723	495
93		Jetty Park through Cocoa Beach									7.0	4.3	997.7	142.5	229.4	889	903	1,044	661	1,433	1,056
94		Patrick Air Force Base																			
95		Central Brevard Beaches, Brevard County	19.5	(12.1)	-	-	-	-	19.5	(12.1)	19.5	12.1	4,164.5	213.6	343.7	3,586	3,528	4,922	3,069	4,961	4,921
96		South Brevard Beaches, Brevard County	20.8	(12.9)	4.2	(2.6)	1.5	(1.0)	15.0	(9.3)	22.6	14.0	9,680.0	428.3	689.3	9,218	6,640	9,721	8,941	12,482	11,078
97		Sebastian Inlet—Indian River Shores, Indian River County	21.4	(13.3)	0.9	(0.6)	3.2	(2.0)	17.4	(10.8)	22.1	13.7	2,689.8	121.7	195.9	2,479	2,102	2,766	2,378	3,472	2,942
98		Vero Beach to Ft. Pierce Inlet									23.8	14.8	1,727.0	72.6	116.8	1,095	1,287	1,476	1,529	2,634	2,341
99		Fort Pierce Inlet—St Lucie Inlet, St Lucie and Martin Counties	35.2	(21.9)	-	-	-	-	35.2	(21.9)	36.5	22.7	5,238.7	143.5	231.0	4,066	4,409	5,309	4,515	6,428	6,705
100		St Lucie Inlet—Jupiter Inlet, Martin and Palm Beach Counties	24.9	(15.5)	4.8	(3.0)	3.7	(2.3)	16.4	(10.2)	26.5	16.5	7,543.5	285.1	458.8	5,849	5,177	8,181	7,593	10,167	8,294
101		Jupiter Inlet—Lake Worth Inlet, Palm Beach County	18.8	(11.7)	-	-	2.5	(1.5)	16.3	(10.1)	19.3	12.0	6,428.8	333.1	536.1	5,833	5,513	6,315	5,683	7,829	7,400
102		Lake Worth Inlet—Boynton Inlet, Palm Beach County	24.3	(15.1)	-	-	-	-	24.3	(15.1)	19.2	11.9	2,566.0	135.5	218.0	2,301	2,276	2,566	2,261	2,737	3,255
103		Boynton Inlet—Boca Raton Inlet, Palm Beach County	22.6	(14.1)	-	-	-	-	22.6	(14.1)	24.6	15.3	1,702.5	69.3	111.6	1,451	1,407	1,630	1,508	2,110	1,945

Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment

Seq. Beach ID	All Beach Units (CHU and non-CHU) CHU ID and Description - defined in Table 1 - Proposed Rule Non-CHU Description - (USFWS Supporting Documents - Proposed Rule)		Critical Habitat Units - Lengths and Ownership defined in Table 1 Loggerhead Sea Turtle Terrestrial Habitat Propose Rule								All Beach Units (CHU and non-CHU) Lengths and Nesting Data (USFWS Supporting Documents - Proposed Rule)					All Beach Units (CHU and non-CHU) Yearly Nests Counts (USFWS Supporting Documents - Proposed Rule)					
	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total					
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011
104	LOGG-T-FL-16:	Boca Raton Inlet-Hillsboro Inlet, Palm Beach and Broward Counties	8.3	(5.2)	-	-	-	-	8.3	(5.2)	8.6	5.3	753.5	87.6	141.0	789	546	794	627	934	831
105		Hillsboro Inlet to Port Everglades								18.3	11.4	1,010.3	55.2	88.9	876	914	946	1,003	1,145	1,178	
106		Port Everglades through Golden Beach								15.2	9.4	286.0	18.8	30.3	231	252	306	264	351	312	
107		Miami Beaches								21.6	13.4	135.0	6.3	10.1	107	123	140	128	124	188	
108		Fisher Island								0.7	0.4	5.3	7.1	11.5	2	7	1	5	8	9	
109		Virginia Key								3.9	2.4	48.0	12.2	19.6	81	44	26	59	34	44	
110		Key Biscayne								6.0	3.7	114.5	19.1	30.7	74	90	117	141	152	113	
111		Elliott Key (Biscayne NP)								3.1	1.9	7.5	2.4	3.9	12	4	5	6	13	5	
112		Lower Matecumbe Key								2.7	1.7	4.3	1.7	2.7	2	7	6	3	3	5	
113	LOGG-T-FL-17:	Long Key, Monroe County	4.2	(2.6)	-	-	4.2	(2.6)	-	-	5.5	3.4	17.0	3.1	5.0	18	23	10	20	15	16
114		Little Crawl Key to Vaca Key								3.8	2.4	3.3	0.9	1.4	2	-	12	4	1	1	
115	LOGG-T-FL-18:	Bahia Honda Key, Monroe County	3.7	(2.3)	-	-	3.7	(2.3)	-	-	4.7	2.9	14.0	3.0	4.8	9	13	18	20	13	11
116		Big Pine Key and Key West								8.1	5.0	12.2	1.6	2.5	5	19	2	16	24	7	
117		Anclote Key								9.1	5.7	3.5	0.4	0.6	1	4	9	5	-	2	
118		Honeymoon Island								6.4	4.0	2.2	0.3	0.5	3	2	1	5	2	-	
119		Hurricane Pass to Blind Pass								37.5	23.3	101.7	2.7	4.4	116	48	105	133	113	95	
120		Blind Pass to Pass-a-Grille								6.4	4.0	16.0	2.5	4.0	15	3	30	27	11	10	
121		Shell Key								4.0	2.5	2.3	0.6	0.9	4	1	4	4	1	-	
122		Mullet Key								9.6	6.0	34.8	3.6	5.8	26	20	47	38	26	52	
123		Egmont Key								4.8	3.0	34.7	7.2	11.6	21	21	50	33	29	54	
124		Anna Maria Island								11.7	7.3	139.5	11.9	19.2	118	133	147	161	135	143	
125	LOGG-T-FL-19:	Longboat Key, Manatee and Sarasota Counties	16.0	(9.9)	-	-	-	-	16.0	(9.9)	19.2	11.9	216.8	11.3	18.2	160	143	252	216	265	265
126		Lido Key								5.5	3.4	28.7	5.2	8.4	24	33	31	17	17	50	
127	LOGG-T-FL-20:	Siesta and Casey Keys, Sarasota County	20.8	(13.0)	-	-	-	-	20.8	(13.0)	20.8	12.9	591.5	28.4	45.8	549	401	622	545	741	691
128	LOGG-T-FL-21:	Venice Beaches and Manasota Key, Sarasota and Charlotte Counties	26.0	(16.1)	-	-	1.9	(1.2)	24.1	(15.0)	26.9	16.7	1,825.3	68.0	109.4	1,487	1,326	2,208	1,673	1,861	2,397
129	LOGG-T-FL-22:	Knight, Don Pedro, and Little Gasparilla Islands, Charlotte County	10.8	(6.7)	-	-	1.9	(1.2)	8.9	(5.5)	11.6	7.2	262.7	22.6	36.4	147	247	356	275	236	315
130	LOGG-T-FL-23:	Gasparilla Island, Charlotte and Lee Counties	11.2	(6.9)	-	-	1.5	(1.0)	9.6	(6.0)	13.8	8.6	252.3	18.3	29.5	218	162	266	283	275	310
131	LOGG-T-FL-24:	Cayo Costa, Lee County	13.5	(8.4)	-	-	13.2	(8.2)	0.3	(0.2)	9.9	6.2	126.5	12.4	19.9	57	76	120	172	149	185
132		North Captiva Island								6.5	4.0	36.0	5.7	9.2	20	44	-	31	48	37	
133	LOGG-T-FL-25:	Captiva Island, Lee County	7.6	(4.7)	-	-	-	-	7.6	(4.7)	8.0	5.0	78.0	9.8	15.7	58	53	137	80	64	76
134	LOGG-T-FL-26:	Sanibel Island West, Lee County	12.2	(7.6)	-	-	-	-	12.2	(7.6)	10.5	6.5	175.0	16.7	26.8	107	140	244	155	135	269
135		Sanibel Island East								9.6	6.0	28.3	3.0	4.7	18	35	34	26	20	37	
136		Estero Island								11.3	7.0	21.0	1.9	3.0	12	8	44	11	23	28	
137		Lovers Key								4.0	2.5	21.2	5.3	8.5	30	17	29	13	17	21	
138		Big Hickory Island								1.7	1.1	3.0	1.8	2.9	3	3	1	1	7	3	
139	LOGG-T-FL-27:	Little Hickory Island, Lee and Collier Counties	8.7	(5.4)	-	-	-	-	8.7	(5.4)	8.1	5.0	113.5	14.0	22.5	100	77	127	95	157	125
140	LOGG-T-FL-28:	Wiggins Pass-Clam Pass, Collier County	7.7	(4.8)	-	-	2.0	(1.2)	5.7	(3.6)	7.8	4.8	97.7	12.6	20.2	88	73	99	84	131	111
141	LOGG-T-FL-29:	Clam Pass-Doctors Pass, Collier County	4.9	(3.0)	-	-	-	-	4.9	(3.0)	5.1	3.2	72.3	14.1	22.7	68	67	73	50	86	90
142		Doctors Pass to Gordon Pass								9.0	5.6	55.3	6.2	9.9	31	44	60	59	73	65	
143	LOGG-T-FL-30:	Keewaydin Island and Sea Oat Island, Collier County	13.1	(8.1)	-	-	12.4	(7.7)	0.7	(0.5)	12.4	7.7	203.5	16.5	26.6	188	157	242	172	216	246

Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment


Seq. Beach ID	All Beach Units (CHU and non-CHU) CHU ID and Description - defined in Table 1 - Proposed Rule Non-CHU Description - (USFWS Supporting Documents - Proposed Rule)		Critical Habitat Units - Lengths and Ownership defined in Table 1 Loggerhead Sea Turtle Terrestrial Habitat Propose Rule								All Beach Units (CHU and non-CHU) Lengths and Nesting Data (USFWS Supporting Documents - Proposed Rule)					All Beach Units (CHU and non-CHU) Yearly Nests Counts (USFWS Supporting Documents - Proposed Rule)					
	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total					
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011
144		Marco Island									11.4	7.1	49.2	4.3	6.9	56	40	34	54	46	65
145	LOGG-T-FL-31:	Cape Romano, Collier County	9.2	(5.7)	-	-	7.2	(4.5)	2.0	(1.2)	4.0	2.5	57.5	14.4	23.1	66	31	82	40	63	63
146	LOGG-T-FL-32:	Ten Thousand Islands North, Collier County	7.8	(4.9)	2.9	(1.8)	4.9	(3.1)	-	-	4.6	2.9	63.3	13.9	22.4	-	-	70	61	76	46
147		Ten Thousand Islands ENP									19.4	12.1	88.0	4.4	7.1	-	-	-	107	69	-
148	LOGG-T-FL-33:	Highland Beach, Monroe County	7.2	(4.5)	7.2	(4.5)	-	-	-	-	7.5	4.7	40.0	5.2	8.4	-	-	-	21	59	-
149	LOGG-T-FL-34:	Graveyard Creek-Shark Point, Monroe County	0.9	(0.6)	0.9	(0.6)	-	-	-	-	0.7	0.4	17.0	24.3	39.1	-	-	-	6	28	-
150	LOGG-T-FL-35:	Cape Sable, Monroe County	21.3	(13.2)	21.3	(13.2)	-	-	-	-	20.9	13.0	304.0	14.5	23.4	-	-	-	275	333	-
151		Sandy Key									1.0	0.6	1.0	1.0	1.6	-	-	-	-	2	-
		Peninsular Florida Recovery Unit Totals									976.5	606.8	58,197.6	59.6	95.9	49,137	44,509	60,527	51,965	73,355	67,567
		Peninsular Florida Critical Habitat Totals	563.7	(350.2)	90.3	(56.1)	82.6	(51.3)	390.9	(242.9)	575.9	357.8	50,376.7	87.5	140.8	42,630	38,357	52,837	44,986	63,083	58,633
		Peninsular Florida Non Critical Habitat Unit Totals									400.6	248.9	7,820.9	19.5	31.4	6,507	6,152	7,690	6,979	10,272	8,934
Dry Tortugas Recovery Unit																					
Florida																					
152	LOGG-T-FL-36:	Dry Tortugas, Monroe County	6.3	(3.9)	6.3	(3.9)	-	-	-	-	6.3	3.9	133.0	21.1	34.0	na	na	na	117	180	102
153	LOGG-T-FL-37:	Marquesas Keys, Monroe County	5.6	(3.5)	5.6	(3.5)	-	-	-	-	5.3	3.3	12.3	2.3	3.7	20	7	17	9	12	9
154	LOGG-T-FL-38:	Boca Grande Key, Monroe County	1.3	(0.8)	1.3	(0.8)	-	-	-	-	1.3	0.8	3.7	2.8	4.5	4	7	6	2	2	1
155	LOGG-T-FL-39:	Woman Key, Monroe County	1.3	(0.8)	1.3	(0.8)	-	-	-	-	1.4	0.9	3.5	2.5	4.0	2	7	2	4	3	3
		Florida State Totals									14.5	9.0	152.5	10.5	16.9	26	21	25	132	197	115
		Dry Tortugas Recovery Unit Totals (all Critical Habitat)	14.5	(9.0)	14.5	(9.0)	-	-	-	-	14.5	9.0	152.5	10.5	16.9	26	21	25	132	197	115
Northern Gulf of Mexico Recovery Unit																					
Mississippi																					
156		Cat Island									4.8	3.0			-						
157		West Ship Island									5.1	3.2			-						
158		East Ship Island									2.7	1.7			-						
159	LOGG-T-MS-01:	Horn Island, Jackson County	18.6	(11.5)	17.7	(11.0)	-	-	0.8	(0.5)	20.1	12.5			-						
160	LOGG-T-MS-02:	Petit Bois Island, Jackson County	9.8	(6.1)	9.8	(6.1)	-	-	-	-	10.3	6.4			-						
		Mississippi State Totals	28.4	(17.6)	27.5	(17.1)	-	-	0.8	(0.5)	43.0	26.7	-	-	-						
Alabama																					
161		Dauphine Island									25.8	16.0	1.5	0.1	0.1	-	-	-	-	3	6
162	LOGG-T-AL-01:	Mobile Bay-Little Lagoon Pass, Baldwin County	28.0	(17.4)	5.4	(3.4)	3.1	(1.9)	19.5	(12.1)	28.5	17.7	44.5	1.6	2.5	32	46	58	49	27	55
163		Gulf Shores									6.5	4.0	4.2	0.6	1.0	4	4	6	2	3	6
164	LOGG-T-AL-02:	Gulf State Park-Perdido Pass, Baldwin County	10.7	(6.7)	-	-	3.5	(2.2)	7.3	(4.5)	10.6	6.6	7.5	0.7	1.1	4	6	10	8	5	12
165	LOGG-T-AL-03:	Perdido Pass-Florida-Alabama line, Baldwin County	3.3	(2.0)	-	-	1.7	(1.0)	1.6	(1.0)	3.9	2.4	4.5	1.2	1.9	4	6	4	5	3	5
		Alabama State Totals	42.0	(26.1)	5.4	(3.4)	8.2	(5.1)	28.3	(17.6)	75.3	46.8	62.2	0.8	1.3	44	62	78	64	41	84
Florida Panhandle																					


Loggerhead Sea Turtle NorthWest Atlantic Distinct Population Segment- 2006 - 2001 Nesting Statistics by Beach Segment


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	Critical Habitat Unit (CHU) ID	Unit Description	Total Length of Unit *		Federal		State		Private and other (counties and municipalities)		Mean Survey Length *		Avg Annual # Nests	Avg Nesting Density		Yearly Nests Total					
			km	mi	km	mi	km	mi	km	mi	km	mi		km	mi	2006	2007	2008	2009	2010	2011
166	LOGG-T-FL-40:	Perdido Key (incl. Gulf Islands National Seashore Perdido Key Unit)	20.2	(12.6)	11.0	(6.8)	2.5	(1.6)	6.7	(4.2)	23.7	14.7	19.2	0.8	1.3	21	8	22	17	10	37
167		Pensacola Beach								13.5	8.4	5.8	0.4	0.7	7	3	7	10	2	13	
168		Navarre Beach and Gulf Islands National Seashore (excl. Perdido Key unit)								30.3	18.8	20.3	0.7	1.1	9	9	24	24	13	43	
169		Eglin Air Force Base								27.3	17.0	14.8	0.5	0.9	18	8	18	18	6	21	
170		Okaloosa County Beaches and Henderson SP								15.6	9.7	7.2	0.5	0.7	5	3	11	6	4	14	
171		Miramar Beach through Topsail Hill								16.4	10.2	10.5	0.6	1.0	5	7	20	9	9	13	
172		Camp Helen SP and Walton County Beaches								32.9	20.4	26.3	0.8	1.3	21	15	28	36	27	31	
173		Panama City Beaches								28.2	17.5	15.2	0.5	0.9	11	13	18	16	16	17	
174		St. Andrews SP								9.0	5.6	8.8	1.0	1.6	6	10	11	10	10	6	
175		Tyndall Air Force Base								28.5	17.7	43.3	1.5	2.4	48	35	39	49	45	44	
176	LOGG-T-FL-41:	St. Joe Beach and Mexico Beach	18.7	(11.7)	-	-	-	-	18.7	(11.7)	23.5	14.6	29.0	1.2	2.0	33	20	38	50	16	17
177	LOGG-T-FL-42:	St. Joseph Peninsula	23.5	(14.6)	-	-	15.5	(9.7)	8.0	(4.9)	25.4	15.8	169.8	6.7	10.8	185	158	203	158	146	169
178		Cape San Blas (Eglin Air Force Base)								4.8	3.0	32.2	6.7	10.8	24	34	48	37	23	27	
179	LOGG-T-FL-43:	Cape San Blas	11.0	(6.8)	-	-	0.1	(0.1)	10.8	(6.7)	10.5	6.5	21.7	2.1	3.3	9	9	39	18	8	47
180	LOGG-T-FL-44:	St. Vincent Island	15.1	(9.4)	15.1	(9.4)	-	-	-	-	16.1	10.0	49.5	3.1	4.9	38	47	57	51	44	60
181	LOGG-T-FL-45:	Little St. George Island	15.4	(9.6)	-	-	15.4	(9.6)	-	-	14.8	9.2	77.7	5.3	8.5	58	42	81	66	92	127
182	LOGG-T-FL-46:	St. George Island	30.7	(19.1)	-	-	14.0	(8.7)	16.7	(10.4)	30.5	19.0	148.0	4.9	7.8	90	88	202	168	154	186
183	LOGG-T-FL-47:	Dog Island	13.1	(8.1)	-	-	-	-	13.1	(8.1)	12.1	7.5	27.2	2.3	3.6	27	30	41	25	13	-
184		Bald Point/Alligator Point								16.5	10.3	10.8	0.7	1.1	6	13	12	16	4	14	
		Florida State Totals	147.7	(91.8)	26.1	(16.2)	47.5	(29.5)	74.0	(46.0)	379.6	235.9	737.3	1.9	3.1	621	552	919	784	642	886
		Northern Gulf of Mexico Recovery Unit Totals								497.9	309.4	799.5	1.6	2.6	665	614	997	848	683	970	
		Northern Gulf of Mexico Critical Habitat Totals	218.0	(135.5)	59.0	(36.7)	55.8	(34.7)	103.2	(64.2)	230.0	142.9	598.6	2.6	4.2	501	460	755	615	518	715
		Northern Gulf of Mexico Non Critical Habitat Totals								255.3	158.6	200.9	0.8	1.3	164	154	242	233	165	255	
		Loggerhead Sea Turtle Northwest Atlantic Nesting Range - Totals								2,440.9	1,516.7	64,595.7	26.5	42.6	54,555	48,094	67,202	56,738	80,004	75,578	
		Loggerhead Sea Turtle Northwest Atlantic Nesting Range - Critical Habitat Totals	1,189.9	(739.4)	230.6	(143.3)	247.6	(153.9)	711.8	(442.4)	1,211.9	753.1	55,204.2	45.6	73.3	46,821	40,925	57,880	48,431	68,064	64,513
		Loggerhead Sea Turtle Northwest Atlantic Nesting Range - Non Critical Habitat Totals								1,228.8	763.5	9,391.5	7.6	12.3	7,734	7,169	9,322	8,307	11,940	11,065	

* CHUs "Length of Unit" in Table 1 compared to "Mean Survey Length" from USFWS supporting documents shows variations which are significant for some units. In many cases, it is apparent that the starting/stopping points for adjacent units may have differed in the two documents. In aggregate the Table 1 lengths proposed were 22 km or 13.7 mi less than the USFWS supporting documents showed.

In some instances in South Carolina, The average nest density was not calculated in the support documents provided by USFWS due to insufficient data per SCDNR. Some values have attached comments that clarify the information. These values are marked with a red triangle in the upper right corner.

 = Selected beach [for Critical Habitat Unit designation] within the to 25 percent [for each state] of nesting densities (highest nesting densities0

 = Selected beach [for Critical Habitat Unit designation] adjacent to a high density beach

 = Exempted Department of Defense

Red Font = Qualify as an adjacent beach but have withdrawn because of urbanization, erosion, and/or invasion of exotics that have made the habitat less suitable for nesting.