

Smith, Spence

From: DuBose Griffin [GriffinD@dnr.sc.gov]
Sent: Monday, August 23, 2010 10:21 AM
To: Smith, Spence
Subject: RE: SC sea turtle data on Seaturtle.org

Hi Spence,

Thank you for your email. I apologize about the pdfs. I sent them right after we hung up. I checked the sent email and confirmed that I used the correct address. I am not sure what happened but I am sorry that they did not get to you sooner. Let me know if you need additional information.

DuBose

From: Smith, Spence [mailto:shsmith@louisberger.com]
Sent: Monday, August 23, 2010 10:21 AM
To: DuBose Griffin
Subject: SC sea turtle data on Seaturtle.org

Hello DuBose,

First, I would like to thank you and Charlotte for speaking with me this past Friday clarifying aspects of your protocols for relocating sea turtle nests in SC. The information will be very useful for the National Park Service in responding to some specific public comments made on their Cape Hatteras National Seashore ORV Long Range Management Plan/Environmental Impact Statement (EIS) that referenced the SC protocols. The heads up about the erosional nature of Cape Island is of use as well. It will also likely be very useful in responding to public comments on the EIS we are helping the NPS develop for the Cape Lookout National Seashore ORV Management Plan as well. Like I said on Friday, I am using the information strictly to clarify your protocols on when you all relocate nests and to compare the % of nests relocated in SC to the % that the Seashore has relocated over the past 2 years.

Also, I wanted to thank you for offering to print the 2009 and 2010 data for SC from the seaturtle.org website to a pdf file and email it to me. However, if you haven't already done so, there is no longer a need for it, as I was finally able to print the web pages to pdf this morning without it crashing my computer.

Again, thank you for your help – it was very informative and greatly appreciated.

Best of luck with the rest of the turtle hatching/nesting season.

Regards,
Spence

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Marine Scientist

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Smith, Spence

From: DuBose Griffin [GriffinD@dnr.sc.gov]
Sent: Monday, August 23, 2010 10:30 AM
To: Smith, Spence
Subject: FW: 2009 and 2010 Nest Data in PDF form
Attachments: 2009 Nest Data Summary.pdf; 2010 Nest Data Summary.pdf

Here is the original. Let me know if this comes through.

DuBose

From: DuBose Griffin
Sent: Friday, August 20, 2010 4:12 PM
To: 'shsmith@louisberger.com'
Subject: 2009 and 2010 Nest Data in PDF form

Mr. Smith,

Here is the information that you requested. The pdf files are "ok." If you want me to work on them a bit more, let me know. Thank you for your efforts in protecting sea turtles in North Carolina. They need all the help they can get.

Sincerely,

DuBose



DuBose B. Griffin
SC Sea Turtle Coordinator
griffind@dnr.sc.gov | 843 953 9016 Direct

SC DNR, Marine Turtle Program
Charleston Office, 217 Fort Johnson Road | Charleston, SC 29412
843 953 9016 Main | 843 870 3667 Cell | 843 953 9353 Fax
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Sea Turtle Nest Monitoring System

STNMS Overview (PDF)

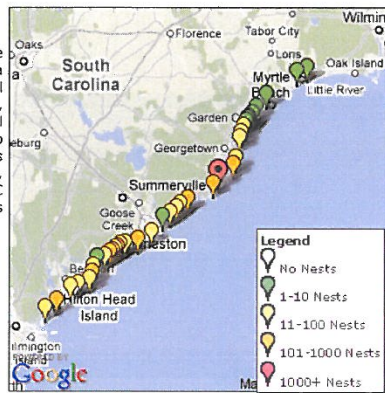
South Carolina DNR Sea Turtle Conservation Program

Select a Beach:

Program Description



The South Carolina Department of Natural Resources Marine Turtle Conservation Program is responsible for managing and protecting sea turtles in the state of South Carolina, USA. This program has several all encompassing components: management, monitoring, research, and education. More specifically this program provides technical expertise on anthropogenic activities that have the potential to impact sea turtles (i.e., nourishment, dredging), locates and protects sea turtle nests (~300 km of coastline), documents strandings, performs necropsies on fresh dead strandings, works with the SC Aquarium to provide rehabilitation for live strandings, monitors



nearshore waters for leatherbacks, and provides as much education, outreach and exchange of scientific information as time allows.

The SCDNR began monitoring sea turtle nesting activities and strandings in the late 1970s. Information gained from this program contributes to ongoing sea turtle nest management and protection projects on all of the state's beaches. There are approximately 300 kilometers of ocean-facing sandy beaches in South Carolina that provide suitable nesting habitat for sea turtles. To date, loggerheads, green turtles, leatherbacks and rarely Kemp's ridleys sea turtle nests have been recorded on South Carolina beaches. By far the most common nesting species is the loggerhead. In South Carolina, nesting surveys and nest protection measures are carried out by a variety of public agencies such as the SCDNR, USFWS, South Carolina Department of Parks and Recreation and Coastal Carolina University. Several private organizations and numerous volunteers are also actively involved with sea turtle protection work. Altogether, more than 1100 individuals participate in nest monitoring activities in South Carolina each year. Results from all South Carolina sea turtle nesting beach projects are submitted to the SCDNR and compiled for the State and made available to federal agencies. These data are crucial in monitoring populations, formulating protective regulations, making management decisions, and maximizing reproduction for recovery.

Year 2010

The data presented here should be considered preliminary in nature. All data, figures and maps on this website remain copyright of the project coordinators and may not be used or referenced without the explicit written consent of the data owners.

Summary ?

Nests: 3100
In Situ: 1463
Relocated: 1328 (42.8%)
Hatchery: 325 (10.4%)
Lost: 130 (4.1%)
Incubating: 2141
Unknown: 9
False Crawls: 4440

Estimated Eggs to Date: 233204
Eggs Lost: 13767 (5.9%)
Hatched Eggs: 71084
Emerged Hatchlings: 65093
Mean Incubation Duration (all): 52.7 days
Mean Clutch Count: 112.8 eggs (Relocated Only)

Mean Hatch Success: 60.1%
Mean Emergence Success: 55.1%
Program Nest Success: 25.3%
Program Beach Success: 41.1%

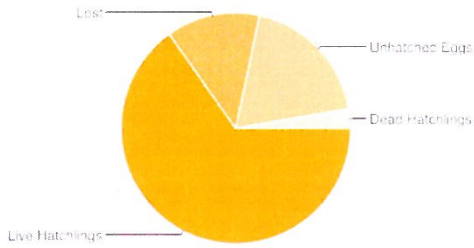
Eggs

Activity

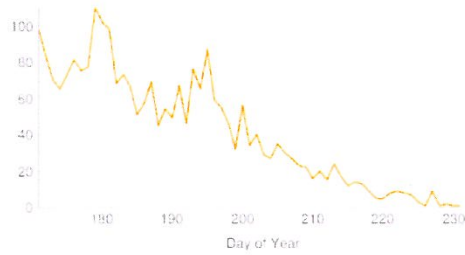
False Crawls



Losses



Nests



Species

Species	Nests
Loggerhead	3080
Green Turtle	3
Leatherback	3
Unknown	2

Beach Report

Beach	???		Apr		May		Jun		Jul		Aug		Overall				
	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	HS%	ES%	R%
Bay Point Island	28	10	0	0	0	0	2	0	5	8	0	0	35	18	0	0	5.7
Botany Bay Island	1	0	0	0	13	3	52	90	30	27	1	0	97	120	60.6	56.8	12.3
Botany Bay Plantation	1	0	0	0	41	40	79	114	53	48	2	0	181	204	59.2	56.7	61.3
Bull Island	4	0	0	0	18	7	70	0	41	0	5	0	138	174	56.6	43.7	62.3
Cape Island	0	0	0	0	121	0	519	0	370	0	29	0	1039	2384	25.9	10.9	59.9
Capers Island	0	0	0	0	1	0	6	2	3	0	1	1	11	3	14.2	14	0
Daufuskie Island	0	0	0	0	10	5	33	19	22	6	0	0	65	30	74.7	68.2	66.1
Debidue Beach	0	0	0	0	1	0	4	9	5	3	1	0	11	12	92	0	72.7
Deweese Island	0	0	0	0	0	0	6	7	7	2	2	1	15	10	79.2	72.9	53.3
Edingsville Beach	0	0	0	0	10	11	27	92	13	44	4	3	54	150	60.2	58.1	0
Edisto Beach State Park	4	0	0	0	11	9	48	48	35	33	4	4	102	94	70.4	66.3	31.3
Edisto Town Beach	1	0	0	0	11	10	39	23	24	17	1	2	76	52	71.5	60.2	67.1
Folly Beach	0	0	0	0	5	0	21	1	25	0	3	0	54	19	74.1	88.8	74
Fripp Island	0	0	0	0	2	4	14	24	9	6	0	3	25	37	72.5	76.8	84
Garden City Beach	0	0	0	0	0	0	0	0	0	1	2	0	2	1	72.5	76.8	100
Harbor Island	2	0	0	0	5	3	16	19	7	9	0	0	30	31	66.4	49	60
Hilton Head Island	0	0	0	0	30	19	130	102	66	34	8	2	234	157	82.3	71	66.2
Hobcaw Beach	0	0	0	0	1	0	7	11	6	8	2	1	16	20	68.4	48.7	43.7
Hunting Island State Park	1	0	0	0	15	13	55	80	38	35	2	4	111	135	48.3	31.9	45
Huntington Beach State Park	0	0	0	0	0	0	3	11	5	6	0	1	8	18	93.1	91.6	0
Interlude	0	0	0	0	5	1	1	4	0	0	0	0	13	6	0	0	0

Beach																		
Isle of Palms	0	0	0	0	5	1	9	6	7	8	2	3	23	18	79.5	65.1	69.5	
Kiawah Island	2	0	0	1	36	12	94	116	80	47	4	13	216	189	83.1	71.4	44.4	
Lighthouse Island	0	0	0	0	24	0	75	0	62	0	15	0	176	297	14.1	0	76.7	
Litchfield by the Sea	0	0	0	0	0	0	2	0	2	0	0	0	4	0	89.7	0	50	
Little Capers Island	4	0	0	0	7	1	20	6	7	2	1	0	39	9	48.3	44.5	17.9	
Morris Island	0	0	0	0	0	0	1	0	0	0	0	0	1	0	48.3	44.5	0	
Myrtle Beach	0	0	0	0	0	0	1	0	1	1	1	1	3	2	64	0	100	
Myrtle Beach State Park	0	0	0	0	0	0	0	0	1	0	0	0	1	0	64	0	100	
North Island	9	1	0	0	0	0	11	1	5	4	1	0	26	6	0	0	15.3	
North Litchfield	0	0	0	0	0	0	0	1	2	0	2	0	4	1	0	0	75	
North Myrtle Beach	0	0	0	0	1	0	5	7	3	5	1	2	10	14	84.4	84	30	
Otter Island	1	0	0	0	0	0	0	0	0	0	0	0	1	4	84.4	84	0	
Pawleys Island	0	0	0	0	1	0	9	1	5	4	1	1	16	6	87.9	0	87.5	
Sand Island	0	0	0	0	1	3	37	12	11	6	1	0	50	21	0	0	8	
Seabrook Island	1	0	0	0	9	4	36	28	20	9	2	1	68	42	72.2	64.4	75	
South Island	0	0	0	0	24	22	63	77	46	48	5	4	138	151	70.9	74.4	19.5	
South Litchfield	0	0	0	0	0	0	1	2	0	0	0	1	1	3	85.8	0	100	
Sullivan's Island	0	0	0	0	0	0	2	1	0	0	0	0	2	1	85.8	0	100	
Surfside Beach	0	0	0	0	0	0	1	0	1	0	0	0	2	0	94.6	0	100	
Waties Island	0	0	0	0	0	0	1	1	1	0	0	0	2	1	57	56	0	
Total	59	11	0	1	408	168	1500	915	1018	421	103	48	3100	4440	60.1	55.1	42.8	

Sea Turtle Nest Monitoring System

STNMS Overview (PDF)

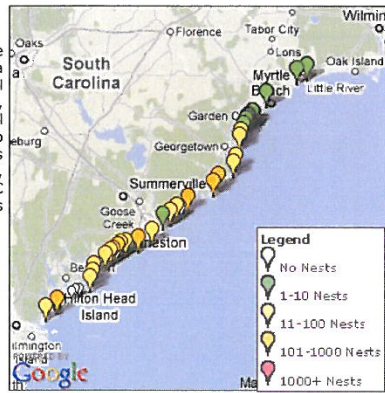
South Carolina DNR Sea Turtle Conservation Program

Select a Beach:

Program Description



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nearshore waters for leatherbacks, and provides as much education, outreach and exchange of scientific information as time allows.

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Year

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Summary ?

- Nests:** 2194
 - In Situ:** 1030
 - Relocated:** 880 (40.1%)
 - Hatchery:** 277 (12.6%)
 - Lost:** 143 (6.5%)
 - Incubating:** 1
 - Unknown:** 80
 - False Crawls:** 3372
-
- Estimated Eggs to Date:** 237459
 - Eggs Lost:** 10468 (4.4%)
 - Hatched Eggs:** 163393
 - Emerged Hatchlings:** 154143
 - Mean Incubation Duration (all):** 53.9 days
 - Mean Clutch Count:** 116.3 eggs (Relocated Only)

- Mean Hatch Success:** 64.7%
- Mean Emergence Success:** 61%
- Program Nest Success:** 84.1%
- Program Beach Success:** 39.4%

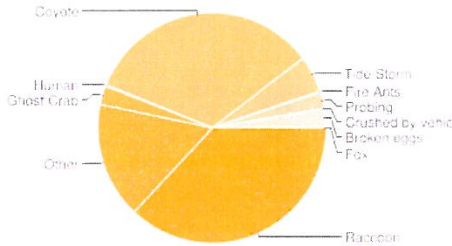
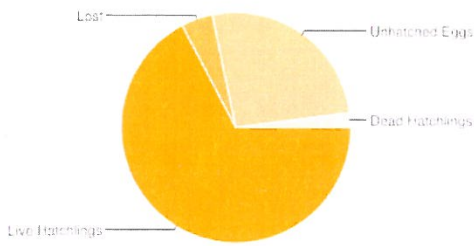
Eggs

Activity

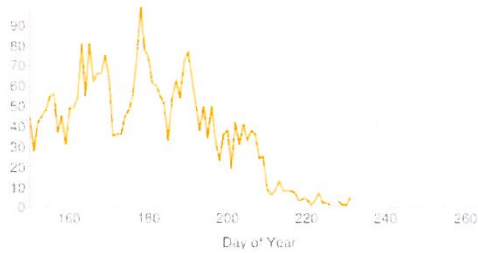
False Crawls:



Losses



Nests



Species

Species	Nests
Loggerhead	2183
Green Turtle	1
Leatherback	3

Beach Report

Beach	???		May		Jun		Jul		Aug		Sep		Overall				
	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	Nests	False Crawls	HS%	ES%	R%
Botany Bay Island	0	0	7	0	37	29	24	25	4	0	0	0	72	54	45.4	37	0
Botany Bay Plantation	2	0	10	10	67	88	42	96	3	1	0	0	131	195	42.7	39	8.3
Bull Island	4	0	11	15	53	84	39	68	2	3	0	0	109	170	53.5	44.4	65.1
Cape Island	27	0	99	0	335	0	270	0	19	0	0	0	750	1739	72.1	67.6	66.5
Daufuskie Island	0	0	3	0	17	10	9	5	2	0	0	0	31	15	61.4	45.9	32.2
Debidue Beach	0	0	2	1	9	8	6	8	2	0	0	0	19	17	81.2	77.5	47.3
Deweese Island	0	0	2	2	9	13	4	4	1	1	0	0	16	20	68.1	59.6	37.5
Edingsville Beach	0	0	6	5	36	43	22	38	0	0	0	0	64	86	47.2	45.4	1.5
Edisto Beach State Park	0	0	14	11	29	25	23	20	2	3	0	0	68	59	51.4	53.9	38.2
Edisto Town Beach	1	0	6	9	42	25	26	30	2	1	0	0	77	65	56.9	57.7	50.6
Folly Beach	0	0	2	1	18	12	13	1	2	0	0	0	35	19	67.3	64.9	60
Fripp Island	0	0	2	2	12	22	13	15	0	0	0	0	27	39	72.6	43.9	66.6
Harbor Island	0	0	2	4	12	16	11	7	0	0	0	0	25	27	66.6	73	76
Hilton Head Island	4	0	15	0	83	0	70	0	8	0	0	0	180	100	72.5	57.4	66.1
Hobcaw Beach	0	0	2	6	10	22	7	23	0	1	0	0	19	52	71.3	74.3	42.1
Hunting Island State Park	0	0	10	11	40	40	29	37	1	0	0	0	80	88	57.4	51.7	52.5
Huntington Beach State Park	0	0	0	0	4	2	3	2	0	0	0	0	7	4	86.8	74.3	0
Isle of Palms	0	0	5	0	8	9	5	2	1	1	0	0	19	12	87.1	82.1	68.4
Kiawah Island	1	0	14	5	67	63	43	28	3	3	0	0	128	99	79.9	69.9	47.6
Lighthouse Island	6	0	15	0	67	0	49	0	4	0	0	0	141	289	70.5	69.4	70.2
Litchfield	0	0	2	1	2	2	1	0	0	0	0	0	5	3	88.6	25.3	60

by the Sea																		
Myrtle Beach	1	0	0	0	1	0	1	0	1	0	0	0	4	0	91.6	0	75	
Myrtle Beach State Park	0	0	0	0	1	0	0	0	0	0	0	0	1	0	96.3	0	100	
North Litchfield	0	0	0	0	0	1	1	0	0	0	0	0	1	1	90.6	88.3	0	
North Myrtle Beach	1	0	0	0	1	0	0	0	0	0	0	0	2	0	83.5	72.8	50	
Pawleys Island	0	0	1	0	5	1	2	0	1	0	0	0	9	1	71.1	52.9	77.7	
Sand Island	0	0	2	9	13	17	9	8	0	0	0	0	24	34	0	0	0	
Seabrook Island	0	0	3	2	18	14	15	16	1	0	0	0	37	32	68.4	54	62.1	
South Island	0	0	14	12	45	72	36	29	1	0	1	0	97	113	47.5	45.1	31.9	
South Litchfield	0	0	0	2	2	6	1	1	0	1	0	0	3	10	79.6	96.1	66.6	
Sullivan's Island	0	0	0	0	2	4	2	2	0	0	0	0	4	6	76.8	40.4	50	
Surfside Beach	0	0	0	0	1	1	0	0	0	0	0	0	1	1	95.5	0	100	
Waties Island	0	0	0	0	5	20	3	2	0	0	0	0	8	22	67	64	0	
Total	47	0	249	108	1051	649	779	467	60	15	1	0	2194	3372	64.7	61	40.1	

CALCULATING THE PERCENT OF SEA TURTLE NESTS RELOCATED IN SOUTH CAROLINA

Based on the suggestion of DuBose Griffin of the SCDNR Marine Turtle Conservation Program, I recalculated the percent of nests relocated in SC without the data for Cape Island. The reason for this is that Cape Island contributes approximately one third of the turtle nests annually to SC. However, because the beach is highly erosional, approximately 60 percent of the nests are relocated, skewing the overall percentage of nests relocated for SC.

All of the raw data used to calculate the percent of nests relocated without including the Cape Island data was obtained on 8/23/2010 from <http://www.seaturtle.org/nestdb/index.shtml?view=2>.

2009**All South Carolina:**

Nests: 2194
Nest relocated: 880 (40.1%)

Cape Island

Nests: 750
% relocated: 66.5%
Calculated nests relocated: (750 x 0.665): 499

Percent nests relocated in SC not including Cape Island

Nests: (2194-750): 1444
Relocated nests (880-499): 381
Percent of nest relocated: (381/1444): 26.4%

2010 (as of 8/23/2010)**All South Carolina:**

Nests: 3100
Nest relocated: 1328 (42.8%)

Cape Island

Nests: 1039
% relocated: 59.9%
Calculated nests relocated: (1039 x 0.599): 622

Percent nests relocated in SC not including Cape Island

Nests: (3100-1039): 2061
Relocated nests (880-499): 706
Percent of nest relocated: (706/2061): 34.3%

Recalculation done by S. Smith, The Louis Berger Group Inc.