

**From:** [Britta Muiznieks](#)  
**To:** [Mike Murray](#)  
**Cc:** [Michelle Baker](#); [Thayer Broili](#)  
**Subject:** Fw: Feedback needed on turtle data  
**Date:** 01/14/2009 03:23 PM  
**Attachments:** [Twilight and Sea Turtle Nests at CHNS 97 to 07.xls](#)  
[Turtle Nests by Lay Date Doc.doc](#)

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Mike-

Michelle spent some time pulling this information together this morning because she was concerned about misinformation being distributed at the subcommittee meeting. One thing to note is that I hadn't realized that the 2000 data was missing from the email that I sent to you yesterday. We need to be very cautious with any analysis of data that anyone outside the NPS has pulled together. Given adequate turn around time, we have the in-house ability to provide you with what we believe is the correct data. That is what we are here for.



Turtle Nests by Lay Date Doc.doc

Britta

Britta Muiznieks  
 Wildlife Biologist  
 Cape Hatteras National Seashore

252-995-3740-**Office**  
 252-475-8348-**Cell**  
 252-995-6998-**FAX**

----- Forwarded by Britta Muiznieks/CAHA/NPS on 01/14/2009 03:06 PM -----

**Britta  
 Muiznieks/CAHA/NPS**

01/13/2009 12:55 PM

**To:** Mike Murray/CAHA/NPS  
**cc:** Michelle Baker/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS

**Subject:** Re: Feedback needed on turtle data

Mike-

I wouldn't spend any time trying to analyze Larry's data because it is incorrect!!! We don't know where his numbers came from. We have to be cautious when we refer to nest numbers recorded for the month of May because until recently we did not have staff searching for nests in the beginning of May. Only in 2007 did we have staff searching for nests starting on May 1. From 2006 and prior staff started searching May 15th or later. Any nests that were found in early May prior to 2006 would have been incidental (e.g. LE or public reporting an activity). People were not actively searching the entire beach on a regular basis. For this very reason, FWS required us in the BO to start our surveys on May 1st.

I had Michelle look in the database for **May** nests and she came up with a total of 22 nests of which 17 hatched for the period of 1997-2007. We had an additional 2 nests in May in 2008 both of which hatched.

Total	Year	DATE	Hatch?
1	1997	14-Apr	Y
2		31-May	Y
3	1998	26-May	Y
	1999	No nests	
4	2001	28-May	Y
5	2002	27-May	Y
6		27-May	Y
7		29-May	Y
8		29-May	Y
9		30-May	Y
10		12-May	N
11		28-May	N
12		29-May	Y
		29-May	Washed out/Dig?
13	2003	21-May	N
14		30-May	Y
15	2004	22-May	Lost
16		22-May	Y
17		28-May	Y
18		31-May	N
	2005	No nests	
19	2006	18-May	Y
20		18-May	Y
21		30-May	Y
22	2007	18-Apr	Y
23	2008	18-May	Y
24		28-May	Y

I hope this helps.

Britta

Britta Muiznieks  
Wildlife Biologist  
Cape Hatteras National Seashore

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▼ [Mike Murray/CAHA/NPS](#)

**Mike  
Murray/CAHA/NPS**

01/13/2009 10:59 AM

To: Britta Muiznieks/CAHA/NPS@NPS, Michelle Baker/CAHA/NPS@NPS  
cc: Thayer Broili/CAHA/NPS@NPS  
Subject: Feedback needed on turtle data

Britta or Michelle,

See Larry's attached turtle nesting data (in Deb's message), which he reportedly compiled from NPS reports. Without spending any time checking the records and his math to absolutely **confirm** the accuracy of it, **would you please give me your impression of whether it seems reasonably accurate and credible.**

I want to do some graphing of the data (I'll do it), which may help inform the Natural Resource subcommittee discussion about how much risk to turtle nesting would occur if night driving restrictions started in early May vs. mid-May vs. late May, etc. I don't want to spend time graphing it if we think the data is unfounded or grossly inaccurate. If we think the data is reasonably credible, then I'll do the graphing and still put in a caveat that NPS has not confirmed the accuracy of the data.

Note: I know you are swamped. I'm not aware of any more things to add to the "to do" list.

Thanks,

Mike Murray  
Superintendent  
Cape Hatteras NS/ Wright Brothers NMem/ Ft. Raleigh NHS  
(w) 252-473-2111, ext. 148  
(c) 252-216-5520  
fax 252-473-2595

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----- Forwarded by Mike Murray/CAHA/NPS on 01/13/2009 10:42 AM -----

Deb Lane/CAHA/NPS

01/13/2009 09:14 AM

To Mike Murray/CAHA/NPS@NPS

cc

Subject Re: Fw: turtle nesting info 

Mike  
Try this one.



Twilight and Sea Turtle Nests at CHNS 97 to 07.xls

Deb Lane, IT Specialist

0022465

Cape Hatteras NS/Wright Brothers NMem/Ft. Raleigh NHS  
Phone 252-473-2111, ext. 133  
Cell 252-305-1043  
Fax 252-473-2595

▼ Mike Murray/CAHA/NPS

**Mike  
Murray/CAHA/NPS** To Deb Lane/CAHA/NPS@NPS  
cc  
01/13/2009 08:30 AM Subject Fw: turtle nesting info

Deb,

Would you please try to open the attachment and convert it into an Excel spreadsheet (or something I can open).

Thanks,

Mike Murray  
Superintendent  
Cape Hatteras NS/ Wright Brothers NMem/ Ft. Raleigh NHS  
(w) 252-473-2111, ext. 148  
(c) 252-216-5520  
fax 252-473-2595

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----- Forwarded by Mike Murray/CAHA/NPS on 01/13/2009 08:29 AM -----

**"Larry Hardham"**  
**<hardhead@embarqmail.com>** To <Mike\_Murray@nps.gov>  
cc  
01/12/2009 03:01 PM Subject Re: turtle nesting info

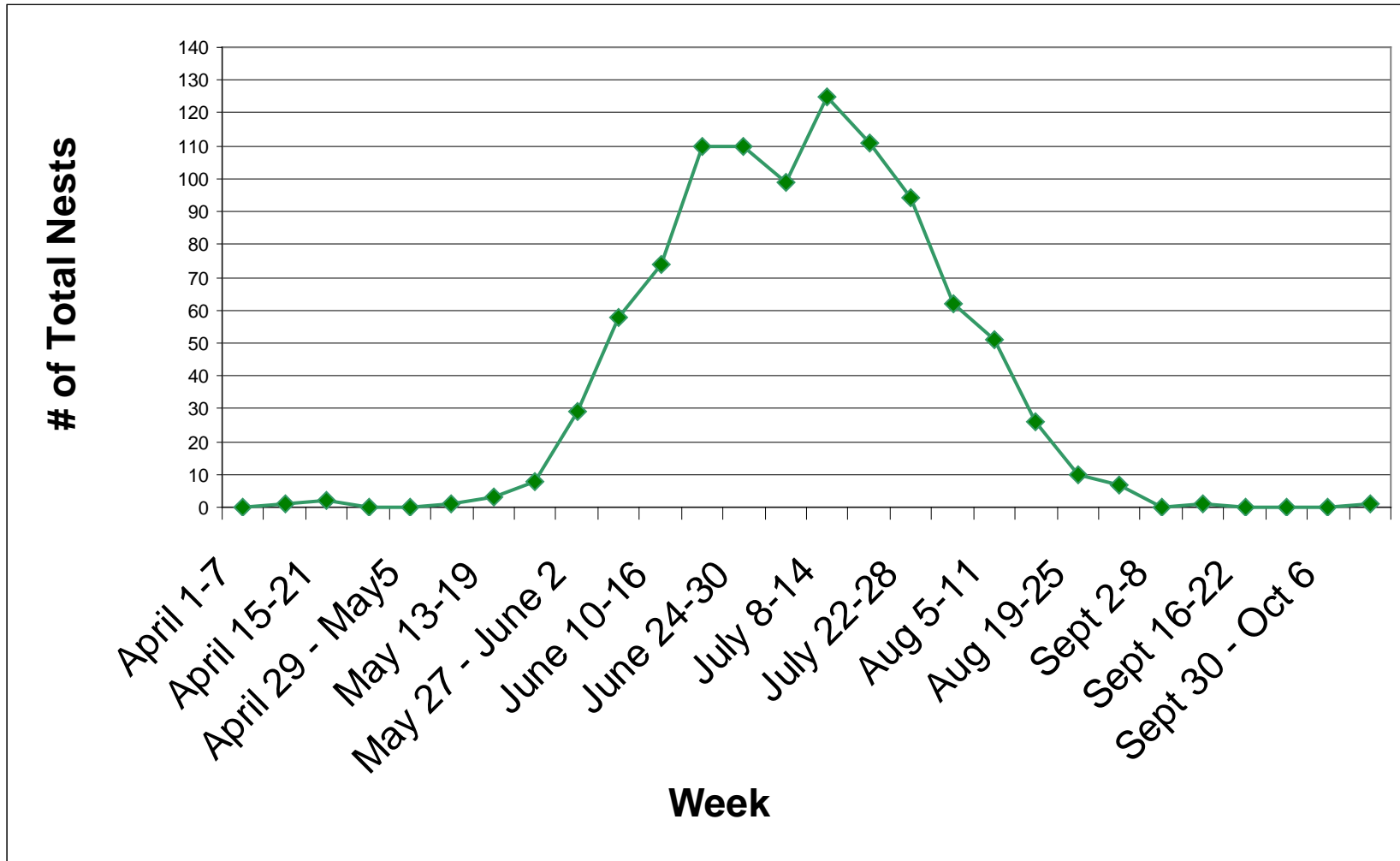
Mike,  
Had meant to send you this but had not run accross my note to myself to do it. Sorry for the delay.  
Thanks,  
Larry

----- Original Message -----  
From: <Mike\_Murray@nps.gov>  
To: <hardhead@embarqmail.com>  
Sent: Monday, January 12, 2009 12:44 PM  
Subject: turtle nesting info

>  
> Hi Larry,  
>  
> If you would please email me the sea turtle nesting information you showed  
> me at the last meeting (i.e., the spreadsheet showing the numbers of nests  
> by calendar weeks), then I will get it graphed to share with the Natural  
> Resource subcommittee. I think the information would help illustrate the  
> relatively low percentage of nests that are theoretically "at risk" prior  
> to June and after August.  
>  
> Thank you,  
>  
> Mike Murray  
> Superintendent  
> Cape Hatteras NS/ Wright Brothers NMem/ Ft. Raleigh NHS  
> (w) 252-473-2111, ext. 148  
> (c) 252-216-5520  
> fax 252-473-2595  
>  
> CONFIDENTIALITY NOTICE  
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> it is addressed. This communication may contain information that is  
> proprietary, privileged or confidential or otherwise legally exempt from  
> disclosure.  
>  
>  
> \_\_\_\_\_ Information from ESET NOD32 Antivirus, version of virus  
> signature database 3757 (20090111) \_\_\_\_\_  
>  
> The message was checked by ESET NOD32 Antivirus.  
>  
> <http://www.eset.com>  
>  
>  
>  
>  
[attachment "Twilight and Sea Turtle Nests at CHNS 97 to 07.xlr" deleted by Mike  
Murray/CAHA/NPS]

### Natural Resources Subcommittee Sea Turtle Information, January 2008

The below graph indicates the lay dates for the 983 nests laid on CAHA between 1997 and 2008. Nests that did not have known lay dates (i.e. were found only when hatchlings emerged) are not included in these totals. The number of nests by year may differ slightly than what was reported during that time, but these numbers represent the most accurate information known and are reported as such in the 2008 Sea Turtle Annual Report. It is important to note that these numbers are misleading. Prior to 2007, turtle patrols were conducted between May 15 – Sept 1. In some years, patrols did not begin until June 1. Any nests found before the start date or end date of turtle patrol were found by chance (i.e. visitor reporting, staff on the beach, etc.) since no coordinated, scheduled patrols were conducted. It is unknown how many nests were missed during these times. Beginning in 2007, FWS requires CAHA to begin patrols May 1 and continue until Sept. 15<sup>th</sup> in order to reduce the chance of missed nests.



0022468

Table 1. Nests by lay date week and year (1997-2008)

Week	1997	1998	1999	2000	2001 (1 UNK)	2002 (2 UNK)	2003 (1 UNK)	2004	2005	2006	2007	2008 (1 UNK)	TOTAL
April 1-7	0	0	0	0	0	0	0	0	0	0	0	0	0
April 8-14	1	0	0	0	0	0	0	0	0	0	0	0	1
April 15-21	0	0	0	1	0	0	0	0	0	0	1	0	2
April 22-28	0	0	0	0	0	0	0	0	0	0	0	0	0
April 29 - May5	0	0	0	0	0	0	0	0	0	0	0	0	0
May 6-12	0	0	0	0	0	1	0	0	0	0	0	0	1
May 13-19	0	0	0	0	0	0	0	0	0	2	0	1	3
May 20-26	0	1	0	4	0	0	1	2	0	0	0	0	8
May 27 - June 2	1	1	1	4	2	9	2	2	0	2	2	3	29
June 3-9	1	4	8	3	9	6	10	1	1	3	2	10	58
June 10-16	2	8	9	5	8	7	7	3	9	6	1	9	74
June 17-23	5	14	7	8	8	17	11	6	4	8	10	12	110
June 24-30	8	9	10	14	14	10	12	1	5	9	5	13	110
July 1-7	5	11	8	13	5	15	3	6	7	7	11	8	99
July 8-14	15	18	13	9	9	8	11	6	8	8	6	14	125
July 15-21	5	6	11	9	8	5	6	5	11	8	18	19	111
July 22-28	8	12	11	4	1	9	9	5	9	9	9	8	94
July 29 - Aug 4	5	9	4	1	6	8	9	3	5	3	6	3	62
Aug 5-11	7	2	7	5	1	2	2	2	5	5	7	6	51
Aug 12-18	3	2	1	3	1	0	1	1	6	3	3	2	26
Aug 19-25	1	0	0	1	1	0	2	0	0	1	1	3	10
Aug 26 - Sept 1	1	0	1	0	1	0	0	0	3	1	0	0	7
Sept 2-8	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept 9-15	0	0	0	0	0	0	0	0	0	1	0	0	1
Sept 16-22	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept 23-29	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept 30 - Oct 6	0	0	0	0	0	0	0	0	0	0	0	0	0
Oct 7-13	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>Total Nests</b>	<b>68</b>	<b>98</b>	<b>91</b>	<b>84</b>	<b>74</b>	<b>97</b>	<b>86</b>	<b>43</b>	<b>73</b>	<b>76</b>	<b>82</b>	<b>111</b>	<b>983</b>

N:\EQD\CAHA ORV\Admin Record\\_ADMIN RECORD AUG 2012\Correspondence\20090114\_Twilight and Sea  
Turtle Nests at CHNS 97 to 07

CHNS nesting activity 1997 through 2007				Nags Head	
Dates Nest Laid	Lost nests	Hatched nests	Total	AM Twilight	PM Twilight
April, 13 to 16	1	0	1		
April, 17 to 20	1	0	1		
April, 21 to 24	0	0	0		
April, 25 to 28	0	0	0		
April, 29 to 31	0	0	0		
May, 1 to 4	1	2	3	5:42	8:18
May, 5 to 8	0	0	0	5:38	8:21
May, 9 to 12	1	0	1	5:34	8:25
May, 13 to 16	0	0	0	5:30	8:29
May, 17 to 20	1	0	1	5:26	8:32
May, 21 to 24	2	3	5	5:23	8:34
May, 25 to 28	2	6	8	5:21	8:37
May, 29 to 31	1	9	10	5:18	8:40
June, 1 to 4	5	16	21	5:17	8:42
June, 5 to 8	3	22	25	5:16	8:45
June, 9 to 12	7	30	37	5:15	8:47
June, 13 to 16	6	37	43	5:15	8:49
June, 17 to 20	5	45	50	5:15	8:51
June, 21 to 24	9	56	65	5:16	8:52
June, 25 to 28	19	27	46	5:17	8:52
June, 28 to 30	11	18	29	5:18	8:53
July, 1 to 4	15	43	58	5:19	8:52
July, 5 to 8	15	28	43	5:21	8:52
July, 9 to 12	36	31	67	5:23	8:51
July, 13 to 16	35	31	66	5:26	8:49
July, 17 to 20	25	21	46	5:29	8:47
July, 21 to 24	26	23	49	5:32	8:45
July, 25 to 28	28	20	48	5:35	8:42
July, 29 to 31	18	11	29	5:39	8:38
August, 1 to 4	15	14	29	5:41	8:35
August, 5 to 8	14	9	23	5:45	8:31
August, 9 to 12	13	9	22	5:48	8:27
August, 13 to 16	5	4	9	5:52	8:22
August, 17 to 20	6	4	10	5:55	8:17
August, 21 to 24	3	0	3	5:58	8:12
August, 25 to 28	3	2	5	6:02	8:06
August, 29 to 31	0	2	2	6:04	8:02
September, 1 to 4	0	0	0		
September, 5 to 8	0	0	0		
September, 9 to 12	1	0	1	Source of Twilight information:	
September, 13 to 16	0	0	0	<a href="http://aa.usno.navy.mil/cgi-bin/aa_rstablew.pl">http://aa.usno.navy.mil/cgi-bin/aa_rstablew.pl</a>	
September, 17 to 20	0	0	0	Nags Head was closest town listed	
September, 21 to 24	0	0	0		
September, 25 to 28	0	0	0		
September, 29 to 30	0	0	0		
October, 1 to 4	0	0	0		
October, 5 to 8	0	0	0		
October, 9 to 12	0	0	0		
October, 13 to 16	1	0	1		