

**From:** [Mike Murray](#)  
**To:** [pete\\_benjamin@fws.gov](mailto:pete_benjamin@fws.gov)  
**Subject:** DEIS turtle issue  
**Date:** 06/30/2010 02:18 PM  
**Attachments:** [Twilight and Sea Turtle Nests at CHNS 97 to 07.LH.xls](#)

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Pete,

One of Sandy MacPherson's recommendations was that NPS establish fixed hours for night driving restrictions during the turtle nesting season, rather than what was proposed in Alternative F, which was "from 1 hour after sunset until turtle patrol has checked the beach in the morning (by approx. 1/2 hour after sunrise)."

Her suggestion makes sense to us. It is simpler to understand and enforce. See attached information compiled by Larry Hardham from information provided by NPS or available on-line (i.e., the data shown is consistent with what we know). It shows when nests have typically occurred (1997 -2007) vs. the times for evening/morning twilight during those dates ("twilight" being defined as 1/2 hour after official sunset or 1/2 hour before official sunrise). Based on this information, we are contemplating revising the night driving restriction during the turtle nesting season to be from 9 p.m. (or 8 p.m.) until 7 a.m.. We believe that 7 a.m. would generally gives us 1.5 hours of light to conduct the morning turtle patrol in areas open to ORV use, which should allow adequate time for consistent, reliable coverage prior to the beach re-opening to ORVs for the day.

What do you think of this approach?



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

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| 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     |   |             |