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**Attachments:** [NCWRC Night Driving Recs for CAHA V8 Mar 09.doc](#)

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Mike,

Attached is a set of recommendations from WRC regarding night driving and resource management issues. I had a brief conversation with Pete Benjamin this morning and we agreed to send separate packages in hopes that would provide the broadest framework for guidance as you evaluate these complex issues.

Please contact me if you have any questions.

Thanks.

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## **Recommendations Pertaining to Night Driving on CAHA during the Sea Turtle Nesting Season**

### **Introduction**

The recommendations contained herein are interim concepts being presented by the North Carolina Wildlife Resources Commission at the request of the National Park Service. These concepts consider both biological and social issues related to beach driving on CAHA. These concepts are provided to indicate the current thinking of our agency, but by their very nature will require further development before being finalized. As indicated below, we agree that above-ambient lighting in CAHA and throughout Dare County impacts turtle populations more than human activity on the beach. We believe these recommendations reflect acceptable compromises between biological and social issues and provide a foundation from which opportunities to successfully address lighting, night driving, and wildlife population issues can be maximized.

### **Goals for Recovery**

- Recovered population of sea turtle nests at CAHA = 200 nest annually
- Annual increase in sea turtle nests  $\geq 2\%$  (or greater) annually, based on the past 5-yr average.
- Decrease the number of sea turtle takes associated with night driving activities to  $< 3/\text{yr}$ .
- Decrease the number of violations to sea turtle, bird and sea beach amaranth resources associated with night driving activities to  $< 5/\text{yr}$ .
- Show an average annual increase in loggerhead sea turtle nests of  $\geq 2\%$  from the last 5 yr. average.
- Reduce “takes”/yr. on individual sea turtles or individual eggs associated with night driving activities (i.e. hatchlings caught in tire ruts, disorientation due to lights associated with vehicles, eggs or hatchlings run over, etc.).
- Document an average of  $< 10$  resource violations associated with night driving activities/yr.

### **Performance Objectives**

Reduced lighting county-wide: Year 3 = 25% reduction from baseline; Year 5= 50% reduction from baseline; Year 10 = 75% reduction from baseline.

### **Assumptions and Background**

- We are assuming that lighting (all sources) is affecting turtle nesting and hatchling survival at CAHA and throughout Dare County to a greater degree than is human activity on the beach.

- We are assuming the below biological criteria are reasonable and achievable and are accurate measures of a sustainable sea turtle nesting population.
- Recovery criteria, as stated in the Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle, are: “(1)...statistical confidence (95 percent) that the annual rate of increase over a generation time of 50 years is 2 percent or greater resulting in a total annual number of nests of 14,000 or greater for this recovery unit (approximate distribution of nests is NC=14% [2,000], SC=66% [9,200], and GA=20% [2,800]); and (2) (t)his increase in number of nests must be a result of corresponding increases in number of nesting females (estimated from nests, clutch frequency, and remigration interval). CAHA historically accounts for approximately 10 percent of the nests laid in NC (although, the last two years – 2007 and 2008 – have seen percentages of 14.5 and 13.2, respectively, of the state-wide totals), the above range-wide objectives translate into a CAHA-specific objective of 200 nests per year within the next 50 years, with interim benchmarks based on an approximate 2 percent annual rate of increase.
- NPS establishes turtle friendly lighting restrictions on NPS property by May 2011.
- County establishes turtle friendly lighting program county-wide by May 2011.

### Recommendations

#### **Year 1 (est. implementation 2011) –**

- Unrestricted night driving from Nov. 16<sup>th</sup> through April 30<sup>th</sup>, subject to resource closures.
- No night driving May 22<sup>nd</sup> through Sept. 15<sup>th</sup> between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).
- Restricted night driving from May 1<sup>st</sup> through May 21<sup>st</sup> and again starting Sept. 16<sup>th</sup> through Nov. 15<sup>th</sup> between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel), subject to the following conditions:
  - Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.
  - Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).
  - Headlights only on during transit and not shining into bird nesting areas.
  - Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)
  - NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.

“Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).

#### **Year 3, provided the following metrics are met;**

- 1) Reduced problem beachfront lighting county-wide by 25% from baseline.
- Unrestricted night driving from Nov. 1<sup>st</sup> through April 30<sup>th</sup>, subject to resource closures.
  - No night driving May 22<sup>nd</sup> through Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).

- Restricted night driving from May 1<sup>st</sup> through May 21<sup>st</sup>, and again from the Tuesday after Labor Day through October 31<sup>st</sup> between 1 hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition.
  - Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.
  - Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).
  - Headlights only on during transit and not shining into bird nesting areas.
  - Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)
  - NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.
- “Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).

**Year 5, provided the following metrics are met;**

- 1) Reduced problem beachfront lighting county-wide by 50% from baseline.
- Unrestricted night driving from Nov. 1<sup>st</sup> through April 30<sup>th</sup>, subject to resource closures.
  - No night driving the Tuesday after Memorial Day through the Friday before Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).
  - Restricted night driving from May 1<sup>st</sup> through Memorial Day, and again from the Saturday before Labor Day through October 31<sup>st</sup> between 1 hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition.
    - Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.
    - Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).
    - Headlights only on during transit and not shining into bird nesting areas.
    - Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)
    - NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.
  - “Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).

**Year 10, provided the following metrics are met;** If they are not met, NPS returns to one of the above management regimes depending on the level of progress indicated by the metrics.

- 1) Reduced problem beachfront lighting county-wide by 75% from baseline.
- Unrestricted night driving from Nov. 1<sup>st</sup> through April 30<sup>th</sup>, subject to resource closures.

- No night driving the Tuesday after Memorial Day through the Friday before Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).
- Restricted night driving from May 1<sup>st</sup> through Memorial Day, and again from the Saturday before Labor Day through October 31<sup>st</sup> between 1 hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition.
  - Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.
  - Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).
  - Headlights only on during transit and not shining into bird nesting areas.
  - Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)
  - NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.
- “Park and stay” option available throughout CHNS subject to resource closures.

Needed Evaluations:

Conduct assessment to determine baseline lighting conditions (number of lights visible from the beach) throughout Dare County by 2010. May be able to use “Night Skies” data as part of baseline.

Continue to monitor number of sea turtle nests as in the past. Track % increases or decreases. Baseline is set using past 5-yr. average.

Establish scientifically defensible methods to track sea turtle “takes” and resource violations and monitor these for use in relaxing night driving restrictions.