

**United States Department of the Interior**

FISH AND WILDLIFE SERVICE  
Raleigh Field Office  
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Raleigh, North Carolina 27636-3726

April 24, 2007

Michael B. Murray  
Superintendent  
Cape Hatteras National Seashore  
National Park Service  
1401 National Park Drive  
Manteo, North Carolina 27954

Subject: Amendment to the Biological Opinion for Cape Hatteras National Seashore's  
Interim Protected Species Management Strategy

Dear Superintendent Murray:

This letter constitutes an amendment to the U.S. Fish and Wildlife Service's (USFWS) Biological and Conference Opinions (BO), dated August 14, 2006, on the Cape Hatteras National Seashore's (Seashore) Interim Protected Species Management Strategy (Strategy), in accordance with section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (16 United States Code [U.S.C.] 1531 *et seq.*). These opinions assessed the effects of implementation of the Seashore's Strategy on the piping plover (*Charadrius melodus*) of the Atlantic Coast, Great Lakes and Great Plains populations; seabeach amaranth (*Amaranthus pumilus*); and loggerhead (*Caretta caretta*), green (*Chelonia mydas*), and leatherback (*Dermochelys coriacea*) sea turtles; and proposed critical habitat for the wintering population of the piping plover in North Carolina.

On April 3, 2007, the USFWS received your written communication (dated March 30, 2007) requesting reinitiation of consultation. The basis of your request is the inclusion in your draft Finding of No Significant Impact (FONSI) of performance measures that are designed to gauge the success of the implementation of the Strategy on the performance of endangered and threatened species within the Seashore. A complete administrative record of this consultation is on file in the Raleigh Field Office.

The following changes should be made to the corresponding sections of the BO:

**DESCRIPTION OF THE PROPOSED ACTION**

*Insert the following immediately before the "Sea Turtles" section on page 9 of the August 14, 2006 BO:*

The proposed action was modified (via letter of March 30, 2007) to include performance measures for the piping plover. These performance measures are:

Performance Measure 1: Number of breeding pairs of piping plovers in Seashore: four (4) or

more breeding pairs per year.

Performance Measure 2: Number of piping plover nests in the Seashore: three (3) or more nests, or 75% of the number of breeding pairs, whichever is greater.

Performance Measure 3: Number of fledged chicks in the Seashore: at least one (1) fledged chick, on average, per nest (annually).

Performance Measure 4: For wintering piping plovers, the National Park Service (NPS) and FWS will jointly develop a systematic monitoring protocol to help establish where the wintering enclosures should be placed.

*Insert the following immediately before the "Seabeach Amaranth" section on page 10 of the August 14, 2006 BO:*

The proposed action was modified (via letter of March 30, 2007) to include performance measures for sea turtles. These performance measures are:

Performance Measure 5: Sea Turtle false crawl to nest ratio (all species): less than or equal to 1:1 annually.

Performance Measure 6: Percentage of State's total sea turtle nests (all species): the number of sea turtle nests at the Seashore annually will be greater than or equal to 10% of the state-wide average for the previous 5 years.

*Insert the following immediately before the "Action Area" section on page 12 of the August 14, 2006 BO:*

The following definitions should be used for purposes regarding breeding and nesting piping plover activities:

"Breeding Pair" – Breeding pairs of piping plovers may be counted if good evidence of breeding activity is observed. This may include observations of territoriality and courtship, even if no nests or chicks are located, and may likewise include observations of nests and chicks, even if only one adult is seen. However, unmated territorial adults should not be counted, and care must be exercised to prevent counting incubating adults and their non-tending mates as separate pairs.

"Nest" – Piping plovers generally fledge only a single brood per season, but may renest several times if previous nests are lost or, infrequently, if a brood is lost within several days of hatching. Clutch size for an initial nest attempt is usually four eggs, one laid every other day. Therefore, a nest is defined as having at least one egg.

"Fledging" – For the purposes of measuring productivity, plovers are considered fledged if they attain 25 days of age, or are seen in flight, whichever comes first. [Please note that many 25-day-old plover chicks are incapable of flight and therefore remain vulnerable to mortality. Also, data on chick survival for periods less than 25 days are useful for site management purposes, but

should not be included in state averages reported to the USFWS.]

#### **EFFECTS OF THE ACTION**

*Insert the following sentence at the end of the second paragraph on page 57 of the August 14, 2006 BO:*

The inclusion and implementation of the performance measures (via letter of March 30, 2007) is expected to positively contribute to that end.

#### **CONCLUSION**

*Insert the following sentence at the end of the first paragraph of the "Listed species/critical habitat" sub-section on page 75 of the August 14, 2006 BO:*

Our review of the revised performance measures and targets (via letter of March 30, 2007) does not change the "no jeopardy" determination. In fact, the performance measures and targets will help ensure the implementation of the Strategy facilitates the continued existence of these species as functioning components of the CAHA ecosystem. Furthermore, we can use the minimum performance targets identified by the Seashore to establish a level of incidental take for the piping plover that is expected with implementation of the Strategy.

#### **AMOUNT OR EXTENT OF TAKE ANTICIPATED**

*Replace the summary paragraphs in the "Piping plover" section on pages 78-79 of the August 14, 2006 BO with the following:*

- 1) Breeding Piping Plovers: The USFWS expects incidental take of breeding piping plover will be difficult to detect for the following reasons:
  - a) breeding adults may be scared away from or prevented from forming a nest at the Seashore;
  - b) the nests are cryptic;
  - c) the hatchlings are small and sand colored;
  - d) dead young are easily covered by sand or waves; and,
  - e) predators may carry away young.

However, based on the Seashore's performance measures and targets identified in their March 30, 2007 letter, the level of incidental take is expected to be those breeding pairs, nests, eggs, and chicks that are identified by plover monitoring at the Seashore that exceed the Seashore's minimum performance target levels of:

- a) four (4) breeding pair per year;
- b) three (3) or 75% of the number of breeding pairs (whichever is greater); and,
- c) an average of one (1) chick fledged per nest produced, per year.

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The level of take is based on the Seashore's performance target to fledge at least one chick per nest, per year. We note the difference in the level of take identified as "chicks per nest" versus the standard productivity calculation of "chicks per breeding pair." Furthermore, we acknowledge that the Seashore's performance target and subsequently our level of incidental take is below the minimum productivity level required to maintain a stable population (i.e., 1.24 fledged chicks per breeding pair) or the recovery plan level (i.e., 1.5 fledged chicks per breeding pair). However, the Seashore's target reflects higher productivity than has been achieved in recent years (2001-2006 mean fledged chicks per breeding pair = 0.61).

The Seashore's proposed monitoring will provide data that will allow the NPS to determine if they exceed the exempted level of take and adjust the protective measures to enhance conservation of the piping plover the following year. Incidental take for the proposed action is anticipated during each nesting season (i.e., April 1 to August 31 of each year) until a long-term ORV Management Plan is developed (anticipated 2009) or December 31, 2009, whichever comes first.

*Replace the summary paragraphs in the "Sea turtles - all species" section on pages 79-80 of the August 14, 2006 BO with the following:*

The FWS expects incidental take of all species of sea turtles will be difficult to detect for the following reasons:

- 1) the turtles nest primarily at night and all nests are not found because [a] natural factors, such as rainfall, wind, and tides may obscure crawls and [b] human-caused factors, such as pedestrian and vehicular traffic, may obscure crawls, and result in nests being destroyed because they were missed during a nesting survey and egg relocation program;
- 2) the total number of hatchlings per undiscovered nest is unknown;
- 3) the reduction in percent hatching and emerging success per relocated nest over the natural nest site is unknown;
- 4) an unknown number of females may avoid the project beach and be forced to nest in a less than optimal area;
- 5) lights may misdirect an unknown number of hatchlings and cause death; and,
- 6) escarpments may form and cause an unknown number of females from accessing a suitable nesting site.

However, based on the Seashore's performance measures and targets identified in their March 30, 2007 letter, the level of incidental take is expected to be all sea turtle nests and false crawls that are identified by turtle monitoring at the Seashore that exceed the Seashore's minimum performance target levels. That is, incidental take is expected to be all sea turtle nests (all species) that exceed 10% of the State's total annual nesting numbers (based on the previous five years' nesting average) and all false crawls that exceed a false crawl to nest ratio of 1:1 (annually).

The Seashore's proposed monitoring will provide data that will allow the NPS to determine if they exceed the exempted level of take and adjust the protective measures to enhance conservation of sea turtles the following year. Incidental take for the proposed action is anticipated during each sea turtle nesting season (i.e., May 1 to November 15 of each year) until a long-term ORV Management Plan is developed (anticipated 2009) or December 31, 2009, whichever comes first.

#### **TERMS AND CONDITIONS**

*Insert the following paragraphs immediately before the "Coordination of Incidental Take Statements with Other Laws, Regulations, and Policies" section on page 84 of the August 14, 2006 BO:*

The reasonable and prudent measures, with their implementing terms and conditions, are

designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Seashore must immediately provide an explanation of the causes of the taking and review with the USFWS the need for possible modification of the reasonable and prudent measures.

#### REINITIATION NOTICE

*Replace item (1) in the first paragraph of this section on page 85 of the August 14, 2006 BO with the following:*

- (1) the amount or extent of incidental take for breeding piping plovers or nesting sea turtles is exceeded. The amount or extent of incidental take for breeding piping plovers will be considered exceeded if implementation of the Seashore's Strategy results in fewer than:
- four (4) breeding pairs of piping plovers per year; or
  - three (3) or 75% of the number of breeding pairs producing nests per year (whichever is higher); or
  - an average of one (1) fledged chick per nest produced, per year.

The amount or extent of incidental take for nesting sea turtles will be considered exceeded if implementation of the Seashore's Strategy results in:

- fewer than 10% of the State's total annual nesting numbers; or
- a false crawl to nest ratio that is greater than 1.3:1 annually<sup>2</sup>.

This concludes changes to the BO based on our review of the Seashore's March 30 2007 letter. As a reminder, if critical habitat is designated you may ask the USFWS to confirm the conference opinion for the wintering population of the piping plover as a BO issued through formal consultation. The request must be in writing. If the USFWS reviews the proposed action and finds that there have been no significant changes in the action as planned or information used during the conference, the USFWS will confirm the conference opinion as a BO on the project and no further section 7 consultation will be necessary.

We appreciate the time and effort that went into the development of performance measures for your Strategy. If you have any questions about the amendment, please contact me at (919) 856-4520 extension 11, or via email at [Pete\\_Benjamin@fws.gov](mailto:Pete_Benjamin@fws.gov).

Sincerely,

/signed/

Pete Benjamin  
Field Supervisor

<sup>2</sup> The 1.3:1 false crawl to nest ratio was chosen as a level that take would be exceeded because this is the highest false crawl to nest ratio the Seashore has experienced in the last five years (range 0.53:1 to 1.32:1 between 2001 and 2006).