National Park Service
U.S. Department of the Interior

Cape Hatteras National Seashore

FINDING OF NO SIGNIFICANT IMPACT

Interim Protected Species Management Strategy/Environmental Assessment

Cape Hatteras National Seashore, North Carolina

Officially authorized in 1937 along the Outer Banks of North Carolina, Cape Hatteras is the nation's first national seashore. Consisting of more than 30,000 acres distributed along approximately 64 miles of shoreline, Cape Hatteras National Seashore (the Seashore) is part of a dynamic barrier island system. Federal ownership in the Seashore extends from ocean to sound across three barrier islands—Ocracoke, Hatteras, and Bodie—spanning Dare and Hyde counties (see "Figure 2: Cape Hatteras National Seashore Map," page 5 of the strategy/EA). The former U.S. Coast Guard housing area in Buxton and eight village enclaves are excluded from the Seashore boundaries. The villages include Rodanthe, Waves, Salvo, Avon, Buxton, Frisco, and Hatteras on Hatteras Island and Ocracoke on Ocracoke Island. On the oceanside of the villages, federal ownership was established as a 500-foot strip measured landward from the mean high water at the time of acquisition. A larger area seaward of Buxton and Frisco includes portions of Buxton Woods. The 5,880-acre Pea Island National Wildlife Refuge, located at the northern end of Hatteras Island, is within the boundary of the Seashore, but administered for refuge purposes by the U.S. Fish and Wildlife Service (USFWS) (National Park Service [NPS] 1997, as cited in the strategy/EA).

While the number of human visitors to the Seashore has grown, the breeding population of the federally threatened piping plover (*Charadrius melodus*) (USFWS 1996a, as cited in the strategy/EA) and the occurrence of seabeach amaranth (*Amaranthus pumilus*) (USFWS 1996b, as cited in the strategy/EA) have declined within the Seashore. Furthermore, statewide declines were documented for common terns (*Sterna hirundo*), least terns (*Sterna antillarum*), gull-billed terns (*Sterna nilotica*), black skimmers (*Rynchops niger*), and American oystercatchers (*Haematopus palliatus*); all of which are, or are being considered for listing as, species of special concern by the North Carolina Wildlife Resources Commission (NCWRC). Recreational pressure has been implicated in low reproductive success and declining population trends for all of these species, as well as for disturbance or mortality of migrating and wintering piping plovers, colonial waterbirds, and oystercatchers; and adults, nests, and hatchlings of the three species of sea turtles that nest at the Seashore (the federally threatened loggerhead [*Caretta caretta*] and the federally endangered green turtle [*Chelonia mydas*] and leatherback turtle [*Dermochelys coriacea*]) (NMFS and USFWS 1991a, NMFS and USFWS 1991b, NMFS and USFWS 1992, all as cited in the strategy/EA). An Interim Protected Species Management Strategy/environmental assessment (strategy/EA) was developed to address the protection of these species during the period that a long-term off-road vehicle (ORV) management plan/environmental impact statement (EIS) is being developed.

In order to meet the requirements of NPS statutes and regulations, NPS needs to develop a special regulation and a long-term ORV management plan/EIS to address recreational use of the Seashore by the public. A Notice of Intent (NOI) was published in the Federal Register on December 11, 2006. NPS also has obligations to protect species listed under the Endangered Species Act (ESA). According to the NPS *Management Policies 2006*, "The NPS will survey for, protect, and strive to recover all species native to national park system units that are listed under the Endangered Species Act. The Service will fully meet its obligations under the NPS Organic Act and the Endangered Species Act to both pro-actively conserve listed species and prevent detrimental effects on these species." The ESA directs federal agencies to carry

out programs for the conservation of endangered and threatened species, and to ensure that any action authorized, funded, or carried out by an agency is not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat.

Until the long-term ORV management plan/EIS is complete, the NPS will implement an interim strategy to protect sensitive species and provide for recreational use as directed in the enabling legislation, NPS *Management Policies 2006*, and other laws and mandates, such as the ESA. The species addressed in this strategy are those that are specifically affected by recreational use within the Seashore and are listed federally or by the state as threatened, endangered, or species of special concern, or are of special concern to the Seashore. To implement such a strategy, NPS completed an EA in accordance with the National Environmental Policy Act (NEPA).

The strategy/EA will meet the following needs until the long-term ORV management plan/EIS is completed:

- The need for a clear and consistent set of management strategies. The lack of an approved strategy over time has led to inconsistent management of protected species and has created confusion for both the public and the Seashore staff.
- The need for a management strategy on which to consult with the USFWS under Section 7 of the ESA.
- The need for a management strategy that complies with the ESA, the Migratory Bird Treaty Act, NPS *Management Policies 2006*, and park enabling legislation, and that avoids adverse effects to protected species.
- The need to immediately address public concerns about species management and recreational use.

The following are the strategy's objectives:

- Management Methodology
    - Establish an ongoing and meaningful dialogue with the multiple public groups interested in and affected by protected species management to ensure development of an implementable strategy.
    - Establish adaptive interim management practices and procedures that allow for responding to changes in the Seashore's dynamic physical and biological environment.
    - Establish procedures for prompt and efficient public notification of protected species management actions and the reasons for these actions.
- Visitor Use and Experience
    - Provide for continued recreational use and access consistent with required management of protected species.
    - Increase opportunities for public awareness and understanding of NPS resource management and visitor use policies and responsibilities as they pertain to the Seashore and protected species management.
- Threatened, Endangered, and Other Protected Species

- For threatened, endangered, and other protected species (e.g., state-listed species) and their habitats, provide protection from adverse impacts related to recreational uses as required by laws and policies, such as the Migratory Bird Treaty Act, the ESA, and NPS *Management Policies 2006*.

- Cooperate with the USFWS to ensure that NPS management actions comply with the requirements of the ESA.

- Seashore Management and Operations

  - Provide for effective protected species management while maintaining other Seashore operations.

ALTERNATIVES

The strategy/EA evaluated three action alternatives for managing sensitive species and assessed the adverse and beneficial impacts that could result from continuing current management (the no-action alternative, continuation of 2004 management [baseline]) or implementing any of the three action alternatives. These four alternatives are described on pages 39–63 of the strategy/EA and summarized in tables 1, 2, and 3 – Alternatives Elements Summaries (pages 71–103). For bird species the alternatives description and the summary tables illustrate how actions change with the specific life stages of each species. The alternatives were organized in this way to reflect that the biological needs and, hence, the management needs of each species change as a function of life stage. These life stages are explained in the strategy/EA (page 41).

The timing of each life stage varies according to the species in question; however, there is much overlap among species. For example, surveying for piping plover would occur at the same time as surveying for colonial waterbirds. In addition, there would likely be overlap among the established closures, because the preferred habitat is similar between similar species. Therefore, some closures would likely occur at the same time and in the same place for multiple species.

Species management includes establishment of resource closures and buffers to protect special status species (birds, turtles, and seabeach amaranth) from human disturbance. A resource closure is an area delineated by posts, usually with string between them (symbolic fence), and signage prohibiting vehicle access or prohibiting vehicle and pedestrian access. Closures are established to ensure an adequate buffer for protection of the species.

The selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), as well as the action alternatives assessed, specifically addresses actions that affect the following species:

- federally threatened piping plover (*Charadrius melodus*)

- federally listed sea turtles:

  threatened loggerhead (*Caretta caretta*)

  threatened green turtle (*Chelonia mydas*)

  endangered leatherback turtle (*Dermochelys coriacea*)

- federally threatened seabeach amaranth (*Amaranthus pumilus*)
- state-listed threatened species and species of special concern:

  common tern (*Sterna hirundo*)

  least tern (*Sterna antillarum*)

  gull-billed tern (*Sterna nilotica*)

  black skimmer (*Rynchops niger*)
- species of special concern to the Seashore

  American oystercatcher (*Haematopus palliatus*)

  Wilson's plover (*Charadrius wilsonia*)

  red knot (*Calidris canutus rufa*)[1]

SELECTED ALTERNATIVE (MODIFIED PREFERRED ALTERNATIVE – *ALTERNATIVE D (ACCESS/RESEARCH COMPONENT FOCUS) WITH ELEMENTS OF ALTERNATIVE A*)

Based on the analysis presented in the strategy/EA, the NPS identified *Alternative D – Access/Research Component Focus* as the preferred alternative for implementation. The preferred alternative is described on pages 59–63 and in tables 1, 2, and 3 of the strategy/EA. However, after considering public comment on the strategy/EA; park field experience during the 2006 breeding season; the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI); new research ("Effects of human recreation on the incubation behavior of American Oystercatchers" by McGowan C.P. and T.R. Simons, Wilson Journal of Ornithology 118(4):485-293, 2006); and professional judgment, NPS has decided to implement a combination of *Alternative D – Access/Research Component Focus* and some elements of *Alternative A – Continuation of 2004 Management* that pertain to managing sensitive species that are not listed under the ESA (see tables 1, 2, and 3 of this document). The basic rationale for this choice is that alternative D, as modified by elements of alternative A, best provides for both protection of federally and non-federally listed species and for continued recreational use and access consistent with required management of protected species during the interim period, until a long-term ORV management plan/EIS/regulation is developed, approved, and implemented. The modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A* is incorporated into the strategy/EA by Errata (attachment 2 to this FONSI). All elements of the modified preferred alternative were fully assessed in the strategy/EA under alternative A or alternative D.

Based on public comments received on the strategy/EA and discussion with the USFWS, NPS natural resource staff will conduct an annual assessment in February or March of piping plover breeding habitat to plan the upcoming season's pre-nesting closures. Pre-nesting closures will be established in breeding areas used in the past three years and adapted to current habitat and physiographic conditions. Such areas

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[1] Now a candidate species for federal listing under the ESA, the red knot uses the Seashore during migration.

will be closed by posting symbolic fencing by April 1. All species closures are subject to the Superintendent's approval.

With respect to the non-federally listed species, the NPS will implement the selected alternative (modified preferred alternative – *Alternative D (Access Research Component Focus) with Elements of Alternative A*) using the following elements from alternative A:

1. The park will establish resource closures when nesting behavior is observed, rather than establishing pre-nesting closures for species other than piping plover (see strategy/EA, pages 43–44 and "Table 1: Alternatives Elements Summary—Species Observations" and "Table 2: Alternatives Elements Summary—Species Management"). Some, but not all, of the American oystercatcher, Wilson's plover and colonial waterbird nesting areas occur within the piping plover pre-nesting areas; thus the non-federally listed species will continue to benefit by the pre-nesting areas established for piping plovers as described in alternative D and by the relative lack of disturbance in all areas outside the designated ORV corridor. Outside the spits and Cape Point, the non-listed species usually nest near the toe of the dune, which is outside of or near the edge of the ORV corridor. As nesting behavior is observed in these locations, the width of the ORV corridor will be reduced (narrowed toward the high tide line) to provide a buffer around the birds. In areas in which the buffer zone would eliminate the ORV corridor, the park will identify alternate ORV routes if available or provide a bypass if possible. The existing prohibition of pets outside the ORV corridor at the spits and Cape Point will also benefit these non-listed species.

2. American oystercatcher nesting buffer/closure will be established based on adult's reaction to human disturbance (see alternative A, strategy/EA pages 43–44, tables 1 and 2). Closures will vary in size dependent on best professional judgment. If resource closures are created around nests, the Seashore will adjust the ORV corridor whenever possible to allow ORV passage and the ORV corridor width will be reduced if necessary. In areas in which the buffer zone would eliminate the ORV corridor, the Seashore will identify alternate ORV routes if available, or provide a bypass (see "Short-term Bypass Route Criteria" on page 11 of this FONSI) if possible. Observations will allow the Seashore to be responsive to individuality in bird behavior when determining an adequate size of closure zones around nests. The creation of a bypass may be approached as a research opportunity to gather data useful for interim management and for the long-term ORV management plan/EIS to test for distance at which vehicle disturbance to nesting American oystercatchers occurs (see alternative D, strategy/EA page 59). Based in part on the U.S. Geological Survey (USGS) protocols[2], alternative D in the strategy/EA recommended a 300-foot to 450-foot buffer around American oystercatcher nests. Based on experience from the 2006 nesting season, as well as recent research at Cape Lookout and Cape Hatteras National Seashores ("Effects of human recreation on the incubation behavior of American Oystercatchers" by McGowan C.P. and T.R. Simons, Wilson Journal of Ornithology 118(4):485-293, 2006), it was determined that this buffer size was frequently not required for American oystercatcher nests and, if routinely implemented, would result in virtually all key spits and points and most other beaches being completely

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2 The USGS protocols were prepared under an interagency agreement for the Seashore by the U.S. Geological Survey (USGS). The USGS is the scientific research agency for the Department of the Interior. The information and recommendations presented in the protocols represent the professional opinions of scientists that analyzed and interpreted the scientific data associated with protected species found at the Seashore. In addition to the Protocols, many other factors such as federal laws and mandates, NPS management policies, public input, practical field experience, and other scientific opinion were considered in the development of the strategy/EA.

closed to public (ORV and pedestrian) access as soon as nests occur through incubation and fledging. The research states that the birds appear to have habituated to the presence of ORVs (Whittaker and Knight 1998; as cited in McGowan and Simons 2006). NPS staff has observed on numerous occasions that it is possible to drive relatively close to an American oystercatcher nest without disturbing the bird incubating the nest. Actual distance varies based on individual bird behavior. Because of these factors, the buffer size for nesting American oystercatchers was made more flexible compared to the distances specified in alternative D.

3. The park will use a standard buffer distance of 150 feet to 300 feet for colonial waterbird nests, with the exact distance within that range dependent on best professional judgment based on the adult's reaction to human disturbance (see alternative A, strategy/EA "Table 2: Alternatives Elements Summary—Species Management"). Alternative A uses a 150-foot buffer around colonial waterbird nests, which is the same standard used in other parks including Cape Lookout and Cape Cod National Seashores, and is based in part on guidance from the North American Colonial Waterbird Conservation Management Plan. Alternative D in the strategy/EA (see page 59 and "Table 2: Alternatives Elements Summary—Species Management") recommended a 300-foot to 450-foot buffer for colonial waterbird nests, based in part on the USGS protocols. Based on the guidance and in-the-field experience, NPS believes a buffer of 150 feet to 300 feet, to vary within that range based on the adult's reaction to human disturbance, will provide effective protection.

4. Under the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), the Seashore will standardize the initial buffer distance around all species of non-federally listed chicks at 150 feet to 300 feet, which may then vary in size within that range dependent on best professional judgment based on the adult's reaction to human disturbance and for American oystercatcher also based on brood mobility. Alternative A (strategy/EA, pages 43–44, "Table 2: Alternatives Elements Summary—Species Management") provides for an unquantified buffer determined on a case-by-case basis, to be approved by the superintendent, around unfledged American oystercatcher chicks and a buffer of 150 feet around unfledged colonial waterbird chicks. Alternative D (strategy/EA, page 59) proposed a 300-foot buffer around American oystercatcher and least tern chicks, and 600 feet around chicks of other terns and black skimmers. As provided in alternatives A and D, under the selected alternative, management will combine elements of alternatives A and D and be responsive to individuality in bird behavior when determining adequate size of closure zones around broods. Under the selected alternative, a 150-foot to 300-foot buffer will be provided for unfledged chicks. Within these buffer limits, the buffer could be adjusted based on bird behavior.

5. When resource closures are created around non-federally listed chicks, the Seashore will adjust the ORV corridor whenever possible to allow vehicle passage and the ORV corridor will be reduced if necessary. In areas in which the buffer zone will eliminate the ORV corridor, the Seashore will identify alternate ORV routes if available. If there are no alternate ORV routes, then, if possible, the Seashore will establish a bypass. The Seashore will close the beach down to the waterline if necessary to allow chicks access to foraging areas. Observations will allow the Seashore to be responsive to individuality in bird behavior when determining adequate size of closure zones around broods (alternative D, strategy/EA, page 59).

At most American oystercatcher or colonial waterbird nest locations during the 2006 breeding season, the park was able to provide a full beach closure for chicks of non-listed

species and still provide an "alternate route" (i.e., ORV users could get around the closure to reach open areas via some other route or bypass). Under the selected alternative (modified preferred alternative – *Alternative D (Access Research Component Focus) with Elements of Alternative A*), NPS anticipates temporary full beach closures in most locations when chicks are present with alternate access around the closures when possible. In the few situations where an alternate route or bypass is not accessible, NPS will employ an access option that minimizes and manages the risk of unintentional take on chicks of non-federally listed species. The draft NPS/USFWS service-wide Memorandum of Understanding on Migratory Bird Treaty Act species[3] provides for the use of "conservation measures in unintentional take situations" to minimize or avoid the risk of take. For non-federally listed species, the USFWS indicates that the buffer zones, reduced speed limits, pedestrian-only access, daylight-only access, etc., all constitute reasonable, "protective measures" (P. Benjamin, USFWS, pers. comm., M. Murray, National Park Service, May 2, 2007). These few limited situations may be approached as a research opportunity to gather data useful for interim management and for the long-term ORV management plan/EIS to test for distance at which vehicle disturbance to shorebird chicks occurs.

6. Winter/Non-breeding habitat for piping plover and for three non-federally listed species, American oystercatchers, Wilson's plovers, and red knots, will be surveyed. Observation protocols for wintering/migrating shorebirds have been developed by the NPS Inventory and Monitoring Program and tested at the Seashore during the non-breeding season of 2006-2007. NPS and USFWS will jointly review the observation protocols and agree on monitoring protocols that will be implemented for these species (alternative D, strategy/EA, "Table 2: Alternatives Elements Summary—Species Management").

7. The park will monitor and document results of the interim strategy/EA so NPS can provide information to the long-term planning process, which can then allow for adjustments in the strategy that did not produce the planned results (alternative D, strategy/EA page 60).

The other elements of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) derived from alternative D are detailed in the strategy/EA on pages 48–51 and provided below.

1. Implementation of this action will replace Superintendent's Order 10: Monitoring and Protection of Species of Concern.

2. In general, because of the dynamic nature of the Seashore beaches and inlets, the management may change by location and time, and new sites (bars, islands) may require additional management, or management actions may become inapplicable for certain sites due to changes in ground conditions (e.g., habitat changes with vegetation growth).

3. Areas with symbolic fencing (string between posts) are closed to recreational access.

4. Data collection under each alternative will include documenting breeding and nest locations using a geographic positioning system (GPS) and incorporating data into a geographic information system. The Seashore has submitted a request for funding to update the

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3 Executive Order 13186—Responsibilities of Federal Agencies To Protect Migratory Birds requires each federal agency taking actions that are likely to have negative effects on migratory bird populations to develop and implement a Memorandum of Understanding with the USFWS that shall promote the conservation of migratory bird populations.

geographic information system and develop standardized protocols for collecting data for the geographic information system.

5. Existing NPS regulations will continue to be implemented.

6. Predator management will continue with the removal of predators as needed. Use of predator exclosures over piping plover nests will continue. In addition, the Seashore has initiated the planning process to develop a Predator Control Plan/EA in cooperation with the U.S. Department of Agriculture. Thus, current levels of predator management will continue until a Predator Control Plan/EA can be drafted, published for public review, approved, and implemented.

7. The following study will continue for at least another year at the Seashore:

   "Monitoring and Management of American Oystercatcher on Cape Hatteras National Seashore" conducted by Dr. Ted Simons and Shiloh Shulte, Cooperative Research Group, North Carolina State University. The study will monitor American oystercatcher nesting and chick success/survival, and document unfledged chick behavior.

8. ORV access will continue to be managed according to Superintendent's Order 7. Unless otherwise posted, the maximum speed is 25 miles per hour. Superintendent's Order 7 specifically provides for an "Ocean Beach Zone" in which ORVs would "…be permitted within 150 feet of the existing tideline…" The ORV Use Areas provided for in Superintendent's Order 7, commonly referred to as the ORV corridor, are marked at the spits and Cape Point by posts placed 150 feet landward from the average, normal high tide line or, if existing, and less than 150 feet, at the vegetation or the toe of the remnant dune line. During breeding season (April 1 through August 31) the interim protected species management strategy provides for a 100-foot-wide corridor in protected species breeding areas. Due to the large number of miles of beach, the corridor is not marked in areas where the dune line provides a physical barrier. The 150-foot ORV corridor will be provided in areas of the Seashore outside of those areas specifically designated or being managed for species protection, seasonal ORV closures, and safety closures. Implementation of the interim strategy will result in the review and update of Superintendent's Order 7: ORV Management, as determined necessary.

9. Essential use vehicles will enter restricted areas subject to the guidelines in the Essential Vehicles section of the U.S. Fish and Wildlife Service Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan (USFWS 1996a, as cited in the strategy/EA). Due to the soft sand conditions of the Seashore, the maximum speed of essential use vehicles will not exceed 10 miles per hour.

10. Weekly minimum frequencies are provided for species observations. If a need is established for more frequent observations than the minimum stated, and staff is available, the Seashore may conduct observations more frequently on a case-by-case basis.

11. Staff used for field observations, education, and outreach will be trained by qualified NPS staff and will meet the following minimum qualifications:

    a. Completion of an instruction course conducted by a qualified staff biologist. Training will occur at the beginning of the season (March/April) and again in April/May. Training will include:

i. Job description/expectations
ii. Personal safety
iii. Professional behavior
iv. NPS and Seashore rules, regulations, policies
v. Geographic locations orientation
vi. Awareness of the community and their role in it
vii. Seashore personnel and job descriptions
viii. ATV/beach driving
ix. Protected species surveying and management
    1. Identification
    2. Behavior
    3. Needs
    4. Closures
x. Completion of observation forms, etc.
xi. Overview of existing Seashore activities and studies
xii. Equipment operation, care, and upkeep
xiii. Outreach and education

b. Returning staff may not need the full training.

12. Temporary/seasonal staff will be hired using the following procedure:

Temporary/seasonal staff will be hired and trained by April 1 to begin bird monitoring and protection, education, and outreach activities. A few returning previously trained, experienced staff may start in mid-March to help prepare equipment, signs, etc. for the season, to help prepare for the training and to help permanent staff with initial monitoring before April 1. Any additional temporary/seasonal staff will be hired and trained by May 1 to conduct turtle monitoring and protection, education, and outreach activities, following the guidelines in the NCWRC Handbook for Sea Turtle Volunteers in North Carolina (Revised 2006). Job descriptions will be created with specific needs and standards for all skilled and unskilled positions. A standard for hiring seasonal employees, interns, and volunteers will be developed, including expectations and requirements for in-house training to occur at established times.

Recruiting may begin as early as October of the preceding year.

A list will be maintained of trained local volunteers and those interested in becoming trained to fill volunteer positions.

Set times for training and set start dates for seasonal staff will be established.

All the training information will be available for transmittal to all new staff during training. This will provide consistent information to everyone, and managers will be assured that seasonal employees, interns, and volunteers received consistent information.

13. Programming of staff time may be adjusted following the first season of the strategy implementation, i.e., following the 2007 breeding season.

14. The target level of law enforcement staffing is a minimum of 17 positions, an increase of three permanent law enforcement positions over that in Fiscal Year 2005. It is planned that law enforcement staff activities will be directed to appropriate protected species projects. However, enforcement staff will be reallocated in the event that other emergency or

enforcement situations must be attended to during high visitation periods. It is the responsibility of the Superintendent and law enforcement managers to direct their resources where most needed depending on circumstances. If, and as this occurs, law enforcement staff may not be able to dedicate as much time to species protection.

15. The level of effort for outreach and compliance will now include:

    a. The Seashore will enforce proper trash disposal and anti-wildlife feeding regulations to reduce the attraction of predators to the area.

    b. Annual protected species reports regarding the previous breeding season will be published on the Seashore website and an initial bird posting plan for the upcoming season will be drafted that provides pre-nesting closures.

    c. A variety of educational and outreach materials will be developed regarding the impacts of trash disposal, wildlife feeding, fireworks, and pets on sensitive Seashore species. These will be distributed though a variety of methods that could include press releases, email announcements, and the use of local volunteer and community organizations.

    d. Interpretive signage will be developed for certain species.

Under the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), the Seashore will implement protective measures seasonally for recent piping plover breeding areas (areas used at some time during the past three breeding seasons). The Seashore will establish resource closures when nesting behavior is observed, rather than establishing pre-nesting closures, for those state-listed species and species of special concerned outlined previously. Sea turtle protections will be the same as alternative A with some variation in management. Seabeach amaranth resource closures will be established when a plant/seedling is found outside of an existing resource closure.

Alternative D provides for adaptive management in that the NPS can adjust the ORV corridor to allow for passage when necessary. If a buffer zone will eliminate the ORV corridor, the NPS will identify alternative ORV routes (if available) or provide a bypass (if possible). Additional management will include continued predator removal, additional recreation use restrictions, and public outreach. The selected alternative will allow for some variability in species management based on the individual species behavior and will adapt management strategies to afford access where feasible while protecting species.

RECREATION AND OTHER SEASHORE MANAGEMENT

Between April 1 and August 31 each year, a 100-foot-wide ORV corridor will be designated, where possible, above the mean high tide line in piping plover breeding areas used within the past three years or new habitat identified during the annual habitat assessment. Breeding areas outside the ORV corridor used within the past three years will be closed to pedestrian access using symbolic fencing at the same time. The ORV corridor will be delineated with posts below the dune line, maintaining a 100-foot corridor where possible taking into consideration necessary species closures.

Education will be provided for visitors regarding the wildlife values. In areas of reduced corridor width (i.e., narrower than 100 feet) a reduced speed limit of 10 miles per hour will be posted. Additionally, periodic patrols to observe and enforce compliance with closures will occur. During other times of the year ORV and pedestrian access will be restricted year-round to a corridor 150 feet duneward of the ocean mean high tide.

Pedestrian access will be maintained outside of the symbolically fenced areas. If no bird activity is seen by July 15, or if the area is abandoned for two weeks, whichever is later, the closure area will be reopened to recreation use.

Because closure zones will adjust to individual bird behavior, an ORV corridor may not be feasible for safety reasons or due to insufficient area. In these cases, the Seashore will attempt to identify an alternate ORV route. If no alternate route is available, a bypass will be considered using the bypass criteria outlined below. In piping plover breeding areas, an ORV closure will be implemented in the event an alternate route or bypass is unavailable.

Recent piping plover breeding habitats within the spits and Cape Point will be closed to ORVs and pedestrians beginning April 1. An ORV and pedestrian corridor will provide access around these closures, unless foraging chicks or safety issues require that the access route be closed. If a closure is required, the decision-making process for providing continued ORV access will include consideration of an alternate ORV route or a bypass. If a turtle nest hatching could lead to the blocking of access to the spits, Cape Point or South Beach, access will be provided, if feasible, via alternate route or bypass. Seabeach amaranth occurring outside of existing species management closures will be protected from ORV and pedestrian access.

Short-term bypass route criteria:

a. The bypass area will be routed around dunes and vegetation if possible. If necessary, ground leveling, consistent with the state coastal management program, may be considered if dune fields do not exceed 36 inches in height. Leveling will be done by hand (no machinery will be used).

b. The bypass will take advantage of natural terrain (e.g., blowouts) to minimize ground altering disturbance to the natural areas and avoid impacts to wetlands.

c. The bypass will be at a minimum wide enough to allow one ORV to safely pass, and a maximum of two lanes if "line of sight" vision is compromised.

d. Natural area disturbance to accommodate avoidance of turtle or bird nesting will not exceed 6,000 square feet.

e. Minimal vegetation impact will be allowed.

   Federal or state-listed plants or plants falling under the category of special concern (e.g., seabeach amaranth, dune blue curls) will not be compromised.

   Vegetation in altered areas will be expected to recover within the following growing season. If vegetation does not recover within one growing season, or by other natural process (such as overwash creating habitat), the Seashore will initiate restoration of vegetation.

   Any vegetation removal will be performed with hand tools (no machinery will be used).

Areas will be restored if predicted recovery period exceeds one season. Bypass routes will not infringe upon or fragment an adjacent resource/safety closure. Bypass routes will not disturb or impact any cultural resource (i.e., shipwrecks).

SPECIES SURVEYING AND MANAGEMENT

Birds. Species observation activities will be similar to previous management activities but with defined start dates and data gathering requirements (see strategy/EA, "Table 1: Alternatives Elements Summary—Species Observation"). For example, staff will use a GPS to record the location of piping plover nests for incorporation into a GIS system. This will provide additional data for adapting resource management in following years. Seasonal closure areas will be established with symbolic fencing to minimize human disturbance in areas used by piping plover during the past three breeding seasons (defined as recent breeding habitat). An annual habitat assessment will be conducted in February or March. Based on this assessment, new habitat and suitable portions[4] of recent breeding habitat, such as some shoreline foraging areas and nesting habitat, will be closed to the public with symbolic fencing by April 1 each year. This annual habitat assessment will include Bodie Island Spit; Green Island; Cape Point, South Beach, and Hatteras Spit; and South Ocracoke. Beginning March 15 staff will survey recent piping plover breeding areas once a week and beginning April 1, staff will survey recent piping plover breeding areas three times per week. Recent breeding areas for other species will be surveyed twice per week. A range of observations will occur for each bird species by qualified staff across all life stages. Observations required as part of the terms and conditions of the USFWS Amended Biological Opinion (2007) are outlined in table 1 of this FONSI. The USFWS Amended Biological Opinion (2007) is included as attachment 1 to this FONSI. Staff will observe species activities and potentially close areas, outside of defined pre-nesting closures, being used by other protected bird species. Closures will be removed if no bird activity is seen by July 15 or when the area has been abandoned for a 2-week period, whichever comes later. When piping plover nests are found in existing or newly established closure areas, Seashore staff will collect a variety of data including number of observations of plovers performing territorial defense or courtship outside symbolic fencing; number of observations of plovers making nest scrapes outside the symbolic fencing; and the number of vehicles, pedestrians, or pets within the symbolic fencing and/or in which tracks are observed crossing into posted habitat. For all species, 150-foot nest buffers will be established that could be adjusted based on observed bird behavior.

Closures will expand once the eggs hatch to protect unfledged chicks. Piping plover broods will be protected by a 600-foot to 3,000-foot buffer, depending on bird behavior. Based on piping plover behavior, the buffer could be reduced after the first week to no less than 300 feet, but may require expansion up to a maximum of 3,000 feet. This buffer will move if the piping plover chicks relocate and will incorporate resting and foraging sites. A 150-foot to 300-foot buffer will be established around American oystercatcher chicks, and a 150-foot to 300-foot buffer around colonial waterbird colonies when chicks are present. These buffers could be adjusted based on observed bird behavior. The Seashore will provide an alternate route or bypass around listed and non-listed chicks, if possible.

Closures and buffers will be removed once all of the chicks have fledged or are lost. Monitoring reports will include the fate (e.g., survived, fledged, lost to predators, etc.) of each brood relative to the management measures implemented. Suitable interior habitats at the spits and Cape Point will be closed year round to provide for resting and foraging for piping plover. At present, such suitable habitat includes ephemeral ponds and moist flats at Bodie Island Spit, Cape Point, Hatteras Spit, and Ocracoke. The actual

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[4] On the Atlantic Coast, piping plovers nest in sand, gravel, or cobble substrates in backshore, dune, interdune blowout, overwash fan, and barrier flat zones of open or sparsely-vegetated beaches (Haig 1992). Nest sites may have little or no slope (Cairns 1982; Burger 1987), although nesting does occur on lower-elevation dunes (Cairns 1982). On wide beaches, piping plovers nest in the open to maintain a wide field of view, but on narrower beaches, eggs can be laid in clumps of vegetation (Cairns 1982). Where beaches are wide, piping plovers tend to nest far from the tide line to reduce risk of nest overwash, but this places nests closer to vegetated dunes, where risk of predation is high (Burger 1987). (All as cited in the strategy/EA.)

locations of suitable foraging and resting habitat may change periodically due to natural processes (i.e., overwashes).

Consistent with the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), procedures will be developed and implemented by the Seashore to ensure all concessionaires and contractors doing work on or near the beach fully understand and comply with the plover protection measures implemented by the NPS.

Sea Turtles. The Seashore will follow the management guidelines defined by the NCWRC in its Handbook for Sea Turtle Volunteers in North Carolina (2006). An annual permit from the NCWRC will be required (attachment 3 to this FONSI is the current permit). Beaches will be patrolled daily beginning at dawn each day between May 1 and September 15 in search of sea turtle crawls and nests. As provided in the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), periodic monitoring (e.g., every two to three days) for unknown nesting and emerging hatchlings will continue, especially in areas of high visitation, through November 15. Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed washed ashore or following severe storm events. Staff will collect the same data as identified under current management and in the terms and conditions of the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI). As is current practice, nests will be left in place unless there is a need to relocate them for environmental reasons. When a nest is found, staff will assess the need for relocation and follow relocation guidance identified in the NCWRC handbook. Any single nest left in place, or relocated, will be protected by an approximately 30-foot by 30-foot posted closure during the incubation period. These small closures will be expanded to the surf line approximately 50 to 55 days into incubation. The width of the closure is based on the type and level of use in the area of the beach where the nest was laid (see table 2 of this FONSI). Consistent with the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), procedures will be developed and implemented by the Seashore to ensure all concessionaires and contractors doing work on or near the beach fully understand and comply with the sea turtle protection measures implemented by the NPS, including measures related to lighting.

Seabeach Amaranth. An annual survey will be conducted in August for new plants or seedlings. All resource closures will be surveyed for the presence of seabeach amaranth prior to reopening. Potential new habitat will be surveyed. Staff will record all locations of individual plants or plant clusters using a GPS.

CONSERVATION MEASURES/RECOMMENDATIONS

Conservation measures are discretionary activities intended to minimize or avoid adverse effects of an action on listed species or critical habitat, to help implement recovery plans, or to develop information. Conservation measures outlined in the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI) will be considered for implementation. The Seashore will notify the USFWS when any of these conservation measures are implemented.

PERFORMANCE MEASURES – PIPING PLOVER

Based on public comments and discussions with the USFWS, performance measures were developed to gauge the success of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*). The terms and conditions in the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI) require monitoring relative to the various breeding stages (number of breeding pairs, number of scrapes, number of nests, and number of fledglings); thus it is appropriate to have performance measures relative to most of these stages. In recent years (2003–2005) an average of 2.6 plover pairs have bred at the Seashore, with an average of 2

nests and 2.3 chicks fledged each year (National Park Service, Piping Plover (*Charadrius melodus)* Monitoring at Cape Hatteras National Seashore, 2006 Annual Report). Improvement on these results will be indicative of the success of the selected alternative. There are four main recent breeding sites at the Seashore, Bodie Island, Cape Point/South Beach, Hatteras Spit and Ocracoke, so it is reasonable to consider "four" as an initial target number for breeding pairs and a percentage of that number as an initial target for nesting attempts. The following performance measures will be considered minimum targets during the period the interim strategy will be in effect.

Performance Measure 1, Number of Breeding Pairs: The target is four or more breeding pairs per year.

Performance Measure 2, Number of Piping Plover Nests: The target is three or more nests or 75% of the number of breeding pairs, whichever is greater.

Performance Measure 3, Number of Chicks Fledged: The target is an average of at least one chick per nest per year at the Seashore.

Performance Measure 4, Monitoring Procedures: For wintering piping plovers, the NPS and USFWS will jointly develop a systematic monitoring protocol to help establish where the wintering enclosure should be placed.

PERFORMANCE MEASURES – SEA TURTLES

The Seashore has averaged 75 turtle nests per year; however, this number is highly variable year-to-year. No trend is apparent for loggerhead or other turtle species at the Seashore (see page 73 of the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI)). As detailed in the USFWS Amended Biological Opinion (2007), the Seashore has also generally represented approximately 10% of the total North Carolina sea turtle nests. Under the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), the Seashore expects to continue to contribute approximately the same percentage of the state's total sea turtle nests for all species. One of the primary anticipated responses of sea turtles (all species) to management actions will be a reduction in the false crawl to nest ratio. The ratio at the Seashore has been reported to be as high as 3:1. The literature (Dodd 1988) reports an observed ratio of 1:1 on undisturbed beaches (Dodd, C.K., Jr. 1988. Synopsis of the biological data on the loggerhead sea turtle *Caretta caretta* [Linnaeus 1758]. Fish and Wildlife Service Biological Report 88(14). 110 pages as cited on page 74 of the USFWS Amended Biological Opinion [2007]).

Performance Measure 5, False Crawl Ratio: The sea turtle false crawl to nest ratio target for all species is less than or equal to 1:1 annually.

Performance Measure 6, Percentage of Sea Turtle Nests (all species) in the State: The target is that the total number of sea turtle nests at Cape Hatteras National Seashore annually will be greater than or equal to 10 % annually of the statewide average for the previous five years.

REINITIATION OF CONSULTATION IF PERFORMANCE MEASURE TARGETS NOT MET

If one or more targets are not met, the Seashore will reinitiate consultation with USFWS as part of the annual review process identified in the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), unless the Seashore and the USFWS mutually agree that the failure to meet the target was caused by factors beyond the management control or influence of the Seashore (e.g., a higher than normal

frequency of severe storms occurred during the breeding season resulting in an increased incidence of nest failures).

HOW THE SELECTED ALTERNATIVE (MODIFIED PREFERRED ALTERNATIVE – *ALTERNATIVE D (ACCESS/RESEARCH COMPONENT FOCUS) WITH ELEMENTS OF ALTERNATIVE A*) MEETS THE OBJECTIVES

Implementation of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will meet the purpose and need requirements. The selected alternative will meet the objectives outlined in the strategy/EA as detailed in the following paragraphs.

The selected alternative will meet to a large degree the objective to establish adaptive interim management practices and procedures that have the ability to respond to changes in the Seashore's dynamic physical and biological environment. The protected species management measures in the selected alternative, including the performance measures detailed on pages 13-14 of this FONSI, allow the park to protect species while adapting and providing for recreational uses. These management measures also afford the Seashore the ability to adapt to changes in habitat resulting from the Seashore's dynamic environment.

The objective to establish procedures for prompt and efficient public notification of protected species management actions and the reasons for these actions will be fully met through implementation of the selected alternative. The Seashore will expand on existing notification methods, providing additional closure information. However, the potential for constant change in the closures makes prompt and efficient notification challenging.

The objective to establish an ongoing and meaningful dialogue with the multiple public entities interested in and affected by protected species management to ensure the development of an implementable strategy will be met to a moderate degree under the selected alternative. Communication and outreach with the community will be increased. The management measures provide for a greater flexibility in resource management and, thus, could increase compliance with the closures, resulting in a more implementable strategy.

The objective to provide for continued recreational use and access consistent with the required management of protected species will be met to a large degree, with the selected alternative allowing for a greater range of recreational uses, while providing resource protection.

The objective to increase opportunities for public awareness and understanding of NPS resource management and visitor use policies and responsibilities as they pertain to the seashore and protected species management will be met to a large degree. The outreach efforts outlined in the selected alternative provide opportunities to the Seashore to increase public awareness and understanding about protected species management. In addition, the educational materials that will be developed under the selected alternative will increase public awareness.

The objective to provide threatened, endangered, and other protected species and their habitats protection from adverse impacts related to recreational uses as required by laws and policies, such as the Migratory Bird Treaty Act, ESA, and NPS *Management Policies 2006* will be met to a moderate degree. The selected alternative provides a higher level of protection over the current condition although the level of surveying and management under the selected alternative leaves room for some risk to the protected species addressed in the strategy/EA. Furthermore, under the selected alternative, the NPS will reinitiate consultation with the U.S. Fish and Wildlife Service as part of the annual review process identified in the USFWS Amended Biological Opinion (2007) if one or more of the performance targets are not met. As

such, the NPS will fully meet the objective to consult with the USFWS to ensure that NPS management actions comply with the requirements of the Endangered Species Act.

Lastly, the selected alternative will provide for effective protected species management while maintaining other Seashore operations, meeting this objective to a moderate degree. Additional protected species management demands may have some impact on other Seashore operations, but these operations will be maintained.

When compared to the other alternatives, the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) better meets more of the objectives than alternatives A or B. Compared to alternative C, the selected alternative meets the objectives to a similar degree; however, the selected alternative better meets the objectives for visitor use. While the selected alternative has been modified to incorporate elements from alternative D (Access/Research Component Focus) and alternative A (Continuation of 2004 Management), this combination of elements still meets the objectives to the same degree as outlined in the strategy/EA. Because it best meets the stated objectives, the selected alternative was selected for implementation.

OTHER ALTERNATIVES ANALYZED IN THE ENVIRONMENTAL ASSESSMENT

In addition to the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), for which all elements were fully analyzed under alternative A and alternative D, the no-action alternative and two other action alternatives were fully analyzed in the strategy/EA. These alternatives, as well as alternatives eliminated from further consideration are outlined below.

ALTERNATIVE A – NO-ACTION ALTERNATIVE, CONTINUATION OF 2004 MANAGEMENT

Under the no-action alternative, protected species management at the Seashore would be a continuation of existing management, i.e., protected species management as it occurred in 2004. The no-action alternative did not address the vehicle escort program that was implemented in 2005, because that management action was a one-time emergency action carried out by an NPS incident management team working with Seashore staff. The NPS incident management teams are not available for continuing management activities such as interim protected species management at the Seashore. The no-action alternative accounts for species management before 2005, while acknowledging specific management changes provided in Superintendent's Order 7: ORV Management, which was issued in 2004. Management actions prior to 2004 were provided to give context to the baseline. Alternative A is described on pages 43–46 and in tables 1, 2, and 3 of the strategy/EA.

Under alternative A, the Seashore would implement protective measures for recent piping plover breeding areas (areas used at some time during the past three breeding seasons); American oystercatcher and colonial waterbirds, if a territory or colony or nest is established; sea turtle nests; and seabeach amaranth plants or seedlings. Measures vary for special status bird species according to the activity. Any species management closures would require Superintendent approval before being installed. Continued management would include predator removal, recreation use restrictions, and public outreach.

Implementation of alternative A would meet the purpose but would not meet the need requirements defined in the strategy/EA. The need for action identified the need for a clear and consistent set of management strategies for protected species because the lack of structure has created confusion for the public and the Seashore staff. Continuation of 2004 management practices would perpetuate this lack of consistency.

The continuation of 2004 management practices would not sufficiently address a number of the objectives of the strategy/EA. For example, alternative A would meet only to some degree the objective to establish adaptive interim management practices and procedures that have the ability to respond to changes in the Seashore's dynamic physical and biological environment. Resource management would remain relatively static in responding to protection and recreational use at the Seashore. The objective to establish an ongoing and meaningful dialogue with the multiple publics interested in and affected by protected species management to ensure the development of an implementable strategy would be met to some degree under alternative A. Continuation of existing management under alternative A would likely result in the same civic engagement challenges the Seashore and the interested publics have experienced in the past. The objective to provide threatened, endangered, and other protected species and their habitats protection from adverse impacts related to recreational uses as required by laws and policies, such as the Migratory Bird Treaty Act, ESA, and NPS *Management Policies 2006* would be met to a moderate degree under alternative A. Surveying would occur, but not at the necessary levels. Alternative A would meet the objective to provide for effective protected species management while maintaining other Seashore operations to a moderate degree. Operations would be maintained at existing levels, but they would not be sufficient to provide for species management. Lastly, alternative A would meet only to a moderate degree the objective to increase opportunities for public awareness and understanding of NPS resource management and visitor use policies and responsibilities as they pertain to the Seashore and protected species management and the objective to establish procedures for prompt and efficient public notification of protected species management actions and the reasons for these actions. The Seashore outlined an objective to consult with the USFWS to ensure that NPS management actions comply with the requirements of the ESA. Alternative A would meet this objective fully because the Seashore could initiate consultation with the USFWS. Alternative A also would meet to a large degree the objective to provide for continued recreational use and access consistent with required management of protected species. Because alternative A did not meet the objectives to the same or greater degree as the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), alternative A was not selected for implementation. Although the no-action alternative did not meet to a large degree most of the objectives of the strategy/EA, certain elements of the no-action alternative, when combined with alternative D as the selected alternative, will provide a level of species protection that will meet those objectives. Those elements are outlined above in the selected alternative.

See the strategy/EA, "Table 5: Summary of Impacts and Environmental Consequences Section" for a more complete description of the impacts of alternative A.

ALTERNATIVE B – UNDISTURBED AREA FOCUS

Under alternative B, the Seashore would implement year-round protective measures for historic piping plover breeding areas (areas used at some time during the past 10 breeding seasons) and seasonal measures for recent American oystercatcher and historic colonial waterbird breeding areas. Sea turtle protections would be the same as alternative A with some variation in management. Closures would be established around all potential habitat (historic and extant populations) of seabeach amaranth. Additional management would include continued predator removal, additional recreation use restrictions, and public outreach. Alternative B is described on pages 52–54 and in tables 1, 2, and 3 of the strategy/EA.

Implementation of alternative B would meet the purpose and need requirements. Alternative B would meet the strategy objectives outlined in the strategy/EA as detailed in the following paragraphs.

Alternative B would meet the objective to provide for effective protected species management while maintaining other Seashore operations only to a moderate degree. The requirements under alternative B for additional protected species management may have some impact on other Seashore operations, but

these operations would be maintained. With larger areas to enforce, extra demands may be placed on the law enforcement division. There would be short-term and long-term major adverse impacts on the law enforcement division.

The objective to establish an ongoing and meaningful dialogue with the multiple public entities interested in and affected by protected species management to ensure the development of an implementable strategy would be met to a moderate degree under alternative B. The objective to provide for continued recreational use and access consistent with the required management of protected species would be difficult to meet during the interim period as resource protection activities under alternative B would have a long-term major adverse impact to ORV dependent recreationists at the spits and Cape Point and a short-term, minor adverse impact in areas outside the spits and Cape Point. See the strategy/EA, table 5 and the "Environmental Consequences" section, for a more complete description of impacts of alternative B.

The objective to provide threatened, endangered, and other protected species and their habitats protection from adverse impacts related to recreational uses as required by laws and policies, such as the Migratory Bird Treaty Act, ESA, and NPS *Management Policies 2006* would be met to a large degree. The level of surveying and management, including resource related closures, minimizes the amount of risk to the species.

When compared to the other action alternatives, alternative B better meets objectives related to protected species, but does not meet objectives regarding visitor use and park operations to the degree met by other alternatives. Since it does not meet the objectives to the same or greater degree as the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), alternative B was not selected for implementation.

See the strategy/EA, "Table 5: Summary of Impacts and Environmental Consequences Section" for a more complete description of the impacts of alternative B.

ALTERNATIVE C – TAILORED MANAGEMENT FOCUS

Under alternative C, the Seashore would implement protective measures seasonally for historic piping plover and colonial waterbird breeding areas (areas used at some time during the past 10 breeding seasons) and for recent American oystercatcher and Wilson's plover breeding areas. Sea turtle protections would be the same as alternative A with some variation in management. Like alternative B, closures would be established around all potential habitat (historic and extant populations within the last 10 years) of seabeach amaranth. Under alternative C, adaptive management would include establishing an alternate ORV route (another access ramp, an existing interdunal road, or North Carolina State Highway 12 [NC-12]) and, in the case of turtle nests, potential bypass routes around closure areas to maintain ORV access. Additional management would include continued predator removal, additional recreation use restrictions, and public outreach. Alternative C would allow for some variability in species management based on the individual species behavior and would adapt management strategies to afford access where feasible while protecting species. Alternative C is described on pages 55–59 and in tables 1, 2, and 3 of the strategy/EA.

Implementation of alternative C would meet the purpose and need requirements. Alternative C would meet the strategy objectives outlined in the strategy/EA as detailed in the following paragraphs.

It would meet the objective to provide for effective protected species management while maintaining other Seashore operations to a large degree. Additional protected species management demands may have some impact on other Seashore operations, but these operations would be maintained.

The objective to establish an ongoing and meaningful dialogue with the multiple public entities interested in and affected by protected species management to ensure the development of an implementable strategy would be met to a moderate degree under alternative C. The objective to provide for continued recreational use and access consistent with the required management of protected species would be met to a moderate degree. Partial beach resource closures would result in short-term, negligible, adverse impacts and full-beach resource closures would result in long-term, minor adverse impacts outside the spits because alternate routes and bypass options are provided in alternative C. The objective to provide threatened, endangered, and other protected species and their habitats protection from adverse impacts related to recreational uses as required by laws and policies, such as the Migratory Bird Treaty Act, ESA, and NPS *Management Policies 2006* would be met to a moderate degree. The level of surveying and management under alternative C leaves room for some risk to the protected species addressed in the strategy/EA.

When compared to the other action alternatives, alternative C better meets more of the objectives than alternative B. Compared to alternative D, alternative C meets the objectives to a similar degree; however, alternative D better meets the objectives for visitor use. Because it did not best meet the stated objectives, alternative C was not selected for implementation.

See the strategy/EA, "Table 5: Summary of Impacts and Environmental Consequences Section" for a more complete description of the impacts of alternative C.

ALTERNATIVES DISMISSED

The NPS considered and dismissed from further analysis several alternatives before development of the range of reasonable alternatives for full impact analysis. Brief descriptions of these preliminary alternatives, and reasons for dismissal, are outlined below. Additional detail is provided in the strategy/EA (pages 65–69).

1. Elements of alternatives carried forward for consideration under the long-term ORV management plan/EIS/proposed negotiated rulemaking.

    a. Creating new habitat. Planning and implementation for creation of new habitat is a longer-term process than the scope of this interim strategy and should be considered in the larger context of a long-term ORV management plan/EIS.

    b. Escort program. Available funding/staffing levels for the interim strategy would not be sufficient to implement an escort program.

    c. Closing areas in front of villages for longer time period. Not applicable to the interim strategy as it relates more to the management of ORVs than of species, but would be considered under the long-term ORV management plan/EIS.

    d. Regulating number of vehicles on beach. Not applicable to the interim strategy as it relates more to the overall management of ORVs, but would be considered under the long-term ORV management plan/EIS.

    e. Establishing beach shuttles. Not applicable to the interim strategy as it address a longer-term transportation management issue, but would be considered under the long-term ORV management plan/EIS.

2. Captive Rearing of Piping Plovers and Turtles

a. Nest relocation for birds. Moving nests of shorebirds such as piping plover and American oystercatcher would result in nest abandonment and thus reduce their ability to reproduce.

b. Individual turtle nest relocation (for reasons other than imminent threat). Allowing for natural breeding and nesting is the ideal option whenever available; state permits nest relocation for research or when there is an imminent threat and potential loss of the nest due to erosion or frequent flooding.

c. Turtle hatcheries. Hatcheries are not warranted at the Seashore where turtles can be protected in their natural ecosystem.

3. Move all seabeach amaranth to Pea Island National Wildlife Refuge. Management action to extirpate a native, endangered species from the Seashore would be inconsistent with the Seashore's enabling legislation, other laws and regulations, and the NPS *Management Policies 2006.*

4. No species closures in the summer. Summer is the breeding season for these species; failure to adequately protect breeding individuals, nests, and young using measures such as closures would result in further species decline and would likely result in violations of the ESA prohibition on unauthorized "take."

5. Open closed areas after breeding season is over. Some areas may be reopened, but automatically reopening all closed areas would not provide important migrating and wintering habitat for Seashore populations of protected species and would be inconsistent with the Seashore's responsibility under various statutes and the NPS *Management Policies 2006.*

6. No pre-nesting closures for American oystercatchers and colonial waterbirds. Pre-nesting closures are needed in areas previously used for nesting to allow the birds a chance to begin reproductive behavior, and to avoid disturbance causing them to abandon those areas where they would be most likely to nest successfully. Note that although this element is not analyzed in the three action alternatives, it is analyzed in alternative A, which provides that closures are activated for these species if a territory is established or a nest located, rather than specifically providing for pre-nesting closures. No separate pre-nesting closures specific to American oystercatcher and colonial waterbirds have been incorporated into the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*). Based on park experience, a number of American oystercatcher and colonial waterbird nests occur within the piping plover pre-nesting closures established at the spits and Cape Point and therefore do not require separate pre-nesting closures. Outside of these areas, additional closures will be established for American oystercatchers and colonial waterbirds when territories are established or breeding behavior is observed.

7. Round the clock enforcement. There is no source of funding to provide for this, nor is it the norm for any national seashore.

8. Give preferred status to human visitors. During public scoping, some commenters asked that visitor use be put above species protection. The Seashore believes it can both conserve Seashore resources and provide for visitor enjoyment, but legal authorities and NPS

Management Policies 2006 require that, in case of conflict, resource conservation is predominant.

9. Move hatched chicks to Pea Island National Wildlife Refuge. This would be inconsistent with legal authorities and NPS *Management Policies 2006* and would not meet the objectives of the interim strategy.

10. Fence chicks away from the ORV corridor. This would prevent chick access to the intertidal zone and moist substrate habitat used for foraging and may increase vulnerability to predation.

11. Discourage nesting. Allowing activities that discourage nesting in low lying areas subject to overwash would also discourage other important wildlife activities, such as foraging, in these areas, and some flooding can be tolerated by nesting species.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

In addition to identifying the preferred alternative, the NPS also identified the "environmentally preferable alternative" as defined by the U.S. Council on Environmental Quality. Simply put, "this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves and enhances historic, cultural, and natural resources" (U.S. Council on Environmental Quality. NEPA's Forty Most Asked Questions. Question 6.a. http://ceq.eh.doe.gov/nepa/regs/40/40p.3.htm). There is no requirement that the environmentally preferable alternative and the preferred alternative be the same. After completing the environmental impact analysis, the NPS identified alternative B as the environmentally preferred alternative in this strategy/EA because it best meets those objectives related to protected species (see page 15 of this FONSI). The modified preferred alternative (*Alternative D (Access/Research Component Focus) with Elements of Alternative A*) is the selected alternative for implementation for the Interim Protected Species Management Strategy/EA because it best meets overall purpose, need and objectives (see strategy/EA, pages 1–2).

THE SELECTED ALTERNATIVE AND SIGNIFICANCE CRITERIA

The selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not have a significant effect on the environment as defined in 40 CFR §1508.27. Significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Although the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) has the potential to adversely affect the federally listed piping plover, species of sea turtles, and seabeach amaranth, mainly due to recreational activities that will continue under this interim strategy/EA, the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI) found that implementation of the strategy, as proposed, is not likely to jeopardize the continued existence of threatened or endangered species at the Seashore (see pages 45–46 of the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI)).

As described in the strategy/EA, as amended by the Errata (attachment 2 to this FONSI), and the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), the impacts of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) have the potential to adversely affect piping plover, sea turtles, and seabeach amaranth.

These impacts could result from disturbance during surveying and management, continued managed recreational use, aborted nesting attempts, turtles disoriented by light pollution, and crushed or buried seabeach amaranth plants and seeds. However, as determined by the USFWS Biological Opinion (2006; pages 74–75) and the USFWS Amended Biological Opinion (2007) (see attachment 1 to this FONSI), which adopted the performance measures, during the three-year period when the interim plan will be implemented, the selected alternative will seek to achieve the performance measures as described for piping plover and sea turtles. In addition, the selected alternative will have the potential to produce a slight population increase of seabeach amaranth (USFWS Biological Opinion (2006; page 77)). Therefore, based on the actions described on pages 4–15 of this FONSI, the strategy/EA as amended through the Errata (attachment 2 to this FONSI), and the USFWS Amended Biological Opinion, NPS has determined that the selected alternative will have no significant impact on threatened and endangered species occurring within the Seashore (see the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI)).

With the protective measures described above on pages 4–15 of this FONSI, the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will have minor to moderate adverse impacts to state-listed and special status species (American oystercatcher, colonial waterbirds, and Wilson's plover) during the three years the interim strategy will be implemented. As described in the strategy/EA (page 209), a moderate adverse impact is an impact on native species, their habitats, or natural processes sustaining them that will be detectable or could be outside the natural range of variability. Under this threshold level, some impacts might occur during critical periods of reproduction or in key habitats in the park and result in harassment, injury, or mortality to one or more individuals. However, sufficient population numbers or habitat in the Seashore will remain functional to maintain the viability of the species in the Seashore. Moderate adverse impacts will be incurred by other wildlife, such as invertebrate species; however, other bird species will receive minor beneficial impacts resulting from the management measures implemented for protected species. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on state-listed and special status or other wildlife species occurring within the Seashore.

In addition, the NPS requested a consistency determination (February 6, 2006) from the North Carolina Department of Environment and Natural Resources, Division of Coastal Management (DCM) for implementation of the strategy/EA. The Division of Coastal Management manages the state's coastal resources to ensure that proposed Federal activities are compatible with safeguarding and perpetuating the biological, social, economic, and aesthetic values of the state's coastal waters. The Division of Coastal Management concurred with the NPS consistency determination, encouraging "NPS to work with the [North Carolina Wildlife Resources Commission] to resolve their concerns regarding the protection of sea turtles, colonial waterbirds, and shorebirds (see DCM Consistency Determination (2006) (attachment 4 to this FONSI). NPS, through implementation of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) addresses the concerns cited by the North Carolina Wildlife Resources Commission. The North Carolina Wildlife Resources Commission's comments on the strategy/EA were received through the public comment process and have been addressed in the "Summary of Comments and Responses for the Cape Hatteras National Seashore Interim Protected Species Management Strategy/ Environmental Assessment" (attachment 5 to this FONSI).

Resources closures will generally result in only negligible to minor adverse impacts to ORV users, as the majority of areas will maintain access under the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) and alternate routes and bypass options will be provided. Because alternate routes or bypasses will be provided, the effects of

these closures will be slight, but detectable. If any of the spits or Cape Point require extended closures (longer than three weeks), this will be a moderate adverse impact to those visitors wishing to access these areas as they may be required to pursue their choice of activity in other available local and regional areas. Further, their satisfaction at the Seashore will begin to decline for those who seek ORV use opportunities, but may increase for those seeking other forms of recreation. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on visitor use and experience occurring within the Seashore.

Impacts to the local and regional economies will be long-term, negligible, adverse due to the potential loss of business related to any resource closures along the beach. Under the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), closures will be relatively flexible. The selected alternative provides for adaptive management. If a buffer zone will eliminate the ORV corridor, the NPS will identify alternate ORV routes (if available) or provide a bypass (if possible). The selected alternative will allow for some variability in species management based on the individual species behavior and will adapt strategies to afford access where feasible while protecting species. Impacts to the local economies in the towns and villages of Hatteras Island and Ocracoke Island will likely be long-term, negligible, and adverse because the selected alternative provides sufficient flexibility to provide ORV and pedestrian access to most popular Seashore locations most of the time. At the regional level, the closures would not affect economic growth. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on local and regional economies.

The selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will have long-term and short-term moderate adverse impacts on park operations resulting from the need for additional staff and the potential for deferred maintenance. The selected alternative will require existing staff in the interpretation, resource management, and law enforcement divisions to allocate more staff time toward natural resource management activities. This shift in activities could not be accommodated within expected annual funding and will require shifting staff and funding levels between operational divisions. However, the Seashore will be able to sustain current Seashore operations. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on park operations occurring within the Seashore.

The degree to which the proposed action affects public health or safety.

The selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not further impact public health or safety. The interim protected species management measures described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI) will potentially impact visitor use and experience; however, the safety of visitors is already managed under existing procedures such as the Superintendent's Compendium and Superintendent's Order 7 as it relates to safety closures. The selected alternative will not change these procedures. See pages 32–33 of the strategy/EA with respect to the Compendium and Superintendent's Order 7. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on public health or safety.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The selected alternative (modified preferred alternative – *Alternative D (Access Research Component Focus) with Elements of Alternative A*) will not impact unique characteristics of the area including prime farmlands, or wild and scenic rivers, because these resources do not exist in the project area. Impacts to park lands during the term of the interim strategy are not expected to be significant based on the analysis of context, intensity, and duration presented in the strategy/EA. Impacts to wetlands will be associated with the placement of posts for symbolic fencing through wetland habitats. Based on observation, the posts will have no impact to wetland functions. Impacts to wetlands under any of the alternatives were determined to be short-term, minor adverse due to recreational and essential vehicle use in areas requiring vehicular traffic within the intertidal zone. No known cultural resources were identified within the potential management areas; however, minor dune excavation is proposed under the bypass route criteria, requiring sensitivity to the potential for archeological resources to surface. If excavation work revealed any archeological resources, work will cease immediately and Seashore resource staff will determine the nature of the find. Because any work will stop, potential impacts will not elevate above negligible adverse and the topic was eliminated from further consideration. The special status species found within the park are discussed in the threatened and endangered species section below. Based on the actions described on pages 4–15 of this FONSI and the strategy/EA as amended through the Errata (attachment 2 to this FONSI), NPS has determined that the selected alternative will have no significant impact on unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The degree to which the effects on the quality of the human environment is likely to be highly controversial.

At Cape Hatteras National Seashore, actions that may affect ORV use are generally controversial. Controversy exists when substantial questions are raised as to whether a proposal may cause significant impact to the human environment. Controversy refers not to the existence of public opposition, but to a substantial dispute as to the size, nature, or effect of the federal action. Northwest Environmental Defense Center v. Bonneville Power Administration, 117 F.3d 1520, 1536 (9th Cir. 1997), quoting LaFlamme v. FERC, 852, F.2d 389, 400-01 (9th Cir. 1988).

The strategy/EA was written, in part, in response to a 2005 notice of intent (NOI) to sue the NPS issued by Defenders of Wildlife (Defenders), alleging that the NPS's continuing authorization of ORV use at the Seashore violated, or caused violations of, the Endangered Species Act, NEPA, and the Migratory Bird Treaty Act, as well as NPS's Organic Act, agency regulations, and two Executive Orders. On December 18, 2006, following issuance of the original Biological Opinion (USFWS 2006) for the NPS Interim Protected Species Management Strategy/EA, Defenders issued a second NOI threatening to sue both the USFWS and NPS, reiterating many of the allegations from the 2005 NOI and also alleging that the incidental take provisions of the Biological Opinion (2006) violated the Endangered Species Act.

Through further consultation, USFWS and NPS have addressed Defender's concerns about incidental take by incorporating the performance measures enumerated on pages 13 through 15 of this FONSI into an incidental take statement for an amended Biological Opinion (issued April 24, 2007) (attachment 1 to this FONSI). In addition, public scoping completed for the strategy/EA highlighted the divergent opinions on protected species management and ORV use at the Seashore. Controversy related to interim protected species management is based largely on conflicting views of the larger issue of how the park should manage ORV use, which is being addressed by the long-term ORV management plan/EIS and the proposed negotiated rulemaking. A notice of intent to prepare an ORV management plan/EIS was published in the Federal Register in December 2006 and public scoping meetings were held on February 26 (Buxton, NC), February 27, (Kill Devil Hills, NC), February 28 (Raleigh, NC), and March 1 (Washington, DC). A Notice of Intent to Establish a Negotiated Rulemaking Committee to negotiate agreement on the content of a proposed ORV regulation for the Seashore was published in the Federal

Register on June 28, 2007. NPS conducted a workshop for stakeholders and the general public on the collaborative process in Manteo, NC on February 8 and 9, 2007.

The NPS has addressed the subject controversy by holding an open public scoping process for the interim strategy/EA, summarized on pages 26–28 of this FONSI; diligently complying with the consultation requirements of the USFWS; commencing the initial internal and public scoping for the long-term ORV management plan/EIS; and initiating the negotiated rulemaking process. Although these actions have not eliminated controversy as a whole, they have mitigated it. Therefore, the NPS has concluded that during the short period the interim strategy will be implemented, the effects on the quality of the human environment are not likely to be highly controversial.

The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.

No highly uncertain effects or unique or unknown risks were identified during either preparation of the strategy/EA or the public comment period.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

As stated previously, the action is considered an interim strategy for the protection of sensitive species while the Seashore develops a long-term ORV management plan/EIS. Until the long-term ORV management plan/EIS is complete, the NPS will establish an Interim Protected Species Management Strategy/EA to ensure for the proper management of protected species and comply with the ESA, while also providing for adequate use of the Seashore's recreational resources. The species addressed in the strategy/EA are those specifically affected by recreation use within the Seashore that are listed federally or by the state as threatened, endangered, or species of special concern, or are of special concern to the Seashore.

Implementation of the modified preferred alternative during the interim period will not set a precedent for the long-term ORV management plan/EIS. A full range of reasonable alternatives would be developed for analysis in the plan/EIS. Development of these alternatives is not constrained by the interim strategy's selected alternative because all of the actions that will be implemented under it may be reconsidered during development of alternatives for the plan/EIS and may be changed or reversed as a result of that planning process. The selected alternative for the interim strategy would serve as the baseline (continuation of current management) alternative for the long-term ORV management plan/EIS; it would not receive any preferential consideration for selection as the preferred alternative over the other alternatives in the plan/EIS's full range of reasonable alternatives.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Cumulative effects were analyzed in the strategy/EA, and no significant cumulative impacts were identified that were attributable to the implementation of an interim protected species management strategy.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Although no impacts to scientific, cultural, or historical resources either listed in, or eligible to be listed in the National Register of Historic Places, were anticipated, the strategy/EA was distributed to the North

Carolina State Historic Preservation Officer for review and comment related to compliance with Section 106 of the National Historic Preservation Act. No comments were received. Based on the analysis in the selected alternative (modified preferred alternative – *Alternative D (Access Research Component Focus) with Elements of Alternative A*), the NPS has determined there will not be loss or destruction of significant scientific, cultural, or historical resources.

The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.

The USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI) notes that the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) has the potential to adversely affect the federally listed piping plover, species of sea turtles, and seabeach amaranth, mainly due to recreational impacts that will be managed but continue under this interim strategy (pages 45–46). However, the USFWS also found the selected alternative will provide increased protection for threatened and endangered species by monitoring historic and newly created breeding habitat for piping plover, and increasing surveying and management of sea turtles and seabeach amaranth.

As determined by the USFWS Biological Opinion (2006; pages 74–75) and the USFWS Amended Biological Opinion (2007) (see attachment 1 to this FONSI), which adopted the performance measures, during the three-year period when the interim plan will be implemented, the selected alternative will seek to achieve the performance measures as described for piping plover and sea turtles. In addition, the selected alternative will have the potential to produce a slight population increase of seabeach amaranth (USFWS Biological Opinion (2006; page 77)).

The degree of impact to threatened and endangered species is also managed by incorporating the terms and conditions outlined in the USFWS Amended Biological Opinion (2007) provided for this action. The Seashore will implement these terms and conditions. The USFWS analysis of the effects of species response to the action (pages 60–78, attachment 1 to this FONSI) concludes that the action is not likely to result in jeopardy to the species or destruction or adverse modification of designated or proposed critical habitat.

The selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) also includes performance measures to provide specific information on the effectiveness of the strategy/EA with respect to threatened and endangered species. The performance measures will also guide the Seashore in determining when it needs to reinitiate consultation with the USFWS. See pages 13–14 of this FONSI for a discussion of performance measures and reinitiation of consultation.

Therefore, based on the actions described in pages 4–15 of this FONSI, the strategy/EA as amended through the Errata (attachment 2 to this FONSI), and the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), NPS has determined that the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will have no significant impact on threatened and endangered species occurring within the Seashore.

Whether the action threatens a violation of Federal, state, or local environmental protection law.

The purpose of the strategy/EA is to evaluate and implement strategies to protect sensitive species and provide for recreational use for the interim period while the long-term ORV management plan/EIS and ORV regulation are developed. The plan/EIS will form the basis for a regulation that will bring the Seashore into compliance with 36 CFR § 4.10 and Executive Order 11644, as amended by Executive Order 11989. The Notice of Intent to prepare a Draft Environmental Impact Statement for the ORV

management plan was published in the Federal Register December 11, 2006, and initiated the public scoping process. The Seashore held public scoping meetings in February and March, 2007, and is reviewing public comment now.

The USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI) analyzed the effects of and species response to the action (pages 60-68) and concluded that the action is not likely to result in jeopardy to the species or destruction or adverse modification of designated or proposed critical habitat. In addition, performance measures for piping plover and sea turtles will help the park evaluate the effectiveness of the selected alternative and determine if it should reinitiate consultation with the USFWS under Section 7 of the ESA. The selected alternative (modified preferred alternative – *Alternative D: (Access/Research Component Focus) with Elements of Alternative A*) includes measures such as buffer zones, reduced speed limits, pedestrian-only access, and daylight-only access to attempt to prevent take of unfledged chicks of non-listed species as required by the Migratory Bird Treaty Act. Therefore, in the context of the above discussion, the NPS has determined that the selected alternative will not violate any federal, state, or local environmental protection laws.

IMPAIRMENT

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not constitute an impairment to the Seashore resources and values as defined by its enabling legislation and subsequent approved planning documents. This conclusion is based on a thorough analysis of the environmental impacts described in the project's strategy/EA, consultation with the USFWS, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS *Management Policies 2006*.

According to the NPS *Management Policies 2006*, an impact to any park resource or value may, but does not necessarily, constitute impairment. An impact will be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the Seashore;
- key to the natural or cultural integrity of the Seashore or to opportunities for enjoyment of the Seashore; or
- identified in the Seashore's general management plan or other relevant NPS planning documents as being of significance.

As described in the strategy/EA, the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not result in any significant impacts to any resource or value. Overall, implementation of the interim protected species management strategy will not result in impairment of the Seashore resources and values and will not violate the NPS Organic Act.

PUBLIC INVOLVEMENT AND CONSULTATION

The Seashore places a high priority on meeting the intent of public involvement in the NEPA process and giving the public an opportunity to comment on proposed actions. As part of the NPS NEPA process, issues associated with the actions were identified during scoping meetings with NPS staff, coordination with other affected agencies including USFWS, public meetings, and public comment.

The Seashore goals for public involvement included: substantive and valuable input to help guide Seashore decisions, acceptance of the strategy/EA by the public, and minimization of conflicts through dissemination of information and starting discussion. The Seashore places a high value on maintaining a meaningful dialogue with interested parties and organizations. The Seashore elicited public participation in the discussion of issues, areas to be studied, and alternatives. Scoping and public involvement efforts included public meetings and open-houses, flyers and press releases, website postings, and dissemination of information and gathering of comments through the internet. Several public information sessions and public scoping meetings were held and are detailed below.

INFORMATION SESSIONS

The public was given the opportunity to learn about the planning process during seven information sessions held in October 2005. The primary goal of the sessions was to answer questions about the planning process and get input on how the process could best be used to address any public concerns or potential outcomes of the process.

Three of the sessions were more formal in style and held from 7:00 p.m. to 9:00 p.m. on October 3 at the Wright Brothers National Memorial First Flight Centennial Pavilion, October 4th at the Dare County Fessenden Center in Buxton, and October 5 at the Ocracoke Community Center. A facilitator led a question and answer (Q&A) meeting format at the sessions and a court reporter accurately captured a record of questions asked and NPS responses. Individuals were generally given two minutes to comment, identify their issue, and ask a question, and NPS was given two minutes to respond. Nearly 120 people attended the Q&A sessions—16 people attended the meeting at Wright Brothers National Memorial First Flight Centennial Pavilion, 96 people attended the meeting in Buxton, and 6 attended the meeting in Ocracoke.

In addition, four open-house style sessions allowed the public to ask park staff questions and provide input to the park in a more informal atmosphere. These sessions occurred on October 5 from 12:00 p.m. to 2:00 p.m. at the Rodanthe/Waves/Salvo Community Building, October 6 from 12:00 p.m. to 2:00 p.m. at the Wright Brothers National Memorial First Flight Centennial Pavilion, October 6 from 4:00 p.m. to 6:00 p.m. at the Graveyard of the Atlantic Museum, and October 11 from 4:00 p.m. to 6:00 p.m. at the NPS Ocracoke Maintenance Building. These sessions were not recorded and a facilitator was not present, however, NPS representatives did take notes. Approximately 35 people attended one of these four sessions.

Notices for these meetings were posted on the Seashore website and at local post offices, emailed, or mailed to people on the mailing lists, and press releases were sent to the following media/newspapers: Associated Press, Beaufort - Hyde County News, Charlotte Observer, Coastland Times, Elizabeth City Advance, Hatteras Monitor, Island Breeze, North Beach Sun, Ocracoke Observer, Outer Banks Sentinel, Raleigh News and Observer, and the Richmond Times Dispatch.

PUBLIC SCOPING MEETINGS

In early November 2005, three public scoping meetings were held to solicit public input, especially on issues and ideas for alternatives. Public participation is vital to the NPS NEPA planning process and public scoping is an early and open process used to determine the scope of issues and alternatives to be addressed in the strategy/EA. The goal of the meetings was to receive input from everyone, particularly on issues identified, concerns, and any ideas for alternatives that would meet the need, purpose, and objectives of this planning process.

The meetings were held on November 1 from 5:30 p.m. to 9:00 p.m. at the Dare County Fessenden Center in Buxton, November 2 from 5:30 p.m. to 9:00 p.m. at the Wright Brothers National Memorial First Flight Centennial Pavilion, and November 3 from 5:30 p.m. to 9:00 p.m. at the City Museum in Washington, D.C. A total of 140 people attended the meeting in Buxton, 33 attended the meetings at the Wright Brothers National Memorial First Flight Centennial Pavilion, and 18 people attended the meeting in Washington, D.C.

To facilitate input, each meeting started with an open house, and was followed by a short presentation, public hearing, and second open house. During the open house portion of the meetings, the public was encouraged to interact with NPS staff and look at large displays that provided background on the strategy and its alternatives. NPS staff recorded public comments on flip charts. Additionally, a court reporter was available to record public input in a private setting during the open houses. For the public hearing portion of the meetings, a facilitator provided individual citizens the opportunity to speak in front of everyone for a few minutes with a court reporter capturing their input. NPS staff did not respond, as they did during Q&A sessions held in October 2005.

Notices for these meetings were posted on the Seashore website and at local post offices, emailed, or mailed to citizens on the mailing lists, and press releases were sent to the same media/newspapers as for the information sessions.

In addition, a meeting notice was published in the Washington Post on November 1, 2005, for the Washington, D.C. meeting.

NPS provided a 30-day public comment period through which the public could participate by mail or on the Planning, Environment, and Public Comment (PEPC) website. NPS also posted information on the public scoping meetings and additional comment opportunities on October 17, 2005, with a November 17, 2005, deadline for comments.

To the keep the public involved and informed following the public scoping meetings, individuals were given the option to receive notification of the availability of the interim protected species management strategy/EA by either e-mail or mail and the option to either download a copy or have a hardcopy mailed. Individuals were also given the option not to be placed on the mailing list.

PUBLIC REVIEW OF THE STRATEGY/EA

On January 25, 2006, the strategy/EA was distributed for a 30-day public review and comment period with a March 1, 2006, deadline for comments. The strategy/EA was made available for public review through PEPC, individual mailings, as requested, and hard copies of the document were placed in local libraries.

In addition, in early February 2006, four public meetings were held to solicit public comments on the strategy/EA and to give the public the opportunity to provide their comments to the new Superintendent, who was not in place at the time of previous public meetings. The meetings were formal in nature, with the Superintendent providing an update of the planning process, summarizing key points of the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*), and facilitating the public question and comment portion.

These meetings were held on February 6 from 2:00 p.m. to 4:00 p.m. at the Hatteras Village Civic Center; February 8 from 7:00 p.m. to 8:00 p.m. at the Ocracoke Community Center; February 9 from 6:00 p.m. to 8:00 p.m. at the Wright Brothers National Memorial First Flight Centennial Pavilion; and February 10 from 2:00 p.m. to 4:00 p.m. at the Rodanthe/Waves/Salvo Community Center in Rodanthe.

Approximately 40 people attended the meeting in Hatteras, 20 attended the meeting in Ocracoke, 30 attended the meeting at the Wright Brothers National Memorial First Flight Centennial Pavilion, and 50 people attended the meeting in Rodanthe. A court recorder accurately captured a record of the comments. No time limits were placed on individual questions or comments at the Hatteras meeting, while a five minute time limit on comments was used at the Ocracoke, Wright Brothers National Memorial First Flight Centennial Pavilion and the Rodanthe/Waves/Salvo Community Center.

Notices for these meetings were posted on the Seashore website and at local post offices, emailed, or mailed to citizens on the mailing lists, and press releases were sent to the same media/newspapers as for the information sessions and the scoping meetings. During the public comment period, 270 correspondences were received, containing 488 comments. These comments were reviewed and analyzed. Although all comments were considered, only those that were determined to be substantive received a response. The response to comments can be found in the "Summary of Comments and Responses for the Cape Hatteras National Seashore Interim Protected Species Management Strategy/ Environmental Assessment" (attachment 5 to this FONSI).

CONCLUSION

Based on the context, intensity and duration of effects occurring for the limited period of time that the interim protected species strategy will be implemented, the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) does not constitute an action that normally requires the preparation of an EIS because it does not fit under any of the specific criteria provided in Section 4.4 of NPS Director's Order 12 Handbook and does not have the potential for significant impact on the human environment as detailed on pages 20–25 of this FONSI. Negligible to moderate environmental impacts that could occur include adverse effects on the federally listed piping plover, species of sea turtles, and seabeach amaranth, mainly due to recreational activities that will continue under this interim strategy; potential impacts to other protected species, such as American oystercatcher and colonial waterbirds as a result of continued recreation use and the potential from human disturbance during surveying actions (i.e., monitoring and data collection); impacts incurred by other wildlife, such as invertebrate species; negligible to minor adverse impacts to ORV users as a result of resource closures; negligible adverse impacts to the local and regional economies due to the potential loss of business related to any resource closures along the beach; and adverse impacts on park operations resulting from the need for additional staff and the potential for deferred maintenance.

There are no significant adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. In addition, no highly uncertain or highly controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence have been identified and implementing the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not violate any federal, state, or local environmental protection law. There will be no impairment of park resources or values resulting from implementation of the selected alternative.

Based on the foregoing, the NPS has determined the selected alternative (modified preferred alternative – *Alternative D (Access/Research Component Focus) with Elements of Alternative A*) will not have a significant impact on the human environment, that an EIS is not required for this project, and that an EIS will not be prepared.

Recommended:

Michael B. Murray

Michael B. Murray, Superintendent,
Cape Hatteras National Seashore

7/10/07

Date

Approved:

Patricia A. Hooks

Patricia A. Hooks
Southeast Regional Director

7/13/07

Date

TABLE 1: ACTION TO BE IMPLEMENTED — SPECIES OBSERVATION

ACTIVITY	
Survey Time and Frequency **PRE-Nesting**	Piping plover: March 15 – March 31 survey recent breeding areas at Bodie Island Spit, Cape Point and South Beach, Hatteras Spit, and the northern and southern ends of Ocracoke one time per week. April 1 – June 15 survey recent breeding areas at Bodie Island Spit, Cape Point and South Beach, Hatteras Spit, and the northern and southern ends of Ocracoke three times per week (or every other day) and potential new habitat two times per week. Survey for Wilson's plover during piping plover surveys. American oystercatcher: March 15 – June 15 survey recent breeding areas two times per week. Colonial waterbirds: May 1 – June 15 survey recent breeding areas two times per week.
Survey Time and Frequency **Life Stages**	Courtship/Mating: If species are observed exhibiting territorial or courtship behavior during two consecutive surveys in historic habitat, observe three times per week. If scrapes or eggs are observed, survey three times per week. Survey potential new habitat two times per week. Nesting: Piping plover: Observe nests from a distance that does not disturb the birds, based on professional judgment, one time daily. Approach nests once per week to observe and record data. American oystercatcher and colonial waterbirds: Observe nests at least three times per week. Wilson's plover: Observe nests incidental to piping plover monitoring. Unfledged Chicks: Piping plover: During the first week, observe continually during daylight hours. After the first week, if the closure is reduced or remains the same size, keep continuous observation. If the closure is enlarged, observe once daily. American oystercatcher: Observe once daily. Colonial waterbirds: Observe broods at one-day to two-day intervals and record data. Wilson's plover: Observe broods incidental to piping plover monitoring. All Species: When broods are mobile, provide more frequent observation and enforcement presence. All observations end when all chicks have fledged.

TABLE 1: ACTION TO BE IMPLEMENTED — SPECIES OBSERVATION

ACTIVITY	
	Non breeding/wintering: Piping plover: As provided in the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI), the NPS will monitor the presence, abundance, and behavior of migrating and wintering piping plovers from August 1 – March 31 of each year. At each session, specific observations include vehicle, pedestrian, and pet tracks in posted habitat; any signs of predators, including species; specific management measures in place at the time of the observation; observed behaviors; and reactions to disturbance by pedestrians, pets, or vehicles. American oystercatcher, red knot, Wilson's plover: Survey with piping plover. Colonial waterbirds: Winter/Non-breeding habitat not surveyed.
Data Collected	Piping plover: Use GPS to document breeding areas and nest locations. Record locations where territorial/courtship behavior occurs. Record presence and abundance of birds. American oystercatcher and colonial waterbirds: Use GPS to document nest and colony locations. Record presence and abundance of pre-nesting birds.
Sea Turtles	
Survey Time and Frequency	May 1 – September 15 Conduct daily morning surveys by ATV and some ORVs for crawls and nests on all beaches before onset of heavy public ORV use. Daily surveys for nests end September 15. Periodic monitoring (e.g., every two to three days) for unknown nesting and emerging hatchlings will continue, especially in areas of high visitation, September 16 – November 15. Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed washed ashore or following severe storm events. Nest observations stop when all nests have hatched or excavation indicates that the nest was not viable. Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.
Data Collected	Follow the North Carolina Wildlife Resources Commission Handbook and record: -Turtle species -Nest vs. false crawl -Location (physical description and GPS location) -If nest needs to be relocated and, if so, why and where (new physical description and GPS location), number of eggs relocated, and time of day -Necessary protective measures for nest and hatchlings -Information regarding any post hatching nest excavation and analysis Examine all nests after hatching to determine productivity rates. Excavate nests at a minimum of 72 hours after hatching event. In cases where hatching events or dates were unknown, unearth nest cavities 80–90 days after the lay date.
Seabeach Amaranth	

TABLE 1: ACTION TO BE IMPLEMENTED — SPECIES OBSERVATION

ACTIVITY	
Survey Time and Frequency	April 1 During bird and turtle surveys, note any seedlings or plants and record location. August Annual survey of potential habitat (some bird closure areas may not be surveyed due to potential to disturb nesting birds). April – September Before opening any species closure or identifying alternate ORV corridors, survey for seedling/plants. End observations when all plants have died back.
Data Collected	Record location of all individual plants or plant clusters using a GPS and note if the plant is located in an area open or closed to recreational use.
Essential Vehicle Use (EVU)	
Bird Surveys	Piping plover: During bird surveys, NPS vehicles will remain outside of established resources closures.

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TABLE 2: ACTION TO BE IMPLEMENTED —SPECIES MANAGEMENT

Activity	
Closures/ Buffers	Pre-Nesting: American oystercatcher: March 15 Activate closures if a territory is established or a nest located. Closures removed when areas have been abandoned for a two week period. Piping plover: April 1 In February or March of each year, NPS natural resource staff to conduct an annual assessment of piping plover breeding habitat to plan pre-nesting closures in recent breeding areas that are adapted to current habitat and physiographic conditions. Close recent breeding areas by posting symbolic fencing by April 1. Remove closures if no bird activity is seen by July 15 or when area has been abandoned for a 2-week period, whichever comes later. Colonial waterbirds: May 1 Activate closures if a territory is established or a nest located. Closures removed when areas have been abandoned for a two week period. All Species: Designate a 100-foot-wide ORV and pedestrian corridor. Outside of ORV corridor, prohibit pedestrian access to breeding areas beyond the symbolic fencing. Delineate the corridor with posts placed up to 100 feet above the high tide line. In areas of reduced

TABLE 2: ACTION TO BE IMPLEMENTED —SPECIES MANAGEMENT

Activity	
	corridor width (i.e., narrower than 100 feet), post a reduced speed limit of 10 mph .
	Courtship/Mating: Piping plover: If courtship or copulations are observed outside of existing closures on two consecutive survey days, establish or expand buffer to ensure 150-foot buffer for the observed birds. If additional closures are created around courtship/mating areas, adjust the ORV corridor whenever possible to allow vehicle passage. Allow management to be responsive to individual bird behavior when determining adequacy of closure size. American oystercatcher and colonial waterbirds: If territorial or courting birds observed outside of existing closures, based on bird behavior and suitable habitat, expand buffers to accommodate the birds. Provide ORV/pedestrian corridor above the high tide line.
	Nesting: Piping plover: Establish 150-foot buffer/closure around piping plover nests occurring outside existing closures. Expand closures, if necessary, using flexible increments dependent on observed bird behavior. When resource closures are created around nests, adjust the ORV corridor whenever possible to allow vehicle passage. Reduce the width of the ORV corridor if necessary. In areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available or provide a bypass (see "Short-term Bypass Route Criteria" on page 11 of this FONSI) if possible. American oystercatcher: Establish buffer/closure based on adult's reaction to human disturbance. Closures vary in size dependent on best professional judgment. *(from alternative D)* When resource closures are created around nests, adjust the ORV corridor whenever possible to allow ORV passage. Reduce width of ORV corridor if necessary. In areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available, or provide a bypass (see "Short-term Bypass Route Criteria" on page 11 of this FONSI) if possible. Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around nests. Colonial waterbirds: Establish a buffer/closure of 150 feet to 300 feet around the nest or colony based on observed bird behavior, while maintaining ORV/pedestrian corridor. If the buffer and the corridor overlap each other, then staff will reduce corridor width if necessary. In areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available, or provide a bypass (see "Short-term Bypass Route Criteria" on page 11 of this FONSI) if possible. Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around nests. Reduce width of ORV/pedestrian corridors for American oystercatcher and colonial waterbirds will be approached as a research opportunity to gather data useful for the long-term ORV management plan/EIS to test for the distance at which vehicle disturbance to nesting American oystercatcher and colonial waterbirds occurs. All species: Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around nests. If nest is lost, buffers remain in place 2–3 weeks after nest is lost to determine if pair will re-nest, if no other species nesting in area.

TABLE 2: ACTION TO BE IMPLEMENTED —SPECIES MANAGEMENT

Activity	
	Adult Foraging: Piping plover: For adults foraging outside of a closure on two consecutive surveys, expand buffer to include foraging site. These closures are intended to provide foraging opportunities close to breeding sites. Colonial waterbirds, American oystercatcher, and Wilson's plover: No additional buffers/closures.
	Unfledged Chicks: Piping plover: Establish a minimum 600-foot buffer on either side of brood based on observation of bird behavior and terrain conditions at site. Based on observed behavior, buffer area may require expansion up to 3,000 feet if chicks are highly mobile. Based on observed behavior (i.e., mobility of the brood) and the capability to continually observe mobility and behavior, buffer zone can be reduced after the first week to no less than 300 feet, but may require expansion up to 3,000 feet if chicks are highly mobile. Buffer moves with chicks. Close bypass route at night if buffer zone, is less than 600 feet (as identified on p. 8 of the USFWS Amended Biological Opinion (2007) (attachment 1 to this FONSI)). When resource closures are created around broods, adjust the ORV corridor whenever possible to allow vehicle passage. Reduce ORV corridor if necessary. In areas in which the buffer zone would eliminate the ORV corridor identify alternate ORV routes if available. If there are no alternate ORV routes, then if possible establish a bypass (see "Short-term Bypass Route Criteria" on page 11 of this FONSI). Close beach to recreation access down to the waterline, if necessary to allow chicks access to foraging areas. American oystercatcher: Establish 150-foot to 300-foot buffer zone when unfledged chicks are present. Adjust buffer zone as needed when chicks are mobile. Provide alternate ORV/pedestrian access route or bypass to open areas beyond the closure, if possible. Colonial waterbirds: Establish 150-foot to 300-foot buffer zone when unfledged chicks present. Adjust buffer zone as needed when chicks are mobile. Provide alternate ORV/pedestrian access route or bypass to open areas beyond the closure, if possible. For all species: Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around broods. Reopen 100-foot-wide ORV corridor in recent or current nesting areas after chicks fledge. Areas outside of corridor, including the upper beach remain available for protected species use. Re-establish 150-foot ORV corridor after August 31.
Non Breeding/ Wintering Closures	For piping plover: Suitable interior habitats at spits and at Cape Point closed year-round to all recreational users to provide for resting and foraging for all species. For example, at present, such suitable habitats include ephemeral ponds and moist flats at Cape Point, Hatteras Spit, Ocracoke, and Bodie Island Spit. Actual locations of suitable foraging and resting habitat may change periodically due to natural processes.
Sea Turtles	
Nest Closures/ Buffers	Establish a buffer approximately 30 feet by 30 feet with symbolic fencing and signage around nest. Approximately 50–55 days into incubation, closures expanded to the surf line. The width of the closure based on the type and level of use in the area of the beach where the nest was laid: a. vehicle-free areas with little or no pedestrian traffic – 75 feet wide (total width);

TABLE 2: ACTION TO BE IMPLEMENTED —SPECIES MANAGEMENT

Activity	
	b. villages or other areas with high levels of day use –150 feet wide (total width); c. areas with ORV traffic – 350 feet wide (total width). Opposite the surf line on the upper end of the closure, the closed area expanded to 50 feet where possible, but no less than 30 feet duneward from the nest. Traffic detours behind the nest area clearly marked with signs and reflective arrows. Where present within closure, vehicle tracks manually smoothed with rakes or a steel mat attached to an ATV, so as not to impede hatchlings attempting to reach the surf. Use light filtering fence behind nests nearing hatch dates to block light pollution from the villages and vehicles operating on the beach after dark.
Nest Relocation	When a nest is found, staff assesses need for nest relocation and follows relocation guidance identified in the NCWRC handbook. If it is determined the nest will not be relocated, it will be immediately protected with a symbolic fence measuring approximately 30 feet by 30 feet and signage. If a nest is threatened by a storm event, NPS will consult NCWRC to determine appropriate action.
Light Management	Establish turtle friendly lighting standards for all Seashore (NPS) structures. Encourage concessioners to install turtle friendly lighting.
Research	Support research efforts looking at the sex ratios of turtles.
Seabeach Amaranth (SBA)	
Buffers	April 15 – November 30 If a plant/seedling is found outside of an existing closure, the Seashore will erect symbolic fencing with signage creating a 30-foot by 30-foot buffer around the plant. If plants are located next to each other, the area will be expanded to create one enclosure protecting several plants. If a SBA is found during the survey prior to reopening a bird closure to ORV and pedestrian use, the Seashore will protect the SBA as described above and reopen the areas of the bird closure where no plants exist. Areas reopened if no plants are present by September 1. Where plants occur, the closed areas will be reopened after the plants have died.
Predator Management	Trappers will target red and gray fox, raccoons, cats and other predators for removal. Piping plover: Nests surveyed to count eggs and look for predator tracks. As applicable, predator exclosures are erected when nest found with eggs. American oystercatcher and colonial waterbirds: Nests surveyed to count eggs and look for predator tracks.

TABLE 2: ACTION TO BE IMPLEMENTED —SPECIES MANAGEMENT

Activity	
	Sea Turtle: Nests surveyed to count eggs and look for predator tracks. Predator exclosures may be placed over nests if predator tracks or nest predation is evident. SBA: No predator management.
Conservation Measures	Conservation measures are discretionary activities intended to minimize or avoid adverse effects of an action on listed species or critical habitat, to help implement recovery plans, or to develop information. Conservation measures outlined in the USFWS Amended Biological Opinion (2007) (attachment 1 to the FONSI) will be considered for implementation. The Seashore will notify the USFWS when any of these conservation measures are implemented.

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TABLE 3: RECREATION AND SEASHORE MANAGEMENT

Activity	
ORV	
Pre-Nesting Closures	Between identified pre-nesting closures dates (see table 1), designate an ORV corridor up to 100 feet wide along oceanside and soundside shoreline in recent breeding areas. Delineate corridor with posts placed up to 100 feet above the high tide line. In areas with a reduced corridor width due to species management actions, maintain the corridor with a posted speed limit of 10 mph.
ORV Corridors and Access	April 1 – August 31 Piping plover: Designate approximately 100-foot-wide ORV corridor above mean high tide line in breeding areas used within past three years. Delineate corridor with posts placed up to 100 feet above the high tide line. In areas of reduced corridor width (i.e., less than 100 feet), post traffic signs and 10 mph speed limit. Adjust the ORV corridor whenever possible to allow vehicle passage. If an ORV corridor is not feasible for safety reasons or insufficient area, identify alternate ORV route if possible. If there is no alternate route available, Seashore staff will consider establishing a bypass route (see "Short-term Bypass Route Criteria" on page 11 of this FONSI). Seashore staff will allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones. If alternate route or bypass is not feasible, initiate an ORV closure. American oystercatcher and colonial waterbirds: Provide ORV/pedestrian corridor above the high tide line. In areas of reduced corridor width (i.e., less than 100 feet), post traffic signs and 10 mph speed limit. Adjust the ORV corridor whenever possible to allow vehicle passage. If an ORV corridor is not feasible for safety reasons or insufficient area, identify alternate ORV route if possible. If there is no alternate route available, Seashore staff will consider establishing a bypass route (see "Short-term Bypass Route Criteria" on page 11 of this FONSI). Seashore staff will allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones. If alternate route or bypass is not feasible, initiate an ORV closure.

TABLE 3: RECREATION AND SEASHORE MANAGEMENT

Activity	
	Sea Turtles: May 1 – September 15 Outside of recent bird breeding areas, ORV use will be restricted to a corridor 150 feet duneward of the mean high tide line and seaward of the toe of the dunes or vegetation line, whichever is less. A 30-foot by 30-foot buffer zone of signed, stringed fencing will be placed around each nest in any place where recreation occurs. When a nest is approximately 50 days old, where possible, ORV traffic will be routed around the nest on the duneward side, maintaining a buffer of 50 feet where possible, but no less than 30 feet. If the filter fence closure for hatchlings will block access to spits and Cape Point, identify an alternate route (e.g., existing interdunal road, NC-12). If an alternate route is not available, an attempt will be made to identify a bypass route on the duneward side of the nest.
Night Driving	No restrictions. The Seashore will provide periodic night time patrols to observe and enforce compliance with regulations and closures.
Pedestrian	
Pedestrian Access Outside of Bird Closures	Pedestrians allowed 24-hour access to all Seashore beaches outside of existing resource closures.
Pedestrian Access in Turtle and Seabeach Amaranth Closures	Pedestrians allowed 24-hour access to all Seashore beaches outside of existing resource closures.
Other Recreation	
Boat Access	36 CFR 3.6 prohibits launching non-commercial, recreational boats/vessels except at designated launch sites. Permits may be issued for commercial fishing to allow ORV access or boat launching in pedestrian-only areas as well as in ORV areas, but not in areas closed for resource protection. Along sound shoreline where resource closures occur attempt to keep boats 150 feet from the habitat, the extent of the seashore jurisdiction. Erect signs, where practicable, around the perimeter of the closures to alert boaters of closures.
Pets	36 CFR 2.15, Pets: pets must be crated, caged, restrained on a leash, or otherwise physically confined at all times in all areas of the Seashore. Pets prohibited, even if on leash, from the landward side of the posts delineating the ORV corridor at the spits (Bodie, Hatteras, Ocracoke) and Cape Point. Pets prohibited within symbolic fencing around any bird closure area.
Other	Kite flying, kite boards, and ball and Frisbee tossing prohibited within or above all bird closures. 36 CFR 2.38, Explosives: all fireworks are prohibited in the Seashore at all times.
Seashore Management	

TABLE 3: RECREATION AND SEASHORE MANAGEMENT

Activity	
Essential Vehicle Use	Essential vehicles allowed in closures subject to guidelines in Essential Vehicles section of Appendix G of the U.S. Fish and Wildlife Service Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan (USFWS 1996a, as cited in the strategy/EA). In the event of an emergency, the protection of human life takes precedence over all other management activities. To the extent practicable, emergency response vehicle operators will consult with trained resources management staff regarding protected species before driving into or through resource closures; however, prior consultation may not always be practical. Essential vehicles will avoid driving within turtle nest closures.
Essential Vehicles: Speed	Not to exceed 10 mph, whenever possible.
Outreach and Compliance	
	General: Provide information about endangered species at the visitor centers. Enforce proper trash disposal (pack in/pack out) and anti-wildlife feeding regulations throughout the Seashore, including proper disposal of fishing bait and filleted fish carcasses. Provide education and outreach materials regarding the impacts of trash disposal, wildlife feeding, fireworks, and pets on sensitive Seashore species. Solicit from interested parties how to convey information about the species management program. Notify the public of species management closures that will temporarily limit ORV traffic. Send a press release to local and regional newspapers and contact local tackle shops and ORV organizations when species closures established or reopened. Piping plover: Provide periodic patrols to observe and enforce compliance with piping plover closures. Sea Turtles: Conduct educational programs during the sea turtle hatching season where public school students could learn about sea turtles by participating in post-hatching nest examinations. Provide information to the public about nesting sea turtles and measures taken by the Seashore to protect nests and hatchlings. Seabeach Amaranth: Post information about seabeach amaranth at all ORV ramp bulletin boards. Notify public of resource closures and openings.

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