
National Park Service
U.S. Department of the Interior



CAPE HATTERAS NATIONAL SEASHORE
NORTH CAROLINA

CAPE HATTERAS NATIONAL SEASHORE
OFF-ROAD VEHICLE MANAGEMENT PLAN AND
ENVIRONMENTAL IMPACT STATEMENT

FINAL INTERNAL SCOPING REPORT

CAPE HATTERAS NATIONAL SEASHORE

December 2007

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PURPOSE OF AND NEED FOR ACTION

1

2 Officially authorized in 1937 along the Outer Banks of North Carolina, Cape Hatteras is the nation's first
3 national seashore. Consisting of more than 30,000 acres distributed along approximately 64 miles of
4 shoreline, Cape Hatteras National Seashore (the Seashore or park) is part of a dynamic barrier island
5 system. The Outer Banks of North Carolina formed as a result of changes in sea level, wave and wind
6 action, and ocean currents. These factors continue to influence the islands today through the processes of
7 erosion and accretion of the shoreline; overwash across the islands; and the formation, migration, and
8 closure of the inlets (NPS 1979a). Since the 1930s, these natural processes have been influenced by
9 human actions such as building sand berms¹ to protect roads and homes and dredging inlets.

10 The Seashore serves as a popular recreation destination, with more than 2.2 million visitors in 2005
11 showing a 12-fold increase in visitation over the past 50 years. Federal ownership extends from ocean to
12 sound across three barrier islands—Ocracoke, Hatteras, and Bodie. The U.S. Coast Guard property and
13 eight village enclaves are excluded from the Seashore boundaries. On the oceanside of the villages,
14 federal ownership was established as a 500-foot strip measured landward from the mean low water at the
15 time of acquisition. A larger area seaward of Buxton and Frisco includes portions of Buxton Woods. The
16 5,880-acre Pea Island National Wildlife Refuge, located at the northern end of Hatteras Island, is part of
17 the Seashore, but administered for refuge purposes by the U.S. Fish and Wildlife Service (USFWS) (NPS
18 1997a).

19 Two petitions requesting rulemaking for off-road vehicle (ORV) management at Cape Hatteras National
20 Seashore were submitted to the National Park Service (NPS) in 1999 (Bluewater Network 1999a) and
21 2004 (National Parks Conservation Association 2004). In response to these petitions and two executive
22 orders addressing ORVs, the NPS contracted with the U.S. Institute for Environmental Conflict
23 Resolution to select and supervise a team of alternative dispute resolution professionals to conduct a
24 feasibility assessment to recommend to the NPS whether a negotiated rulemaking process is practicable
25 (see page 1, Assessment Report [CBI and FCS 2006]) to develop an agreement on the proposed rule for
26 the Seashore. The assessment report was completed in April 2006 and determined that “consensus-based
27 negotiation to develop a management plan and proposed implementing regulations can be convened, can
28 yield important benefits even if agreement is not reached, and has a modest chance of success
29 (<http://parkplanning.nps.gov/caha>).” On June 28, 2007, a notice was published in the *Federal Register*
30 announcing the Secretary of the Interior's intent to establish a Negotiated Rulemaking Advisory
31 Committee to negotiate and develop special regulations (proposed rule) for management of ORV at Cape
32 Hatteras National Seashore. The public was afforded a 30-day comment period on the proposed
33 establishment and makeup of the Committee. The NEPA process would occur concurrently with the
34 Negotiated Rulemaking and the consensus of the committee would be evaluated in the Draft EIS as part
35 of the NEPA process.

36

¹ The word ‘berm’ as used in this internal scoping report refers to remnants of the man-made dune or dune ridge originally constructed in the 1930s by the Civilian Conservation Corps and the Works Progress Administration. The National Park Service actively maintained this dune ridge until the 1970s when the dune stabilization was abandoned by the Seashore. The word ‘berm’ as used in the internal scoping report also refers to a man-made dune or dune ridge constructed to provide protection to state highway NC-12 and interior sections of the island from ocean flooding and overwash during storms.

1 **SUMMARY OF OFF-ROAD VEHICLE MANAGEMENT AT CAPE HATTERAS**
2 **NATIONAL SEASHORE**

3 ORV management has become an issue of concern in many NPS seashore parks in recent years.
4 Management plans and regulations were developed for multiple units including Cape Cod National
5 Seashore, Fire Island National Seashore, Assateague Island National Seashore, Padre Island National
6 Seashore, and Big Cypress National Preserve. Appendix A provides ORV regulations at these NPS units.

7 Before 1954, local residents and visitors used the beaches for vehicular transportation purposes because
8 there were few formal roads in this remote area. Since the main purpose of beach driving was
9 transportation, and not recreation, the number of ORVs on the beach was much less than it is today. In
10 1954, North Carolina State Highway 12 (NC-12) was paved, providing a formal transportation route. The
11 paving of NC-12, the completion of the Bonner Bridge connecting Bodie and Hatteras Islands in 1963,
12 and the introduction of the State of North Carolina Ferry System to Ocracoke Island facilitated visitor
13 access to the sound and ocean beaches and resulted in increased vehicle use on beaches for recreational
14 purposes (NPS 2004a). Residents adopted the use of ORVs to facilitate commercial netting of fish while
15 sport fishermen used ORVs to pursue migrating schools of game fish and reach more productive areas,
16 such as Cape Point or the inlets, often a mile or more from the nearest paved surface. Presently, at the
17 sound and ocean beaches, ORVs are used for commercial and recreational fishing, sightseeing, travel to
18 and from swimming and surfing areas, and pleasure driving (NPS 2004b).

19 ORVs access the sounds and beaches via a system of ramps located off NC-12. The ramps began as an
20 informal system of unimproved access points connecting the roadway to the sounds and beaches. Over
21 time, this system was formalized and the oceanside ramps are now numbered, maintained, and identified
22 on the Seashore's ORV route maps as official vehicle access routes for beach access. During this same
23 period, the NPS added one additional public ramp (NPS 2004a), for a total of 18 open oceanside public
24 access ramps in the Seashore. In 1978 there were 28 identified ramps, 22 of which were located on NPS
25 lands. Since then, the number of ramps has decreased as some were lost to erosion and other were closed
26 to the public and are now used for administrative vehicle access only. During this same period, the NPS
27 added 1 additional public ramp (NPS 2004a) leaving a total of 16 oceanside ramps available for public
28 use today.

29 ORV use at Cape Hatteras National Seashore has been managed through various plans. In response to
30 Executive Order 11644, Use of Off-Road Vehicles on Public Lands (February 9, 1972), the Seashore
31 developed a draft management plan for ORV use (NPS 2004b) that included:

- 32 • Designation of 27 beach access routes or ramps;
- 33 • Identification of a permitted area for travel from the toe of the dune to the ocean;
- 34 • License requirements for vehicles and operators;
- 35 • Closure of one heavily eroded section of the beach near the Cape Hatteras lighthouse year round;
36 and
- 37 • Designation of seasonal closures in five areas heavily used by pedestrians between May 26 and
38 September 10.

1 This management plan was not finalized or published as a special regulation, as required by the Executive
2 Order.

3 A few years later, in response to Executive Order 11989, Off-Road Vehicles on Public Lands (May 24,
4 1977), the Seashore initiated the development of an ORV management plan at Cape Hatteras National
5 Seashore. In response to this plan, which was released in January 1978, the North Carolina Beach Buggy
6 Association and the Outer Banks Preservation Association each issued proposed alternative plans for
7 ORV management at the Seashore. These proposed plans were considered by the Seashore, along with
8 public comment, and in November 1978 the *Draft Interim Management Plan: Off-Road Vehicle Use,*
9 *Cape Hatteras National Seashore* was issued (NPS 1978a). The Seashore implemented the following plan
10 components:

- 11 • Consolidating and clearly marking entrance and exit points to soundside areas;
- 12 • Establishing sea turtle and bird nesting protection zones;
- 13 • Increasing efforts to provide signage and other information concerning beach conditions and open
14 and closed areas; and
- 15 • Providing better maintenance of access routes and ramps.

16 The 1978 *Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore*
17 established guidelines and management of ORV use in the Seashore while the general management plan
18 was under development. Management through the draft interim management plan was achieved by
19 establishing zones of use for ORVs, as well as describing conditions where vehicles may be allowed or
20 would be prohibited. The draft interim management plan established the following use zones:

- 21 • Zone 1 – Ocean Beach: In this zone ORVs will be permitted landward from 150 feet of the
22 existing tideline, but no closer than 20 feet to the toe of the dune or vegetation line. Portions of
23 Zone 1 may be closed seasonally (May 15 through September 15), or closed temporarily to
24 protect nesting birds or sea turtles, or when the distance between the existing tide and the toe of
25 the dune or the vegetation line is reduced to less than 100 feet. Permits must be issued for
26 vehicles that have less than four weight-bearing wheels and do not meet all vehicular licensing
27 and inspection requirements of their state of origin.
- 28 – Zone 1(a) – Seasonally closed areas include:
 - 29 Those Zone 1 areas, which due to seasonal heavy pedestrian, swimming, wildlife or other
30 use, are deemed seasonally unsuitable for ORV use;
 - 31 Seasonally closed areas shall be identified by signs at both ends of the area, and shall be
32 indicated on maps available for viewing at the offices of the Superintendent and of each
33 District Ranger;
 - 34 Dates of seasonal closures shall be May 15 through September 15 of each year, except on
35 Pea Island National Wildlife Refuge, where the Refuge Manager shall post such closures
36 as he may find necessary to implement the regulations of the USFWS; and
 - 37 Seasonally closed areas shall consist of, but not be limited to, the following areas: Bodie
38 Island, milepost 0 to milepost 3; beach areas fronting villages of Rodanthe, Waves,

1 Salvo, and Avon; northern boundary of Buxton to one mile south of the Cape Hatteras
 2 Lighthouse; beach fronting the villages of Frisco and Hatteras; milepost 49 to milepost
 3 54; and Ocracoke Island milepost 65 to 70.

4 – Zone 1(b) – Temporarily closed sections include:

5 Those narrow beach sections of Zone 1 that have decreased in width to the point where
 6 the average distance from the existing tide to the toe of the dune or vegetation line is less
 7 than 100 feet (30 meters). These sections shall be marked at each end by signs reading
 8 “Beach Temporarily Closed to Vehicle Traffic” and shall be indicated on maps available
 9 for viewing at the offices of the Superintendent and each District Ranger.

10 Bird Nesting Areas – Portions of high beach and inlet flats where significant bird nesting
 11 is occurring. These areas shall be temporarily closed to all visitor use and shall be marked
 12 by posts and “Bird Nesting Area” signs.

13 Sea Turtle Nests – Locations on the beach where a sea turtle nest is discovered. A
 14 rectangular section of beach that includes the nest with 300 feet (92 meters) of tideline
 15 seaward of the nest shall be temporarily closed to ORV use from dune to existing
 16 tideline. Closures shall be marked at both ends by posting with signs indicating “no
 17 ORVs –temporary turtle nest.” The period of closure shall begin on posting, 50 days after
 18 the turtle lays, and shall end 25 days later on official removal of the signs. The purpose of
 19 the closure is to protect hatchling loggerhead turtles, listed as “threatened” under the
 20 Endangered Species Act.

21 • Zone 2 – Soundside: Marsh and flat land west and northwest of NC-12. Vehicular traffic shall be
 22 confined to marked trails, posted as open. No permit shall be required.

23 • Zone 3 – Buxton Woods, Open Ponds: That area of grassed dunes and forest lands lying between
 24 Headquarters, Cape Hatteras Group Coast Guard, and Frisco Campground. The area is roughly
 25 bounded on the south by the ocean dunes; on the east by a northeast-southwest trending line lying
 26 west of the Cape Point Campground, Coast Guard Group Headquarters, and NPS residence-
 27 maintenance area complex; on the north by the NPS boundary through Buxton Woods; and on the
 28 west by a south-north trending line lying east of the Frisco Campground. In this zone, limited
 29 vehicular access on ORV routes posted as open shall be permitted only upon application in
 30 person to the Hatteras District Ranger (or designee) and there shall be no more than 30 total
 31 ORVs in this zone at any one time. Limited access permits for vehicular entry shall not exceed 24
 32 hours in duration and shall not be issued more than 7 days in advance. Permits are renewable
 33 upon request except when vehicular capacity has been reached.

34 • Zone 4 – Dunes and Sand Plains: All land and dune areas seaward of the right of way of NC-12,
 35 except Zone 1 and Zone 3 lands. ORV operation is permitted only on trails posted for ORV use.
 36 Permits must be issued for vehicles that have less than four weight-bearing wheels and do not
 37 meet all vehicular licensing and inspection requirements of their state of origin (NPS 1978a).

38 The 1978 draft interim management plan called for a posted speed limit of 25 miles per hour and for ORV
 39 operators to possess a current driver’s license from their state of origin. Except for Zone 1, the 1978 plan
 40 stated that no vehicle shall enter any unpaved dirt or sand trail or path, or follow any vehicular tracks not
 41 posted as an ORV trail.

1 In 1980, the North District Ranger prepared the *ORV Plan North District Cape Hatteras National*
2 *Seashore* (NPS 1980a). During the development of this plan, concerned individuals were contacted for
3 their comments and suggestions regarding ORV use at the Seashore. Based on these comments and
4 suggestions, recommendations for improvements were made along with a general description and project
5 status of each soundside and oceanside access from Bodie Island to Hatteras Inlet. This plan
6 recommended that the general management plan consider additional parking needs on the soundside and
7 oceanside and at comfort station locations. It also recommended that the general management plan
8 consider impacts of traffic flow changes as a result of corridor and road closures (NPS 1980a). The
9 general management plan addressed these concerns by incorporating additional parking lots as well as
10 parking turnouts along NC-12 (NPS 1984c).

11 The 1984 *General Management Plan/Development Concept Plan/Environmental Assessment: Cape*
12 *Hatteras National Seashore* (NPS 1984c) set forth the basic philosophy to guide management,
13 development, and use of the Seashore. The general management plan describes specific strategies to
14 resolve current issues and to achieve identified management objectives. The management proposals in the
15 general management plan address direct and indirect threats to the Seashore, with ORV use cited as one
16 of these threats. The general management plan calls for additional planning and research on ORV use and
17 for monitoring impacts of ORVs, but does not set forth an ORV management plan.

18 The general management plan specified five visitor experience zones. ORV use was listed as an
19 appropriate activity in three of these five zones: ocean/beach, interior dunes/maritime forests, and
20 marsh/sound. The general management plan also called for an existing action plan to regulate ORV use.
21 The most current ORV planning document known to have existed at that time was the 1978 draft interim
22 management plan (NPS 1978a). This plan was drafted after consideration of public comment to the earlier
23 1978 proposed new ORV management plan (NPS 1978b). The permitting portion of the 1978 proposed
24 plan was controversial, and was removed before release of the 1978 *Draft Interim Management Plan: Off-*
25 *Road Vehicle Use, Cape Hatteras National Seashore* (NPS 1978a).

26 In 2004, Superintendent's Order #07, ORV Management, was issued (NPS 2004x). This order aimed to
27 resolve ORV issues created by Hurricane Isabel, which flattened sand berms and exposed areas of the
28 Seashore to ORV use that the berms once protected from such use. After reviewing the 1984 general
29 management plan, the Superintendent decided that aspects of the 1978 draft interim management plan
30 (permitting sections excluded) would be used as Seashore guidance pending development of a long-term
31 ORV management plan and special regulation.

32 Potential impacts to the natural environment from ORV use at the Seashore were examined in the
33 *Determination of Status of Existing Natural Resource Impacts from Recreational Use of Cape Hatteras*
34 *National Seashore: Literature Review* (Perry and Mitchell nd). The literature review compiled a database
35 of 1,012 relevant citations, 89 of which were specific to ORV use and habitat disturbance. These citations
36 covered five major categories: (1) references pertaining to fauna; (2) references pertaining to
37 sand/sediment processes; (3) references pertaining to vegetation; (4) references pertaining specifically to
38 Cape Hatteras National Seashore; and (5) all other subjects.

39 In the first category, a total of 30 sources discussed the negative impacts of ORVs on bird populations in
40 general. These sources concluded that negative impacts are higher in a stable coastal dune system. These
41 studies included specific impacts of ORVs on birds. The studies concluded that ORV use is the highest
42 during breeding season, pedestrian impacts account for more than half the disturbances to birds, and that
43 natural forces have a greater impact than ORVs. Many specific studies on endangered species, such as the
44 piping plover, show well-documented effects from ORVs. Although the studies in this category

1 documented impacts to birds from ORV use, research was lacking on the effectiveness of management
2 plans.

3 In the remaining categories, the research showed:

- 4 • ORV traffic has a negative impact on compaction, decreased infiltration, and moisture availability
5 of sand and sediments.
- 6 • ORV traffic causes direct damage to vegetation and indirect impacts need to be addressed further.
- 7 • Soil properties, such as moisture retention capability, bulk density changes (through compaction),
8 and salinity, decrease in ability to support dune vegetation under direct impacts of ORV traffic.
9 Indirect impacts need further examination.

10 The studies discussed in the literature review, as well as other studies, demonstrate that ORVs do have an
11 impact to coastal ecosystems, including wildlife and vegetation. Further study is needed to determine the
12 level of these impacts and the effectiveness of management measures.

13 Since 2004, issues of ORV management have continued to be of great interest to various Cape Hatteras
14 National Seashore user groups, as well as other interested parties. On May 17, 2005, Defenders of
15 Wildlife (Defenders), a non-profit environmental organization, issued a notice of intent to sue (NOIS) the
16 NPS for alleged violations of the Endangered Species Act, 16 USC 1531 et seq., National Environmental
17 Policy Act, 42 USC 4321 et seq., the Migratory Bird Treaty Act, 16 USC 703 et seq., the NPS Organic
18 Act, 16 USC 1601 et seq., and the enabling legislation for Cape Hatteras National Seashore, 50 Stat. 669
19 (1937). Defenders alleged that the NPS continuing authorization of ORV use at Cape Hatteras National
20 Seashore without first engaging in formal consultation with the USFWS “violates the agency’s
21 obligations under the [Endangered Species Act] to carry out programs for the conservation of endangered
22 and threatened species and may be resulting in the take of those species.” Defenders alleged that the
23 continued authorization of ORV use at the Seashore without an assessment of environmental impact
24 violates NEPA. Defenders alleged that NPS actions have also caused the death of numerous migratory
25 birds in violation of the Migratory Bird Treaty Act. Lastly, Defenders argued that “the NPS has flagrantly
26 acted contrary to two executive orders, agency regulations, and the organic acts of both [Cape Hatteras
27 National Seashore] and the NPS by authorizing ORV use without first developing a long-term ORV
28 management plan/EIS in a national Seashore area intended to be ‘permanently reserved as a primitive
29 wilderness’” 50 Stat. 669 (1937). Partly as a result of this NOIS, Cape Hatteras National Seashore
30 prepared an interim protected species management strategy/EA to provide for the proper management of
31 protected species and comply with the ESA. The species addressed in the strategy/EA are those
32 specifically affected by recreation use within the Seashore that are listed federally or by the state as
33 threatened, endangered, or species of special concern and/or are of special concern to the Seashore (NPS
34 2006a). In January 2006, the strategy/EA was released for public review. Although the strategy/EA is not
35 an ORV management plan, elements of it do relate to ORV use such as beach closures and other visitor
36 use restrictions related to species protection.

37 Appendix B provides a timeline of ORV management activities at the Seashore.

38 **NEGOTIATED RULEMAKING**

39 Concurrent with the NEPA process, the Seashore is proposing a negotiated rulemaking process to develop
40 a proposed rule for ORV management at the Seashore. The Negotiated Rulemaking Act of 1990 (5 USC

1 561-570) establishes a statutory framework for agency use of negotiated rulemaking to reach a consensus
2 with stakeholders on a proposed regulation. It supplements, but does not substitute for, the rulemaking
3 provisions of the Administrative Procedure Act of 1946 (5 USC 553). Negotiated rulemaking, also known
4 as “regulatory negotiation” or “reg-neg,” began in the 1980s as an alternative to traditional procedures for
5 drafting proposed regulations. It brings together representatives of the agency and various affected
6 interest groups to negotiate the content of a proposed rule with the help of an impartial alternative dispute
7 resolution professional, often referred to as a “neutral.” The Negotiated Rulemaking Act of 1996
8 permanently reauthorized the Negotiated Rulemaking Act of 1990.

9 The negotiated rulemaking process begins with the neutral team conducting a feasibility assessment to
10 determine if the stakeholders for the issue are willing to participate and if it is feasible to conduct the
11 process. If determined feasible, the negotiated rulemaking process then brings together a balanced group
12 representing the regulated public, community, public interest groups, state and local governments, other
13 federal agencies, and the NPS in a Federal Advisory Committee Act (FACA) committee to negotiate
14 concepts of a proposed rule before it is published in the *Federal Register*. If the committee reaches
15 consensus on the proposed rule, then the NPS would use this consensus as the basis for its proposed rule,
16 which is subject to public notice and comment as prescribed by the Administrative Procedures Act. If the
17 committee in this case does not reach consensus, it would provide the NPS with a report indicating those
18 concepts on which it did reach consensus and those areas where disagreement remains. The NPS would
19 then proceed to develop a proposed rule using its usual planning process. Because negotiated rulemaking
20 allows interested, affected parties more direct input into the development of the proposed regulation, NPS
21 expects that the negotiated rulemaking process would result in a rule that is more sensitive to the needs
22 and limitations of both the parties and agency

23 At Cape Hatteras National Seashore, the negotiated rulemaking process has been initiated, beginning with
24 the feasibility assessment, which began in March 2005. This assessment was conducted by the U.S.
25 Institute for Environmental Conflict Resolution (the Institute) and evaluated whether a consensus-based
26 negotiation process could be convened and, if so, whether it is likely to be successful in resolving issues
27 related to Cape Hatteras National Seashore ORV management and regulations. To assist in this
28 determination, the Institute conducted interviews with 55 stakeholders that were asked about their
29 experiences with current ORV management and ideas for future management. During this time, in August
30 2005, a call for proposals for representatives was sent to the identified stakeholders. Based on interviews
31 conducted while gathering information for the feasibility report and the call for representatives, the
32 proposed list of negotiated rulemaking representatives was released in December 2005.

33
34 After these data were collected and compiled, the final feasibility report was released in April 2006,
35 which included the previously released proposed list of representatives. This report concluded that, “a
36 consensus-based negotiation to develop a management plan and proposed implementing regulations can
37 be convened, can yield important benefits even if agreement is not reached, and has a modest chance of
38 success if the conditions described below are met” (CBI and FCS 2006). This finding was contingent on
39 the following recommendations:

- 41 • The NPS and resulting committee establish a set of key milestones for assessing the committee’s
42 progress and determining if the process is meeting the interests of the participants. If it is not
43 meeting these interests, then the committee process can be ended, even if the committee has not
44 completed their work.
- 45 • The NPS and Secretary of the Interior should establish a committee exceeding the 25 member
46 limit in the Federal Advisory Committee Act in order to adequately represent all interests.
47 Increasing the committee to 28 members was recommended.

1 In February 2007, the Seashore began the process informally by holding a workshop on “Participating in
 2 the Negotiated Rulemaking Process” and continued informal participation with two other workshops in
 3 May and October 2007. The Seashore released a Notice of Intent to Begin the Off-Road Vehicle
 4 Management Plan and Environmental Impact Statement process on December 11, 2006, and public
 5 scoping meetings were held on February 26 (Buxton, NC), February 27, (Kill Devil Hills, NC), February
 6 28 (Raleigh, NC), and March 1 (Washington, DC). The Seashore published a Notice of Intent to Proceed
 7 with Negotiated Rulemaking in the Federal Register on June 28, 2007. Once a committee is established,
 8 the negotiated rulemaking and EIS process would run parallel and, to a certain degree, would rely on each
 9 other for input throughout the process.

10 **PURPOSE OF AND NEED FOR ACTION**

As defined in the Director’s Order 12 Handbook, section 2.2:

Purpose is a broad statement of goals and objectives that NPS intends to fulfill by taking action . . . Objectives are a more specific statement of purpose, i.e., what must be accomplished in a large part for the action to be considered a success.

Need is a discussion of existing conditions that need to be changed, problems that need to be remedied, decisions that need to be made, and policies or mandates that need to be implemented . . . Need is why action is being taken at this time.

11 **PURPOSE OF ACTION**

12 “Purpose” is an overarching statement of what the plan must do to be considered a success. The following
 13 draft purpose is based on team discussion:

14 The purpose of this plan is to develop regulations and procedures that manage ORV use/access in
 15 the Seashore to:

- 16 – Protect and preserve natural and cultural resources and natural processes.
- 17 – Provide a variety of appropriate visitor use experiences while minimizing conflicts among
 18 various users.
- 19 – Promote the safety of all visitors.

20 **NEED FOR ACTION**

21 Need is an overarching statement of why action is required. The following draft need statement is based
 22 on team discussion:

23 An ORV management plan is needed to:

- 24 – Bring the Seashore in compliance with Executive Orders 11644 and 11989 respecting ORV
 25 use, and with NPS laws, regulations (36 CFR 4.10), and policies to minimize impacts to
 26 Seashore resources and values.

- 1 – Address the lack of an approved plan, which has led over time to inconsistent management of
2 ORV use, user conflicts, and safety concerns.
- 3 – Provide for protected species management in relation to ORV use upon expiration of the *Cape
4 Hatteras National Seashore Interim Protected Species Management Strategy/EA* (NPS 2006a)
5 and associated Biological Opinion and Amendment (USFWS 2006 and 2007).

6 **OBJECTIVES IN TAKING ACTION**

7 Objectives are “what must be achieved to a large degree for the action to be considered a success”
8 (Director’s Order 12, NPS 2001c). All alternatives selected for detailed analysis must meet project
9 objectives to a large degree, and resolve the purpose and need for action. Objectives must be grounded in
10 the park’s enabling legislation, purpose, significance, and mission goals and must be compatible with
11 direction and guidance provided by the park’s general management plan, strategic plan, and/or other
12 management guidance. The following draft objectives are related to developing an ORV management
13 plan based on team discussion at the internal scoping meeting.

14 **MANAGEMENT METHODOLOGY**

- 15 • Identify criteria to designate ORV use areas and routes.
- 16 • Establish ORV management practices and procedures that have the ability to adapt in response to
17 changes in the Seashore’s dynamic physical and biological environment.
- 18 • Establish a civic engagement component for ORV management.
- 19 • Establish procedures for prompt and efficient public notification of beach access status including
20 any temporary ORV use restrictions for such things as ramp maintenance, resource and public
21 safety closures, storm events, etc.
- 22 • Build stewardship through public awareness and understanding of NPS resource management and
23 visitor use policies and responsibilities as they pertain to the Seashore and ORV management.

24 **NATURAL PHYSICAL RESOURCES**

- 25 • Minimize adverse impacts from ORV use to soils and topographic features, e.g., dunes, mud flats,
26 etc.

27 **THREATENED, ENDANGERED, AND OTHER PROTECTED SPECIES**

- 28 • For threatened, endangered, and other protected species (e.g., state-listed species) and their
29 habitats, minimize adverse impacts related to ORV uses as required by laws and policies, such as
30 the Endangered Species Act, the Migratory Bird Treaty Act, and NPS laws and management
31 policies.

1 VEGETATION

- 2 • Minimize adverse impacts to native plant species related to ORV use.

3 OTHER WILDLIFE AND WILDLIFE HABITAT

- 4 • Minimize adverse impacts to wildlife species and their habitats related to ORV use.

5 CULTURAL RESOURCES

- 6 • Protect cultural resources such as shipwrecks, archeological sites, and cultural landscapes from
7 adverse impacts related to ORV use.

8 VISITOR EXPERIENCE

- 9 • Manage ORV use to allow for a variety of appropriate visitor use experiences.
- 10 • Minimize conflicts between ORV use and other uses.

11 VISITOR USE

- 12 • Ensure that ORV operators are informed about the rules and regulations regarding ORV use at the
13 Seashore.

14 VISITOR SAFETY

- 15 • Ensure that ORV management promotes the safety of all visitors.

16 SEASHORE OPERATIONS

- 17 • Identify operational needs and costs to fully implement an ORV management plan.
- 18 • Identify potential sources of funding necessary to implement an ORV management plan.
- 19 • Provide consistent guidelines, according to site conditions, for ORV routes, ramps, and signage.

20 STUDY AREA AND SCOPE OF THE ANALYSIS

21 The focus of the analysis is to develop strategies for managing the use of ORVs at Cape Hatteras National
22 Seashore in North Carolina, including the three islands of Ocracoke, Hatteras, and Bodie on the soundside
23 and oceanside.

BACKGROUND

NPS units were established by Congress to fulfill specified purposes, based on the park's unique and "significant" resources. A park's purpose, as established by Congress, is the fundamental building block for its decisions to conserve resources while providing for "enjoyment of future generations."

The following were explored by the interdisciplinary team: why the Seashore was established; what resources Congress recognized as needing NPS protection; and what purpose, mission, and objectives must be fulfilled by the Seashore. After an impact analysis is completed on the alternatives, the issue of whether ORV management actions fit into the purpose of the Seashore and if ORV use is appropriate at the Seashore, as defined by its enabling legislation will be revisited.

Cape Hatteras National Seashore's enabling legislation and general management plan summarize its authorizing legislation, its purpose and significance, as well as broad mission goals for the future. These statements were reviewed at the internal scoping meeting and are presented in this section.

CAPE HATTERAS NATIONAL SEASHORE LEGISLATION AND PLANNING DOCUMENTS

The following provides the purpose and significance for Cape Hatteras National Seashore.

PURPOSE AND SIGNIFICANCE OF CAPE HATTERAS NATIONAL SEASHORE

Purpose — Congress established Cape Hatteras National Seashore in 1937 as a national seashore for the enjoyment and benefit of the people, and to preserve the area. As its enabling legislation states:

Except for certain portions of the area, deemed to be especially adaptable for recreational uses, particularly swimming, boating, sailing, fishing, and other recreational activities of similar nature, which shall be developed for such uses as needed, the said areas shall be permanently reserved as a primitive wilderness and no development of the project or plan for the convenience of visitors shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing in this area.

The 1937 enabling legislation for Cape Hatteras National Seashore also states that:

...when title to all the lands, except those within the limits of established villages, within boundaries to be designated by the Secretary of Interior within the area of approximately one hundred square miles on the islands of Chicamacomico [Hatteras], Ocracoke, Bodie, Roanoke, and Collington, and the waters and the lands beneath the waters adjacent there to shall have been vested in the United States, said areas shall be, and is hereby, established, dedicated, and set apart as a national seashore for the benefit and enjoyment of the people and shall be known as the Cape Hatteras National Seashore.

A 1940 amendment to the enabling legislation redesignated the area as the Cape Hatteras National Seashore Recreational Area to permit hunting in the Seashore.

Significance — Park significance statements capture the essence of the park’s importance to the nation’s natural and cultural heritage. Understanding park significance helps managers make decisions that preserve the resources and values necessary to the park’s purpose. The following significance statements recognize the important features of the Seashore. As stated in the 2005-2008 Strategic Plan, the Seashore has the following significance (NPS 2005a):

This dynamic coastal barrier island system continually changes in response to natural forces of wind and wave. The flora and fauna that are found in a variety of habitats at the park include migratory birds and several threatened and endangered species. The islands are rich with maritime history of humankind’s attempt to survive at the edge of the sea, and with accounts of dangerous storms, shipwrecks, and valiant rescue efforts. Today, the Seashore provides unparalleled opportunities for millions to enjoy recreational pursuits in a unique natural seashore setting and to learn of the nation’s unique maritime heritage.

CAPE HATTERAS NATIONAL SEASHORE PLANNING DOCUMENTS

The purpose, need, and objectives need to be consistent with Seashore planning documents. These documents include the 1984 general management plan and the 1997 resource management plan (NPS 1997a).

Cape Hatteras National Seashore General Management Plan (1984)

The general management plan for Cape Hatteras National Seashore states that:

The overall planning objective for the national seashore is to preserve the cultural resources and the flora, fauna, and natural physiographic condition, while providing for appropriate recreational use and public access to the oceanside and soundside shores in a manner that will minimize visitor use conflict, enhance visitor safety, and preserve park resources. Selected beaches will continue to be open for ORV recreational driving and in conjunction with surf fishing in accordance with the existing use restrictions.

The management proposals in the general management plan address direct and indirect threats to the Seashore such as shoreline erosion, spread of exotic species of vegetation, use of ORVs, population growth, and increasing development. To address these issues, the general management plan establishes planning objectives for various units of the Seashore. The general management plan units and management objectives to consider in the development of an ORV management plan include:

Ocean/Beach Unit: Allow natural processes to continue unhampered; allow a wide range of unstructured beach and water oriented active recreational activities; provide for adequate visitor access over the dunes while protecting them from overuse; and concentrate visitor use at selected points, allowing for a more wilderness-type experience between points.

Vegetated Sand Flats Unit: Continue its use as a transportation corridor; allow development necessary to support visitor activities and resource protection; site and design all construction to minimize impact on natural systems and processes; allow appropriate recreational activities; and provide parking turnouts for beach access at appropriate nodes.

Interior Dunes/Maritime Forest Unit: Maintain in an essentially natural state; carefully site and design any construction to minimize impact on natural systems and processes; provide

interpretive trails and ORV access to the sound shore and beach where appropriate; and allow unstructured, passive recreation that can best take advantage of the opportunities for solitude and self-discovery.

Marsh/Sound Unit: Maintain in an essentially natural state; provide access to the sound at widely separated nodes and to provide limited development in support of passive recreational activities at some of these nodes; and provide interpretive trails where appropriate.

Cape Hatteras National Seashore Resource Management Plan (1997)

The *Cape Hatteras National Seashore Resource Management Plan* identified nine goals to provide direction for the future management of the Seashore. Five of the plan's goals relate to the creation and implementation of an ORV management plan (NPS 1997a):

- *Establishment of the national seashore for the benefit and enjoyment of the public:* The purpose of Cape Hatteras National Seashore is to preserve and protect for public use and enjoyment the cultural and natural resources that represent the significance of these barrier islands from Whalebone Junction to Ocracoke Inlet. It is important that the Seashore identify visitor uses and impacts to establish appropriate management policies that will meet the needs of the Seashore visitor while providing for the preservation and protection of the resources unimpaired for future generations.
- *Preservation and protection of cultural resources:* The NPS will provide for the preservation, restoration, protection, interpretation, use, study, and management of significant cultural resources in the Seashore through adequate research and programming, in compliance with the requirements of the Advisory Council on Historic Preservation's regulation for implementing consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended), *NPS Management Policies 2006* (NPS 2006b), and *NPS-28 Cultural Resource Management Guideline* (NPS 1998b).
- *Preservation and protection of natural resources:* The authorizing legislation for Cape Hatteras National Seashore (50 Stat. 669) requires that, with specific exceptions, "affected lands...shall be permanently reserved as a primitive wilderness and no development...shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing in this area..." The NPS will continue to meet this requirement through compliance with all appropriate laws and other authorities. Rigorous enforcement, research, environmental monitoring, and applied resource management are presently underway and will continue in accordance with available funding and direction.
- *Provision for residents to be allowed to commercial fish subject to regulation of the Department of the Interior to protect recreational use:* The authorizing legislation provides that residents of adjoining villages shall have the right to earn a livelihood by fishing in the Seashore. Commercial and recreational fishing are largely unimpeded on Cape Hatteras National Seashore with the exception of use restrictions in a limited number of environmentally sensitive areas. The areas are identified by signs and, in some locations, closed off with rope between posts, known as symbolic fencing.

- *Compliance with generic federal legislation and policy:* The combined list of federal legislation and policies for activities conducted at Cape Hatteras National Seashore is substantial. Compliance is attained through: (1) employee training, i.e., ensuring that employees are knowledgeable with regard to the legal and policy aspect of their work; and (2) review of documents and proposed activities by experienced supervisory personnel.

Cape Hatteras Interim Protected Species Management Strategy/EA (2006) and Finding of No Significant Impact (2007)

Until the long-term ORV management plan/EIS is completed, the NPS is implementing an interim protected species management strategy/EA as detailed in the July 2007 Finding of No Significant Impact (NPS 2007a) to ensure for the proper management of protected species and comply with the Endangered Species Act, 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 and/or are of special concern to the Seashore. The strategy/EA was completed in January 2006 and released to the public for comment. In summer 2007, the Finding of No Significant Impact was released. The strategy/EA details species protection measures, including monitoring and management measures, for the protected species at the Seashore, as well as species of special concern.

NATIONAL PARK SERVICE ORGANIC ACT AND MANAGEMENT POLICIES

In the NPS *Organic Act of 1916* (Organic Act), Congress directed the U.S. Department of the Interior and the NPS to manage units of the national park system “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC 1a-1).

Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions about visitor recreation and resource preservation. By these acts Congress “empowered [the National Park Service] with the authority to determine what uses of park resources are proper and what proportion of the parks resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 [9th Cir. 1996]).

Yet courts consistently interpret the Organic Act and its amendments to elevate resource conservation above visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991) states, “Congress placed specific emphasis on conservation.” The court in *National Rifle Ass’n of America v. Potter*, says “in the Organic Act Congress speaks of but a single purpose, namely, conservation.” The NPS *Management Policies 2006* also recognize that resource conservation takes precedence over visitor recreation. The policy dictates that “when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant” (NPS 2006b, sec. 1.4.3).

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on park resources and values. Yet, the NPS has discretion to allow negative impacts when necessary (NPS 2006b, sec. 1.4.3). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that constitutes resource impairment (NPS 2006b, sec. 1.4.3). The Organic Act prohibits actions

that impair park resources unless a law directly and specifically allows for the action (16 USC 1a-1). An action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006b, sec. 1.4.5). To determine impairment, the NPS must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (NPS 2006b, sec. 1.4.5).

Because park units vary based on their enabling legislation, natural resources, cultural resources, and missions, management activities appropriate for each unit and for areas in each unit vary as well. An action appropriate in one unit could impair resources in another unit. Thus, the environmental impact statement will analyze the context, duration, and intensity of impacts related to the management of ORVs in Cape Hatteras National Seashore, as well as the potential for resource impairment, as required by *Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making* (NPS 2001c).

NPS *Management Policies 2006* address management of ORV in Section 8.2.3.1 Off-road Vehicle Use². These policies states (NPS 2006b, p. 165):

Off-road motor vehicle use in national park units is governed by Executive Order 11644 (Use of Off-road Vehicles on Public Lands, as amended by Executive Order 11989), which defines off-road vehicles as “any motorized vehicle designed for or capable of cross-country travel on or immediately over, land, water, sand, snow, ice, marsh, swampland, or other natural terrain” (except any registered motorboat or any vehicle used for emergency purposes). Unless otherwise provided by statute, any time there is a proposal to allow a motor vehicle meeting this description to be used in a park, the provisions of the executive order must be applied.

In accordance with 36 CFR 4.10(b), routes and areas may be designated only in national recreation areas, national seashores, national lakeshores, and national preserves, and only by special regulation. In accordance with the executive order, they may be allowed only in locations where there will be no adverse impacts on the area’s natural, cultural, scenic, and esthetic values, and in consideration of other existing or proposed recreational uses. The criteria for new uses, appropriate uses, and unacceptable impacts listed in sections 8.1 and 8.2 must also be applied to determine whether off-road vehicle use may be allowed. As required by the executive order and the Organic Act, superintendents must immediately close a designated off-road vehicle route whenever the use is causing, or will cause, unacceptable impacts on the soil, vegetation, wildlife, wildlife habitat, or cultural and historic resources.

NPS administrative off-road motor vehicle use will be limited to what is necessary to manage the public use of designated off-road vehicle routes and areas; to conduct emergency operations; and to accomplish essential maintenance, construction, and resource protection activities that cannot be accomplished reasonably by other means.

Other management policies should be considered in developing a long-term ORV management plan/EIS:

² Sections 8.1 and 8.2 of the NPS *Management Policies 2006* present criteria for visitor use, including appropriate recreational activities, within the national park system.

NPS *Management Policies 2006* instructs park units to maintain as part of the natural ecosystems of parks all plants and animals native to park ecosystems, in part by minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them (NPS 2006b, sec. 4.4.1).

NPS *Management Policies 2006* directs park units to determine all management actions for the protection and perpetuation of federally, state, or locally listed species through the park management planning process, and to include consultation with lead federal and state agencies as appropriate. Section 4.4.2.3, Management of Threatened or Endangered Plants and Animals, specifically states:

The Service 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 proactively conserve listed species and prevent detrimental effects on these species. To meet these obligations, the Service will:

- Cooperate with both the USFWS and the National Marine Fisheries Service to ensure that NPS actions comply with both the written requirements and the spirit of the Endangered Species Act. This cooperation should include the full range of activities associated with the Endangered Species Act, including consultation, conferencing, informal discussions, and securing of all necessary scientific and/or recovery permits.
- Undertake active management programs to inventory, monitor, restore, and maintain listed species' habitats; control detrimental non-native species; control detrimental visitor access; and re-establish extirpated populations as necessary to maintain the species and the habitats upon which they depend.
- Manage designated critical habitat, essential habitat, and recovery areas to maintain and enhance their value for the recovery of threatened and endangered species.
- Cooperate with other agencies to ensure that the delineation of critical habitat, essential habitat, and/or recovery areas on park-managed lands provides needed conservation benefits to the total recovery efforts being conducted by all the participating agencies.
- Participate in the recovery planning process, including the provision of members on recovery teams and recovery implementation teams where appropriate.
- Cooperate with other agencies, states, and private entities to promote candidate conservation agreements aimed at precluding the need to list species.
- Conduct actions and allocate funding to address endangered, threatened, proposed, and candidate species.

The NPS will inventory, monitor, and manage state and locally listed species in a manner similar to its treatment of federally listed species, to the greatest extent possible. In addition, the NPS will inventory other native species that are of special management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and will manage them to maintain their natural distribution and abundance.

OTHER FEDERAL LAWS, EXECUTIVE ORDERS, REGULATIONS, AND POLICIES

The NPS is also required to comply with the following laws, executive orders, regulations, and policies in developing its ORV management plan.

National Environmental Policy Act of 1969, as Amended

NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508). The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making*, and its accompanying handbook (NPS 2001c). Section 102(2) (c) of this act requires that an EIS be prepared for proposed major federal actions that may significantly affect the quality of the human environment.

National Parks Omnibus Management Act of 1998

The National Parks Omnibus Management Act (NPOMA) (16 USC 5901 et seq.) underscores NEPA in that both are fundamental to NPS management decisions. Both acts provide direction for articulating and connecting the ultimate resource management decision to the analysis of impacts, using appropriate technical and scientific information. Both also recognize that such data may not be readily available and provide options for resource impact analysis in this case.

NPOMA directs the NPS to obtain scientific and technical information for analysis. Director's Order 12 states, "If such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact or other alternatives will be selected" (NPS 2001c, sec. 4.4).

Redwood National Park Act of 1978, as Amended

All national park system units are to be managed and protected consistent with the NPS Organic Act as part of the national park system, whether established as a recreation area, historic site, or any other designation. This act states that the NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act of 1918 implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under this act it is prohibited, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess...any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird" (16 USC 703). Subject to limitations in the Act, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

National Historic Preservation Act of 1966, as Amended

Section 106 of this act requires federal agencies to consider the effects of their undertakings on properties listed or potentially eligible for listing on the National Register of Historic Places. All actions affecting the parks' cultural resources must comply with this legislation.

Coastal Zone Management Act, 1966

The Coastal Zone Management Act of 1966 (CZMA) (16 USC 1451 et. seq.) seeks to preserve and protect coastal resources. Through the CZMA, states are encouraged to develop coastal zone management programs (CZMPs) to allow economic growth that is compatible with the protection of natural resources, the reduction of coastal hazards, the improvement of water quality, and sensible coastal development. The CZMA provides financial and technical incentives for coastal states to manage their coastal zones in a manner consistent with CZMA standards and goals. CZMA Section 307 requires that federal agency activities that affect any land or water use or natural resource of the coastal zone must be consistent to the maximum extent practicable with the enforceable policies of the state CZMP. Federal agencies and applicants for federal approvals must consult with state CZMPs and must provide the CZMP with a determination or certification that the activity is consistent with the CZMP's enforceable policies, where those policies will have a possible effect on state coastal resources, as defined by the CZMP and local land use plans.

The North Carolina Coastal Area Management Act (CAMA) establishes a cooperative program of coastal area management between local and state governments through comprehensive planning for the protection, preservation, orderly development, and management of the coastal area of North Carolina. The CAMA program was federally approved in 1978 and is the state's CZMP under the CZMA. Localities are responsible for planning while the state establishes areas of environmental concern. A project must obtain a CAMA permit if it

- Is in one of the 20 counties covered by the Act (including Dare and Hyde Counties),
- Is considered "development" under the Act,
- Is in or affects an area of environmental concern, and
- Does not qualify for an exemption.

As a part of this program, the Coastal Resources Commission designated "Areas of Environmental Concern" in the 20 coastal counties and set rules for managing development in these areas. An area of environmental concern is an area of natural importance that may be easily destroyed by erosion or flooding or that may have environmental, social, economic, or aesthetic values that make it valuable to North Carolina. A consistency determination will be used to determine if the ORV management plan could impact state coastal zone management resources by stating if and how the ORV management plan is consistent to the maximum extent practicable with the enforceable policies of the North Carolina CAMA and the Dare and Hyde county land use plans.

Marine Mammal Protection Act, 1972

The Marine Mammal Protection Act prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine

mammal products into the U.S. The Act defines “take” as “to harass, capture, kill, or attempt to harass, hunt, capture, or kill any marine mammal.” It defines harassment as “any act or pursuits, torment or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.” (For example, young seals that temporarily rest on the Cape Hatteras National Seashore beaches would be protected from disturbance by this Act.) This act recognizes that some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities and that these species or stocks must not be permitted to be depleted. The act, as amended in 1994, provides for certain exceptions to the take prohibitions, such as for Alaska Native subsistence and permits and authorizations for scientific research; a program to authorize and control the taking of marine mammals incidental to commercial fishing operations; preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; and studies of pinniped-fishery interactions.

Endangered Species Act of 1973, as Amended

This act requires all federal agencies to consult with the Secretary of the Interior on all projects and proposals with the potential to impact federally endangered or threatened plants and animals. It also requires federal agencies to use their authorities in furtherance of the purposes of the Endangered Species Act by carrying out programs for the conservation of endangered and threatened species and to ensure that any agency action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat.

Federal Noxious Weed Act of 1975

The Federal Noxious Weed Act (7 USC 2801-2814, January 3, 1975, as amended 1988 and 1994) provides for the control and management of nonindigenous (non-native) weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health.

Antideficiency Act

The Antideficiency Act prohibits federal managers from making or authorizing expenditures in excess of the amount available to them from appropriations or other funds, unless authorized by law. Based on this, the plan/EIS created must be able to be implemented through expected funding sources.

Code of Federal Regulations, Title 36 (1992)

Title 36, Chapter 1 provides the regulations “for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service.” It states, “the National Park Service has the authority to manage the wildlife in the parks in fulfillment of the Organic Act without the consent of the state and by methods contrary to state law” (16 USC 3).

Code of Federal Regulation, Title 36, Section 2.15, Pets

The Code of Federal Regulations, Title 36, Section 2.15, provides regulations for visitors wishing to bring pets into national park units. Under this regulation, the following activities are prohibited in regards to pets:

1. Possessing a pet in a public building, public transportation vehicle, or location designated as a swimming beach, or any structure or area closed to the possession of pets by the superintendent. This does not apply to guide dogs accompanying visually impaired persons or hearing ear dogs accompanying hearing-impaired persons.
2. Failing to crate, cage, restrain on a leash which shall not exceed six feet in length, or otherwise physically confine a pet at all times.
3. Leaving a pet unattended and tied to an object, except in designated areas or under conditions which may be established by the superintendent.
4. Allowing a pet to make noise that is unreasonable considering location, time of day or night, impact on park users, and other relevant factors, or that frightens wildlife by barking, howling, or making other noise.
5. Failing to comply with pet excrement disposal conditions which may be established by the superintendent.

Code of Federal Regulations, Title 36, Section 3.6, Prohibited Operations

Section 3.6 prohibits the launching of a vessel “propelled by machinery” from any location within the park other than a designated launch site. Launching sites for non-commercial, recreational boats/vessels are the boat ramps located at Oregon Inlet Fishing Center and Ocracoke Marina parking area.

Code of Federal Regulations, Title 36, Section 4.10, Travel on Park Roads and Designated Routes

Travel on park roads and designated routes.

- (a) Operating a motor vehicle is prohibited except on park roads, in parking areas and on routes and areas designated for off-road motor vehicle use.
- (b) Routes and areas designated for off-road motor vehicle use shall be promulgated as special regulations. The designation of routes and areas shall comply with Section 1.5 of this chapter and E.O. 11644 (37 FR 2887).

Executive Order 11644: Use of Off-Road Vehicles on the Public Lands

On February 8, 1972, President Richard Nixon issued Executive Order 11644 to “establish policies and provide for procedures that will ensure the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.”

The executive order directs agencies to develop and issue regulations and administrative instructions to provide for administrative designation of the specific areas and trails on public lands on which the use of ORVs may be permitted, and areas in which the use of ORVs may not be permitted. The location of areas and trails shall:

- minimize damage to soil, watershed, vegetation, or other resources of the public lands;
- minimize harassment of wildlife or significant disruption of wildlife habitats;
- minimize conflicts between ORV use and other existing or proposed recreational uses of the same on neighboring public lands, and ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors; and

- not be located in officially designated wilderness areas or primitive areas and shall be located in areas of the national park system, natural areas, or national wildlife refuges and game ranges only if the respective agency head determines that ORV use in such locations will not adversely affect their natural, aesthetic, or scenic values.

Executive Order 11989: Off-Road Vehicles on Public Lands

This executive order, issued on May 24, 1977, by President Jimmy Carter, directs agencies to immediately close off-road areas or trails when it is determined that the use of ORVs will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources to the type of ORV causing such effects, until such time as determined that such adverse effects have been eliminated and measures have been implemented to prevent future recurrence. Also included in the executive order is the authority to adopt the policy that portions of the public lands under an agency's jurisdiction shall be closed to use by ORVs except those areas or trails that are suitable and specifically designated as open to such use.

Executive Order 11593: Protection and Enhancement of the Cultural Environment

This executive order directs federal agencies to support the preservation of cultural properties and to identify and nominate to the National Register cultural properties in the park and to "exercise caution...to assure that any NPS-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered."

Executive Order 11988: Floodplain Management

This executive order directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Executive Order 11990: Protection of Wetlands

This executive order directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Executive Order 13112: Invasive Species

This executive order requires federal agencies to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.

Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

Migratory birds are of great ecological and economic value to this country and to other countries. They contribute to biological diversity and bring tremendous enjoyment to millions of Americans who study, watch, feed, or hunt these birds throughout the United States and other countries. The United States has recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds. Such conventions include the Convention for the Protection of Migratory Birds with Great Britain on behalf of Canada 1916, the Convention for the Protection of Migratory Birds and Game Mammals-Mexico 1936, the Convention for the Protection of Birds and Their

Environment-Japan 1972, and the Convention for the Conservation of Migratory Birds and Their Environment-Union of Soviet Socialist Republics 1978. These migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act (Act), the United States has implemented these migratory bird conventions with respect to the United States. This executive order directs executive departments and agencies to take certain actions to further implement the Act.

Superintendent's Compendium: Closures, Permit Requirements, and Other Restrictions

Under the provisions of 16 USC 3 and 36 CFR 1, Parts 1-7, the compendium details designated closures, permit requirements, and other restrictions imposed under the discretionary authority of the Superintendent. The general provisions of the compendium allow for closures and public use limits for posted bird areas and turtle nests as well as implementing vehicle restrictions during May through September on beach areas in front of villages, on life guarded beaches, and on beaches adjacent to NPS campgrounds or other posted areas. The compendium also covers restrictions for resource protection, public use, and recreation; boating and water use activities; and vehicles and traffic safety. It prohibits vehicular access to beach or soundside vehicle areas other than those marked and maintained vehicle access routes and prohibits all off-road traffic on Pea Island National Wildlife Refuge.

Superintendent's Order #07: ORV Management

Before Hurricane Isabel in September 2003, the existing berm line physically established ORV driving areas between the ocean and the constructed berm. Overwash during Hurricane Isabel and the resulting flattening of the constructed berm exposed areas of the park once protected by the berm from ORV use. Areas of special concern include sections of destroyed berm south of Ramp 4, south of Ramp 44 around Cape Point to "south beach," south of Ramp 55, and south of Ramp 70. To address this event and the changes it produced, this order adopts the 1978 *Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore* (NPS 1978a) except for the portions that refer to permitting. Under Superintendent's Order #07, this plan was used as park guidance until an ORV management plan was prepared, approved, and implemented. Since Superintendent's Order #07 was enacted, the Seashore completed the planning effort for the Interim Protected Species Management Strategy/EA. The management actions related to ORVs detailed in the Finding of No Significant Impact (2007) for the strategy/EA supersede the guidance provided in the Superintendent's Order.

Superintendent's Order 10: Monitoring and Protection of Species of Concern

The park's goal is to prevent "take" and contribute toward recovery of protected species. Accomplishing this goal includes protective closures, monitoring and research, law enforcement, predator control, and other management actions. The park's efforts will also contribute toward the Government Performance and Results Act (1993) goals for the NPS:

1a2A: 41% of federally listed species that occur or have occurred in parks are making progress towards recovery.

1a2B: 70% of populations of native plant and animal species of management concern are managed to self-sustaining levels, in cooperation with affected states and others, as defined in approved management documents.

Director's Order 12: Conservation Planning, Environmental Impact Analysis, Decision Making, and Handbook

Director's Order 12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001c) provides the groundwork for how the NPS complies with NEPA. Director's Order 12 and its accompanying handbook set forth a planning process for incorporating scientific and technical information and establishing a solid administrative record for NPS projects.

Director's Order 12 requires that impacts on park resources be analyzed in terms of their context, duration, and intensity. It is crucial for the public and decision makers to understand the implications of those impacts in the short and long term, cumulatively, and within context, based on an understanding and interpretation by resource professionals and specialists. Director's Order 12 also requires that an analysis of impairment of park resources and values are made as part of the NEPA document.

Director's Order 77: Natural Resource Protection

Director's Order 77 addresses natural resource protection, with specific guidance provided in Reference Manual 77, Natural Resource Management (NPS 1991). This Director's Order includes Director's Order 77-1, Wetland Protection and Director's Order 77-2, Floodplain Management, both of which would be considered during the development of an ORV management plan at the Seashore.

Director's Order 77-1, reissued in 2002, establishes policies, requirements, and standards for implementing Executive Order 11990, Protection of Wetlands. Under this order, the NPS adopts a goal of "no net loss of wetlands." In addition, the NPS will strive to achieve a long-term goal of net gain of wetlands servicewide. For proposed new development or other new activities, plans, or programs that are either located in wetlands or otherwise have the potential for direct or indirect adverse impacts on wetlands, the NPS will employ a sequence of avoiding adverse wetland impacts to the extent practicable, minimizing impacts that could not be avoided, and compensating for remaining unavoidable adverse wetland impacts by restoring degraded wetlands. If the preferred alternative in an EA or EIS will result in adverse impacts on wetlands, the NPS will prepare and approve a Statement of Findings (SOF) in accordance with procedures described in Procedural Manual 77-1, Wetland Protection.

Director's Order 77-2, Floodplain Management, approved in 2003, applies to all NPS proposed actions, including the direct and indirect support of floodplain development that could adversely affect the natural resources and functions of floodplains, including coastal floodplains, or increase flood risks. This director's order also applies to existing actions when they are the subjects of regularly occurring updates of NPS planning documents. Under Director's Order 77-2, it is NPS policy to preserve floodplain values and minimize potentially hazardous conditions associated with flooding. In managing floodplains on park lands, the NPS will (1) manage for the preservation of floodplain values; (2) minimize potentially hazardous conditions associated with flooding; and (3) comply with the NPS Organic Act and all other federal laws and executive orders related to the management of activities in flood-prone areas, including Executive Order 11988 (Floodplain Management), NEPA, applicable provisions of the Clean Water Act, and the Rivers and Harbors Appropriation Act of 1899. Specifically, the NPS will protect and preserve the natural resources and functions of floodplains; avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and avoid direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. When it is not practicable to locate or relocate development or inappropriate human activities to a site outside and not affecting the floodplain, the NPS will prepare and approve an SOF, in accordance with procedures described in Procedural Manual 77-2, Floodplain

Management, and take all reasonable actions to minimize the impact to the natural resources of floodplains.

STATE AND LOCAL LAWS, REGULATIONS, AND POLICIES

North Carolina State Motor Vehicle Regulations

Title 36, section 4.2 of the Code of Federal Regulations requires that traffic and use of vehicles in all national parks, unless otherwise specified, be governed by state law. Since there are no other federal requirements applicable to Cape Hatteras National Seashore in this regard, the Seashore assimilates and enforces North Carolina State motor vehicle regulations. These state regulations are the basis for enforcement actions with respect to traffic regulation and enforcement actions on the Seashore such as setting and enforcing speed limits, vehicle registration requirements, driving while impaired violations, etc. The Seashore has concurrent jurisdiction with the state and enforces state regulations both on Seashore beaches and vehicle access roads as well as on state highways within the boundaries of the Seashore.

Off-Road Vehicle Regulations for Duck, Kill Devil Hills, Nags Head, Kitty Hawk, and Southern Shores

Each municipality on the Outer Banks has its own individual rules for ORV use. Generally all municipalities that allow beach driving share the following rules: a suggested speed limit of 15 miles per hour, enter and leave the beach only at designated ramps (never between ramps or on the dunes), drive only on the portion of beach that lies between the foot of the dunes and the ocean, proceed with caution and consideration of other beach visitors, vehicles must have a state road registration and valid license plate, and the operator must have a current driver's license. In addition to these general guidelines, the surrounding municipalities have individual ORV regulations.

In Duck and Kill Devil Hills, ORVs are permitted on the beach between October 1 and April 30 with no permit required. The regulation in Kill Devil Hills states that all ORVs must have four-wheel drive and be registered and licensed. Night driving is permitted at Kill Devil Hills. Duck does not permit night driving and does not require four-wheel drive. Driving on sand dunes is prohibited, and vehicles must only enter and exit the beach at designated access points. Agencies of the U.S. government, law enforcement agencies, fire departments, ocean rescue services, and medical emergency services are exempted from these beach driving provisions.

In Nags Head, beach driving is permitted between October 1 and April 30, from dawn to dusk. However, all ORVs must be permitted in accordance with the Regulations Governing Off-Road Vehicles. To use an ORV under these regulations, a permit must be obtained from either the Municipal Complex or Town-designated tackle shops at a price of \$25. Permits are granted only with the accompanying proof of state registration. Duplicates and additional permits for business commercial fishing cost \$2. When operating an ORV, the permit must be displayed on the left front bumper of the vehicle; the vehicle must drive as close to the water's edge as possible, avoiding the sand dunes; and entry to and exit from the beach can only occur at marked access points.

Additionally, ORV traffic in Nags Head is regulated by the Beach Vehicular Traffic Law. This law reiterates that all vehicular traffic is unlawful on Nags Head beaches unless a permit has been issued. In addition, it sets forth principles for the issuance of ORV permits and for the rules of operating such

vehicles on the beaches. Exceptions to the law are also provided to municipal employees, municipal vehicles, and emergency vehicles.

In Kitty Hawk and Southern Shores, no motorized vehicles are allowed on the beaches except for emergency vehicles and commercial fishermen (OBVB 2004).

North Carolina Division of Marine Fisheries Regulations

Commercial fishermen at Cape Hatteras National Seashore are required to be licensed by the North Carolina Division of Marine Fisheries, the agency responsible for the stewardship of the state's marine and estuarine resources. The Standard Commercial Fishing License is an annual license for commercial fishermen who harvest and sell fish, shrimp, crab or any marine species, except menhaden and shellfish. To harvest menhaden and shellfish, fishermen must apply for additional endorsements to their Standard Commercial Fishing License, or purchase a Shellfish License. To be eligible for the Standard Commercial Fishing License, an individual or business must have a current/valid Standard or Retired Standard Commercial Fishing License for the previous license year. The Standard Commercial Fishing License costs North Carolina residents \$200 and non-residents \$800 and the licenses expire yearly on June 30. For those 65 and older, a Retired Standard Commercial Fishing License is available at a cost of \$100 for residents and \$800 for non-residents. To be eligible for this license, an individual must have a current/valid Endorsement-to-Sell License on June 30, 1999 (NCDMF nd).

On January 1, 2007, the Division of Marine Fisheries (DMF) began issuing North Carolina's Coastal Recreational Fishing License (CRFL). This license can be purchased on a 10-day, annual, or lifetime basis, or combined with a variety of licenses issued by the Wildlife Resources Commission (WRC). The license allows recreational fishermen to take finfish for personal consumption; finfish harvested under this license cannot be sold. Fishermen using this license are held to the state's recreational size and possession limits. The license cannot be assigned or transferred and is required for any type of recreational finfish taken not included under the Recreational Commercial Gear License. Fishermen holding the CRFL are required to comply with all DMF sampling and survey programs.

The license is required to recreationally take finfish in the state's Coastal Fishing Waters, which include sounds, coastal rivers and their tributaries, out to 3 miles in the ocean. Recreational anglers who catch fish in the Exclusive Economic Zone (3 miles – 200 miles offshore) will be required to have this license to land fish in state waters. Fishing in Joint Waters (areas managed by both the Marine Fisheries and the Wildlife Resources Commissions) will require either the CRFL or a WRC inland fishing license. Under these new regulations, all visitors to Cape Hatteras wishing to engage in fishing activities must obtain a state license.

North Carolina Wildlife Resources Commission Nongame and Endangered Wildlife Program

The Nongame and Endangered Wildlife Program, established in North Carolina in 1983, aims to prevent species from becoming endangered through maintaining viable, self-sustaining populations of all native wildlife, with an emphasis on species in decline. The North Carolina Wildlife Resources Commission has a Comprehensive Wildlife Strategy to protect state listed species. This strategy includes securing funding for state fish and wildlife agencies to take preventative actions that help keep rare species from becoming endangered and keep common species common (NCWRC nd). Species listed as state threatened, endangered, or of special concern will be considered during the development of an ORV management plan in accordance with NPS *Management Policies 2006*, section 4.4.2.3, which states "The National Park Service will inventory, monitor, and manage state and locally listed species in a manner similar to its treatment of federally listed species, to the greatest extent possible. In addition, the Service will inventory

other native species that are of special management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and will manage them to maintain their natural distribution and abundance” (NPS 2006b, sec. 4.4.2.3). Endangered and threatened wildlife and wildlife species of special concern are protected under Article 25 of Chapter 113 of the North Carolina General Statutes.

RELATIONSHIP TO OTHER PLANS, POLICIES, AND ACTIONS

CAPE HATTERAS NATIONAL SEASHORE PLANS, POLICIES, AND ACTIONS

The following plans, policies, and actions occurring at the Seashore would be considered during the development of a long-term ORV management plan:

The Biological Opinion associated with the interim protected species management strategy was prepared by the USFWS Raleigh Field Office in response to their review of the Cape Hatteras National Seashore’s January 6, 2006, biological assessment (NPS 2006c), the January 18, 2006, *Cape Hatteras National Seashore Interim Protected Species Management Strategy/EA* (NPS 2006a), and other sources of published and unpublished biological information. The Biological Opinion evaluated the proposed action and its potential impact to protected species at the Seashore to determine if there would be a take under the Endangered Species Act. The USFWS concluded that incidental takes of protected species would occur from management action under the Interim Protected Species Management Strategy/EA, but that this level of anticipated take is not likely to result in jeopardy to the species, or destruction or adverse modification of designated or proposed critical habitat (USFWS 2006).

Seashore actions related to ORV management began in response to Executive Order 11644 (Use of Off-Road Vehicles on the Public Lands, February 9, 1972), with the establishment of draft guidelines for ORV use. Following this, Executive Order 11989 (Off-Road Vehicles on Public Lands, May 24, 1977) was issued and the Seashore initiated the development of an ORV management plan. The result was the 1978 draft interim ORV management plan (NPS 1978a) establishing guidelines and controls for off-road use of vehicles in Cape Hatteras National Seashore until promulgation and adoption of the general management plan, under development at that time. As described previously, this plan divided the Seashore into zones and described management in each zone. ORV management was also addressed in the *ORV Plan North District Cape Hatteras National Seashore* (NPS 1980a) and the 1984 *General Management Plan/Development Concept Plan/Environmental Assessment for Cape Hatteras National Seashore* (NPS 1984c). More recently, Superintendent’s Order #07, ORV Management was issued in 2004 (NPS 2004x). Through this order, after reviewing the 1984 general management plan and 1978 draft interim ORV management plan, the Seashore decided that implementing the draft interim ORV management plan, without the permitting portions, would be appropriate. These past ORV planning efforts will be taken into consideration during the development of an ORV management plan.

The *general management plan* for Cape Hatteras National Seashore was developed to guide the preservation, use, development, and operation of the Seashore for a five- to ten-year period. In this plan, reference to ORV use is made as a part of Additional Planning and Research Requirements, which calls for monitoring the impact of ORVs at the Seashore. The general management plan allows for ORV use on selected beaches in accordance with existing use regulations and also prohibits ORVs from the Cape Hatteras Lighthouse/museum parking area to minimize use conflicts. Under the general management plan, the NPS will review and update as necessary the existing action plan regulating ORV use to reduce visitor use conflicts and to protect dunes, vegetation, wildlife, and cultural resources. The action plan will designate ORV routes and sensitive resource areas periodically closed to ORV use. The plan will continue to set safety regulations for ORV operation in the Seashore (NPS 1984a). The Seashore has requested funding to revise the 1984 general management plan.

The 1997 *resource management plan* states that the use of ORVs at the Seashore is a matter of growing controversy and impacts from these vehicles on natural resources and pedestrian visitors are informally monitored on a continual basis. The plan noted, but did not cite, a study examining the effects of human related disturbances, including vehicles, on migrating shore and water birds and stated that more detailed studies would be required to establish effective ORV management.

The *fire management plan* for Cape Hatteras National Seashore describes the proposed actions necessary to carry out fire management policies and objectives for the three parks in the Outer Banks Group. NPS Director's Order 18 requires that all NPS units with vegetation capable of supporting fire develop and implement a fire management plan. Furthermore, this order directs the parks to implement fire related objectives in the park's planning documents, such as general management and resource management plans, while providing for visitor, employee, and public facility protection (NPS 2005b).

The Seashore is developing a *commercial services plan* to identify necessary and/or appropriate commercial services in the Seashore and the best way for NPS to manage them. An EA for the commercial services plan is being prepared; the expected completion date is unknown.

From 1998 to 2004, Cape Hatteras National Seashore distributed a survey to visitors as part of compliance with the *Government Performance Results Act (GPRA) Surveys*. These surveys focus on measurable goals for visitor satisfaction and visitor understanding and appreciation, which assists the Seashore in its planning efforts to achieve its goals.

The *Cape Hatteras National Seashore Visitor Use Study* (Vogelsong 2003) collected and analyzed data to better understand how visitors use the Seashore. Researchers collected data on the distribution and character of use, as well as on visitor attitudes/norms toward visitor density, ORV use, aircraft flyovers, and other activities. To determine levels of visitor use throughout the Seashore, counts were conducted for visitors, parked vehicles, ORVs, and people per vehicle at several designated locations throughout the park. Interviews were conducted throughout the park to represent a wide variety of activity choices. In relation to visitor experience and ORV use, the study found that, although ORV use in the park was high, there was not a negative impact on visitor experiences. Many visitors were positive or neutral toward ORV use, especially when reporting on the acceptability of the number of ORVs seen. It was noted that ORV use is currently concentrated in areas that are receptive to it and that over 76% of the respondents have driven an ORV at the Seashore. Respondents that did not feel positive about ORV use did not appear to be in areas where ORV use was occurring. The study also stated that, although there is a lack of negative social impacts, ORV levels are high in some areas and should be continually monitored. Statistically significant differences between user groups (activity, site related, and ORV users vs. non-users) were found in regard to ORV attitudes and preferences, indicating a potential for conflict between user groups (Vogelsong 2003).

The visitor services project report, or the *Outer Banks Group Parks Visitor Study Cape Hatteras National Seashore Visitors* report, resulted from a visitor study conducted at the Seashore July 12 through 18, 2002. The study found that the most popular activities for current and past visitors were sunbathing/swimming and visiting historic sites. The three most important reasons for visiting Cape Hatteras National Seashore were the lighthouses, swimming, and uncrowded/solitude/low population. Also, when asked about crowding, 27% of visitors said they felt "crowded" to "extremely crowded" while 43% of visitors felt "somewhat crowded." Many visitor groups (49%) felt that crowding "detracted from their park experience" (NPS 2002a).

A *long-range interpretation plan* for Cape Hatteras National Seashore was completed in September 2007. This plan provides recommended actions to be taken over the next five to seven years to improve the

Seashore's personal services program and interpretive media, and provides an achievable implementation strategy (NPS 2007b). As this plan addresses exhibits and other interpretive information provided to Seashore visitors, it would be considered in the development of an ORV plan, particularly those elements that address outreach and education.

Funding was approved for developing a *predator management plan* in 2007. The plan will address native and non-native predators; specifically, those that prey on federal and state-listed species. The U.S. Department of Agriculture, Wildlife Services in Raleigh, North Carolina, will develop the plan and associated environmental assessment in cooperation with the National Park Service.

A *special use permit* is required for activities at Cape Hatteras National Seashore that provide a benefit to an individual, group, or organization, rather than the public at large, and that require some degree of management from the NPS to protect park resources and the public interest. Examples include: religious ceremonies, weddings, fishing tournaments, surfing tournaments, commercial filming, bike tours, marathons, car rallies, and public speeches and assemblies. Permit fees vary and are generally in a range between \$100 and \$500. However, an additional fee is charged for any activity that requires NPS personnel participation or monitoring, or that creates extraordinary administrative work. The full cost is charged for restoration of park resources including litter cleanup (NPS ndb).

The Seashore issues *permits for operations of concessioners* in the park, such as a horseback ride operation; instruction for surfing, kite surfing, and surf fishing; or kayak tours. These permitted activities are subject to the supervision of the Superintendent. In addition to the general guidelines of the permit, there are some additional provisions regarding liability, visitor use, and impacts to the park.

An *ethnographic study* for Cape Hatteras National Seashore was completed in May 2006. The study looked at the eight villages in the Seashore that reflect the nearly 300-year history and culture of the Outer Banks to support the park in interpretation of its cultural resources, stewardship of ethnographic resources in the park, and community relations with the villages. Archival/documentary research and ethnographic fieldwork was completed as part of the study to further socio-cultural understanding of the villages adjoining the Seashore.

The *2004 Hurricane Plan* developed by the NPS Outer Banks Group sets forth objectives of protecting visitor and employee health and safety; protecting visitor and employee property; protecting and securing park resources, facilities, and property; assisting surrounding agencies and communities; and resuming normal park operations as soon as possible after a storm event (NPS 2004ak). The plan sets forth an Incident Command System (ICS) that is responsible for managing most large planned and unplanned events as well as emergencies within or involving the Outer Banks Group. Included in the ICS is a Hatteras Island Division Supervisor, who is to supervise all operations in the Hatteras Island District.

Cape Hatteras National Seashore is currently preparing a *transportation study on Ocracoke Island*, which includes the evaluation of a high-speed passenger ferry to Ocracoke. The transportation study was scheduled to be completed by late 2005, but is still currently under development. It is expected that a tram system will be in operation in Ocracoke Village by summer 2007. The high speed ferry, which would be a private sector passenger shuttle, is still in discussion and not yet confirmed.

In cooperation with the Virginia Institute of Marine Science, Cape Hatteras National Seashore has conducted *research for assessing natural resource impacts from ORV use at the Seashore*. A cooperative agreement between the NPS and the Institute guided this research and called for a literature review and ecological assessment. These studies included conducting a bibliographic search of previous scientific research on impacts of ORV use on ecosystems and their components as the first phase. The second phase assessed impact to the primary dune and beach communities to determine through scientifically

defensible and established methods, any correlation between highly disturbed or unhealthy communities and ORV activities at the Seashore. The results of these studies are being considered during the development of an ORV management plan (NPS 2001b).

Other recreational activities will be considered during the development of an ORV management plan. Recreational users access the Seashore for shelling, sun bathing, and walking, to name but a few activities both with and without ORVs. Activities also include local bird watching clubs that use ORVs to access birding areas, as well as other birdwatchers that access the Seashore by foot. Local bird watching groups conduct tours of the area using ORVs. These tours, which start in Buxton, are not sponsored by the Seashore, but are advertised in the Seashore.

Storms and other weather events, part of the dynamic Cape Hatteras National Seashore ecosystem, must be factored into any planning efforts that occur at the Seashore. A single storm event can dramatically change the face of the landscape at the Seashore, and any management measure put into place should be adaptive to the changing environment.

Annual Monitoring

Cape Hatteras National Seashore conducts annual monitoring of piping plover, American oystercatcher, and colonial waterbirds. Management of piping plover at the Seashore consists of locating breeding plovers and nests, protecting territories and nests, and monitoring nests and broods. The 2006 report of piping plover activities at the Seashore states that fledging rates remain well below what the USFWS believes is necessary to sustain or rebuild a piping plover population at the Seashore and the reduced number of breeding piping plover at the Seashore is a dire situation. Six breeding pairs of piping plover were documented at Cape Hatteras National Seashore during the 2006 breeding season. This represents three more pairs than found in 2005, and the most known pairs since 1999. Since 1989, the productivity rates for piping plover have ranged from 0.2 to 1.3 fledglings per breeding pair. In 2006, there were 0.50 fledglings per breeding pair. This is below the level set forth in the USFWS federal recovery plan of 1.5 fledglings per breeding pair. This low productivity rate is below what the USFWS believes is necessary to sustain or rebuild the piping plover population at the Seashore (NPS 2007c). Data collected from these surveys will be used to help determine the potential impacts of an ORV management plan on the birds at the Seashore.

The Seashore has monitored American oystercatcher for the past six years. The 2002 report of American oystercatcher activities is the most recent available. In 2002, 31 pairs of oystercatchers produced 48 nests. Of these, 10 nests (21%) hatched and 38 nests (79%) were unsuccessful. Overall productivity was 0.29 fledglings per breeding pair. Of the 38 unsuccessful oystercatcher nests, 12 (or 32%) were known to have been lost to predation. This includes 11 clutches lost to fox and one lost to an unknown predator. In 2002, 39 of the 48 nests were located in areas normally used by ORVs. Of these, seven nests (18%) successfully hatched and five nests produced fledglings. Six (67%) of the nine oystercatcher fledglings at Cape Hatteras National Seashore were found in areas seasonally closed to ORV traffic. The Southeastern Shorebird Conservation Plan (USFWS 2004) lists the American oystercatcher as a species of concern. Data collected from these surveys will be used to help determine the potential impacts of an ORV management plan on the birds at the Seashore.

Since 1997, the Seashore has surveyed colonial waterbird activity. The 2006 survey found 13 active colonies at the Seashore, with one on Bodie Island, 10 on Hatteras Island and two on Ocracoke Island. This survey did not provide productivity levels for various species of colonial waterbirds, but concluded that productivity during the 2006 season was low in terms of nest numbers and nest success. Possible

reasons noted for lack of success were raccoon and feral cat colonies located in the area of the colonial waterbird activity, as well as human disturbance (NPS 2006d).

The Seashore lies near the northern edge of nesting sea turtles and conducts annual monitoring of sea turtle nesting. Non-breeding sea turtles can be found off-shore at the Seashore during much of the year. The North Carolina Wildlife Resources Commission issues the Seashore a permit for managing the turtle population yearly, under the authority of the USFWS. In 2006, ocean beaches of Cape Hatteras National Seashore were patrolled daily from May 15 to September 15 in search of turtle crawls and nesting activity. After September 15, the beaches were surveyed through November 15 two to three times per week for possible late nests or hatchling emergence events from possible missed nests. Volunteers in the Park (VIPs) and park staff monitored approximately 55 miles of beach covering Bodie, Hatteras, and Ocracoke Islands. A total of 149 activities were documented of which 76 were confirmed nests, 8 were digs³, and 65 were false crawls. Two species were known to have nested within the park with a total of 72 loggerhead nests and 4 green nests. No leatherback nests were documented in 2005 or 2006. Twenty-three nests and digs were lost to storm activity either before hatching or before a post-hatching excavation could take place to confirm species and egg numbers. The report also documents violations by ORV drivers who disregarded posted closures and states that more staff would be needed to monitor closures and direct traffic (NPS 2007d). Data collected from these studies will be used to help determine the potential impacts of an ORV management plan on sea turtles at the Seashore. Any ORV management plan must provide for the protection of listed species.

The Seashore also surveys for seabeach amaranth. In 2006, a total of 27 recorded survey hours were spent in the months of August and September surveying, on foot, specifically for seabeach amaranth. More hours were actually spent in the field than recorded, as other field work required staff to be in the historic and potential sites during which time no additional plants were observed. All historic sites and potential habitat at Cape Hatteras National Seashore was surveyed. This is the first growing season on record since 1994 that no plants were located (NPS 2007e).

OTHER FEDERAL PLANS, POLICIES, AND ACTIONS

The *U.S. Army Corps of Engineers dredges to maintain the Oregon Inlet Channel*. Annual maintenance dredging of this area has occurred to remove sand deposited in the channel since previous dredging. During the maintenance dredging, a section of shoreline on Cape Hatteras National Seashore at Bodie Island is temporarily closed for safety (NPS 2003e). The turbulent inlet still requires regular dredging to maintain a safe navigation channel, and the lands around the inlet require careful management in accordance with their environmental sensitivity. Due to the long-term maintenance needs, the NPS, U.S. Army Corps of Engineers, NOAA - Fisheries, and USFWS met in 2004 to begin work on a long-term maintenance management plan for the federal navigation channel and EIS that could result in multi-year permits to the Corps of Engineers from the NPS and USFWS, as opposed to the current condition of requiring permits each time dredging occurs. The proposal aims to provide for both safe navigation and protection of resources and public values of the Seashore and Pea Island National Wildlife Refuge. The proposed maintenance management plan would establish standard operating procedures and adaptive management strategies to improve operational efficiencies and eliminate annual issuance of permits. The development of a plan and the resulting operations would be considered a major federal action significantly affecting the human environment, and would require compliance with NEPA (NPS 2004c).

³ “Dig” refers to the process of sea turtles using their flippers to dig a hole to lay their nests. As used above, a dig is an areas that was dug for a nest but not used as a nest.

Also included in the plan would be mitigation measures to protect the habitat at Bodie Island spit. The U.S. Army Corps of Engineers has proposed mitigation for wetland loss through the creation of low spots to collect water and create ephemeral and tidal pools; however, exact mitigation measures have yet to be implemented. Although an EIS was being planned for this project, recent communications between the NPS and USACE indicate that an EIS may not be prepared and this project may not be carried forward (pers. comm. T. Broili, CAHA, L. Gutman, The Louis Berger Group Inc., July 12, 2007).

ORV management activities at Cape Hatteras National Seashore need to account for the USFWS *Piping Plover Atlantic Coast Population Recovery Plan*. This population of piping plovers was listed as threatened in 1986 and has increased from approximately 800 pairs to almost 1,350 pairs in 1995. However, pressure on Atlantic Coast beach habitat from development and human disturbance is pervasive and unrelenting, and the species is sparsely distributed. Increased visitation to Atlantic coast parks, which includes increased ORV use, is cited as one of the many reasons the piping plover was listed. Increased visitation is a continuing threat. Seashore compliance with the recovery plan requires the NPS to:

- manage piping plover populations and breeding habitat to maximize survival and productivity;
- monitor and manage wintering and migration areas to maximize survival and recruitment into the breeding population;
- undertake scientific investigations that will facilitate recovery efforts;
- develop and implement public information and education programs; and
- review progress towards recovery of the species annually and revise recovery efforts as appropriate (USFWS 1996).

Additionally, the ORV management plan must consider the USFWS *Recovery Plan for the Great Lakes Piping Plover*. The Great Lakes population was listed as endangered under provisions of the Endangered Species Act on January 10, 1986. Critical habitat was designated on the Great Lakes breeding grounds on May 7, 2001, and for all populations of piping plovers on the wintering grounds on July 10, 2001. The Great Lakes population had declined from a historic size of several hundred breeding pairs to 17 at the time of listing. From 1986 through 2002, the population fluctuated between 12 and 51 breeding pairs, with breeding areas remaining largely confined to Michigan. The restricted breeding range of this population creates a gap in the distribution of piping plovers across North America, with the Great Lakes population isolated from the other breeding populations (Atlantic and Northern Great Plains). Seashore compliance with the recovery plan requires the NPS to:

- protect the Great Lakes piping plover breeding population and manage breeding habitat to maximize survival and fecundity;
- protect wintering piping plovers and manage habitat to promote survival and recruitment;
- identify and protect migration habitat outside of wintering range;
- conduct scientific research to facilitate recovery efforts;
- develop and implement public education and outreach;

BACKGROUND

- develop partnerships and additional funding mechanisms;
- develop emergency methods to prevent extirpation; and
- review progress toward recovery and revise recovery tasks as appropriate (USFWS 2003b).

The *USFWS and the National Marine Fisheries Service recovery plans for the U.S. population of Atlantic green, hawksbill, leatherback, Kemp's ridley, and loggerhead sea turtles* must be considered when drafting an ORV management plan. Each of these species is listed and the Seashore must comply with the individual recovery plans (NMFS 1991 a and b; USFWS 1991 a and b; NMFS 1992; USFWS 1992 a and b; USFWS 1993).

Implementation of an ORV management plan would consider the *Marine Mammal Recovery Efforts of the National Marine Fisheries Service*. The National Marine Fisheries Service Office of Protected Resources is charged with implementing the Marine Mammal Protection Act and the Endangered Species Act with respect to marine mammal species under the National Oceanic and Atmospheric Administration Fisheries jurisdiction: whales, dolphins, porpoises, seals, and sea lions. As part of the Marine Mammal Protection Act mandate, the Office of Protected Resources works in collaboration with the National Oceanic and Atmospheric Administration Fisheries Regions and Fisheries Science Centers to develop and implement a variety of programs for the protection, conservation, and recovery of marine mammals. The Office of Protected Resources also establishes cooperative agreements with states regarding marine mammal resources, identifies important research needs to collect appropriate information for management decisions, and administers the activities of the Marine Mammal Health and Stranding Response Program (NOAA nd).

Located south of Ocracoke Inlet, *Cape Lookout National Seashore* also developed an interim protected species management plan/EA. Cape Lookout National Seashore's interim protected species management plan/EA will guide management practices for the protection of special status species occurring at the Seashore until a long-term ORV management plan/EIS and regulation is developed. Cape Lookout National Seashore is developing a long-term ORV management plan/EIS. This plan/EIS is being developed during the same timeframe as the Cape Hatteras National Seashore ORV Management Plan/EIS, and will cover similar issues.

STATE AND LOCAL PLANS AND ACTIONS

The North Carolina Wildlife Resources Commission is responsible for publishing the *Handbook for Sea Turtle Volunteers in North Carolina* (NCWRC 2006). The handbook provides guidance to volunteers in conducting biologically sound management projects to benefit sea turtles and to help ensure compliance with laws pertaining to rare and endangered species at all levels of government. This guidance includes descriptions to aid volunteers. An annual permit is issued by the North Carolina Wildlife Resources Commission under the authority of the USFWS and USFWS Recovery Plans referenced.

The North Carolina Department of Transportation (NCDOT) has *various projects related to NC-12 and other Outer Banks access issues*. The NCDOT is considering some long-term projects in response to the changing physical landscape of the area such as a bridge from Avon to Buxton, which is a possible area for a future inlet. The Outer Banks Task Force has developed a long-term management plan for NC-12 that would be considered during the development of an ORV management plan. NC-12 connects the communities located within Cape Hatteras National Seashore to the mainland of North Carolina. Island

residents depend on the roadway for off-island community services, such as hospitals, emergency response, and waste collection. NC-12 is also the primary evacuation route for all permanent and temporary residents on the island when severe weather is approaching. Storms frequently cause the ocean to overwash NC-12 and deposit large quantities of sand over portions of the roadway. The storms sometimes damage NC-12, which interrupts access and services to the island and places hardships on island residents. The worse the damage to NC-12, the longer it takes the NCDOT to repair the roadway. Longer repair times increase delays in using NC-12 and increase the hardship to residents needing access through the island and to the mainland. NC-12 must be continually repaired and maintained to prevent permanent loss of access on Hatteras Island. To address these issues a task force was formed comprising the NCDOT, NPS, U.S. Army Corps of Engineers, USFWS, National Marine Fisheries Service, Federal Highway Administration, Dare and Hyde Counties, and the North Carolina Department of Environment and Natural Resources. The mission of this task force is to develop a long-range protection and maintenance plan for the transportation system on the Outer Banks. As part of this task force, hot spots for erosion have been identified and include Northern Pea Island, Sandbag area, Rodanthe 'S' curves, Buxton/Canadian Hole, Hatteras Village, and Ocracoke (OBTF 2003).

The *erosion of sand* by longshore currents, wave actions, and storms can dramatically change a beach. To maintain a beach that would naturally move and change in the same place and configuration, a sand-replacement process called "beach nourishment" is often used to maintain the necessary amount of sand on a particular stretch of coastline. The Outer Banks is experiencing very high rates of erosion that are affecting one of the state's premiere tourist attractions. The 93 miles of shoreline from Cape Hatteras National Seashore to the Virginia line average 4.7 feet of erosion per year. Annual rates for selected segments of developed beachfront property can exceed 10 feet per year.

The NCDOT is proposing to build *a new bridge to replace the existing Herbert C. Bonner Bridge*, originally built in the 1960s, over Oregon Inlet before the end of its reasonable service life. Four corridors were evaluated for the replacement bridge. The NCDOT and a multi-agency merger team studied the four bridge corridors before two of the corridors were selected for more detailed evaluation. The four corridors were evaluated for their potential impacts to natural resources, including federally protected species, wetlands and submerged aquatic vegetation (SAVs), in addition to being evaluated for costs, construction method, and compatibility with Pea Island National Wildlife Refuge and NPS plans and policies. All of the corridors begin on Bodie Island at the northern endpoint of the existing bridge near the Oregon Inlet Marina and the U.S. Coast Guard Station. NC-12 on Hatteras Island is regularly threatened by shoreline erosion and overwash. Three areas, known as "hot spots" are especially vulnerable. A new bridge located in Corridor Alternative 1 would connect existing NC-12 from the tip of Bodie Island to south of the first hot spot, known as the Canal Zone. A 14-mile bridge in the second Alternative Corridor would run from the tip of Bodie Island south to Rodanthe and would bypass all three "hotspots." The North Carolina Department of Transportation and the Federal Highway Administration released a supplemental draft EIS regarding the replacement of the Herbert C. Bonner Bridge across Oregon Inlet in September 2005, with a supplement to the EIS being released in 2007 (OBTF 2005, FHWA 2007). The supplemental EIS considers two replacement bridge corridors, with the 2007 supplement evaluating two additional alternatives. The bridge is planned in the NCDOT 2007 – 2013 Transportation Improvement Program (FHWA 2007).

The development and implementation of an ORV management plan would consider the *planning efforts of Dare and Hyde Counties*. In Dare County, the County Planning Board serves as an advisory board to the Dare County Board of Commissioners. In compliance with the North Carolina Coastal Area Management Act, Dare County has prepared guidance and policies for land use development, known as the land use plan (Dare County 2003), which provides local elected officials with a set of guidelines for development patterns and other land use issues that are important to the community. Policies on various topics and implementation activities for the policies are included in the land use plan such as policies on

water quality, residential and commercial development patterns, beach access, oceanfront and estuarine development, stormwater management, wastewater, and transportation. The latest version of the Dare County Land Use Plan was certified by the North Carolina Coastal Resources Commission in July 2003, and must be updated every five years. The land use plan applies to the unincorporated portions of Dare County, while each of the municipalities in Dare County adopts its own plans for its respective planning jurisdiction. The Dare County Land Use Plan works in conjunction with the zoning ordinance, as well as the CAMA. Except for the Mainland and Wanchese, the remainder of unincorporated Dare County is zoned. The villages of Duck, Collington, Roanoke Island, Avon, Buxton, and Hatteras all have detailed zoning maps that have been adopted over the years. The villages of Rodanthe, Waves, Salvo, and Frisco are zoned S-1, which is a minimal zoning district that allows all uses but does establish some building setbacks and height limitations. In addition, the county adopted a Special Environmental District (SED-1) for the Buxton Woods maritime forest. This zoning district establishes special standards for land clearing and vegetation removal that are intended to protect the vegetative canopy of the Buxton Woods forest (Dare County 2003).

In 2003 the Outer Banks Visitor Bureau conducted a study called looked at the relationship between the number of people requesting information about the Outer Banks in Dare County versus the actual number of people that traveled to the area, known as the conversion rate. The *Outer Banks Visitor Bureau Conversion Study's* goal was to determine the effectiveness of the Outer Banks marketing material. The conversion study found that the conversion rate, or the number of people who requested information and then visited the Outer Banks, dropped in 2000 from 44% to 33% but that there was beneficial economic impact from the visitation campaign during those years. The study also reported a high number of people who received materials and did not visit the Outer Banks in that year but planned to make the trip in future years (SMR 2003).

The Hyde County Land Use Plan, written in 1986, has seen updates in 1992, 1997, and 2006. Hyde County Land Use Plan is required as part of the state of North Carolina's Coastal Zone Management Act and analyzes land development in the area to plan for future uses. The Hyde County Land Use Plan sets forth the following vision for the Island of Ocracoke: "The vision of Ocracoke Island in the 21st century is a community that ensures livability and economic viability by offering the discerning vacationer a preferable alternative to the over commercialized beach destinations while providing improved attention to Ocracoke residents. The mission of county government should be to facilitate and support:

- Efforts to maintain the historic village assets.
- Efforts to preserve traditional native occupations and crafts including hunting and commercial fishing.
- Efforts to enhance the Island shopping opportunities with small locally owned shops and businesses.
- Efforts to provide affordable housing.
- Cooperative efforts with the community, NPS, and DOT to maintain access to the Island and provide necessary amenities. Ocracoke and Mainland should emphasis access.
- Support village craftsmen." (Hyde County 2006)

LEGAL FRAMEWORK FOR DEVELOPING AN OFF-ROAD VEHICLE MANAGEMENT PLAN

The development of an ORV management plan at Cape Hatteras National Seashore is partially the result of two petitions for rulemaking submitted to the NPS. The first petition was submitted on December 9, 1999, on behalf of the Bluewater Network and 70 environmental organizations. This petition requested an immediate ban on the use of all-terrain vehicles, dune buggies, sand buggies, and other four-wheel drive

vehicles on all off-road areas in the national park system. This petition was servicewide, and while it included Cape Hatteras National Seashore, it was not specific to the Seashore. Petitioners stated that current legal off-road use of all-terrain vehicles, dune buggies, sand buggies, and four-wheel drive vehicles in the 23 national park units fails to leave parks “unimpaired for the enjoyment of future generations” (Bluewater Network 1999a). Furthermore, the Bluewater Network stated that one 1999 survey of ORV use in the parks found 40 park units (including Cape Hatteras National Seashore) with high amounts of illegal use. To address this, the petition requested the NPS issue an advisory to increase the enforcement of the present rules (Bluewater Network 1999a).

The second petition was specific to actions occurring at Cape Hatteras National Seashore. On June 7, 2004, a Petition for Rulemaking Governing Off-Road Vehicle Use in the Cape Hatteras National Seashore was submitted to the Secretary of the Department of the Interior, the Director of the NPS, and the Superintendent of the Outer Banks Group by the National Parks Conservation Association, the Wilderness Society, and the Natural Resources Defense Council, also referred to as the petitioners. This petition requested that the NPS promulgate regulations regarding the use of ORVs in the Cape Hatteras National Seashore. The petitioners first stated that the informal authorization of ORV use at the Seashore violates the federal Endangered Species Act because it does not conserve endangered and threatened species and was implemented without consultation for all affected species with the USFWS. Second, the petitioners stated that the absence of a formal, promulgated ORV management plan violates executive orders and federal regulations regarding ORV use in the national park system. The third claim stated that the informal authorization does not protect the Seashore’s natural resources and, consequently, violates the NPS Organic Act of 1916, the General Authorities Act of 1970, the Cape Hatteras National Seashore enabling legislation, and various NPS management policies (NPCA 2004).

The petition requested the NPS take the following five actions (NPCA 2004):

- (1) initiate the Endangered Species Act Section 7 formal consultation process with the U.S. Fish and Wildlife Service, and ensure that interested parties, including the petitioners, are kept informed of any and all developments in the consultation process;
- (2) promptly develop and promulgate, by special regulation, a formal ORV management plan for Cape Hatteras National Seashore;
- (3) close any and all ORV areas or routes at the national Seashore where ORV use will cause or is causing adverse effects to the soil, vegetation, wildlife, or wildlife habitat, as required by Executive Order 11989;
- (4) immediately enlarge the size of the areas at Cape Hatteras National Seashore that are closed to ORVs in order to protect endangered and threatened species pending the enactment of a formal, promulgated ORV management plan; and
- (5) make public any and all records and information related to ORV use at the Seashore.

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IMPACT ISSUES AND TOPICS

Issues associated with implementing an ORV management plan at Cape Hatteras National Seashore were identified by park staff during the internal scoping meeting using the NPS Environmental Screening Form (appendix B). The use of the Environmental Screening Form is an iterative process during a project. As additional information becomes available, the Environmental Screening Form may be updated. The issues identified are discussed below.

GEOLOGIC RESOURCES

Park staff expressed concerns regarding the impacts of ORV use on beach escarpments, creating a potential hazard to park visitors. Escarpments are a characteristic of beach erosion formed from wave energy cutting into the beach face during storms. The face of the escarpment may be several inches or several feet in height. Height can be a function of the wave energy and/or the near shore bathymetry. Escarpments occurring along Cape Hatteras National Seashore beaches result from shoreline currents, wave patterns, and accretion and erosion. The size and location of near shore sandbars vary each season and can funnel or break wave energy; the seasonal changes in the sandbars result in corresponding seasonal changes in beach profiles. As a rule, escarpments are seen on steeper beaches. They present a safety hazard when ORVs driving along the edge of tall escarpments cause the escarpment to collapse, which can result in a vehicle rollover even at very slow speeds. Along with the issue of human safety, the collapse of escarpments can also accelerate erosion.

Issue Statement: The use of ORVs at the Seashore may be hazardous in areas with beach escarpments due to the risk of vehicle rollovers and other accidents, and the potential for ORVs to cause the collapse of escarpments and accelerate erosion.

AIR QUALITY

ORV users may leave vehicle engines idling for a variety of reasons (e.g., to keep on the air conditioning in the summer or heater in the winter). Idling engines could possibly impact local air quality; however, Ranger observations indicate that most drivers do leave their car engines off once their desired location is reached. In addition, driving on sand may be less fuel-efficient and, therefore, more polluting than driving on a hard surface.

Issue Statement: Cape Hatteras National Seashore is classified by the U.S. Environmental Protection Agency as in attainment for all six criteria pollutants. Despite being in compliance, the driving and idling of ORVs on the Seashore could create localized increases in air pollution potentially degrading the visitor experience.

SOUNDSCAPES

Vehicular noise, although currently a component of the soundscape at the Seashore, has the potential to impact other recreational uses, such as bird watching or enjoying the solitude and natural soundscape of the Seashore. In addition to impacting soundscapes in relation to visitor enjoyment, vehicular noise could create unsuitable habitat for Seashore wildlife. Impacts related to soundscapes could occur wherever ORVs are allowed on the oceanside or soundside. Actions within Cape Hatteras National Seashore must preserve the natural soundscape consistent with the guidance in Director's Order 47, Sound Preservation

and Noise Management, and NPS *Management Policies 2006* (NPS 2006b). Section 8.2.3, Use of Motorized Equipment, of the NPS *Management Policies 2006* says:

The variety of motorized equipment—including visitor vehicles, concessioner equipment, and Park Service administrative or staff vehicles and equipment—that operates in national parks could adversely impact park resources, including the park’s natural soundscape and the flow of natural chemical information and odors that are important to many living organisms. In addition to their natural values, natural sounds (such as waves breaking on the shore, the roar of a river, and the call of a loon) form a valued part of the visitor experience. Conversely, the sounds of motor vehicle traffic, an electric generator, or loud music can greatly diminish the solemnity of a visit to a national memorial, the effectiveness of a park interpretive program, or the ability of a visitor to hear a bird singing its territorial song. Many parks that appear as they did in historical context no longer sound the way they once did.

The Service will strive to preserve or restore the natural quiet and natural sounds associated with the physical and biological resources of parks. To do this, superintendents will carefully evaluate and manage how, when, and where motorized equipment is used by all who operate equipment in the parks, including park staff. Uses and impacts associated with the use of motorized equipment will be addressed in park planning processes. Where such use is necessary and appropriate, the least impacting equipment, vehicles, and transportation systems should be used, consistent with public and employee safety. The natural ambient sound level—that is, the environment of sound that exists in the absence of human-caused noise—is the baseline condition, and the standard against which current conditions in a soundscape will be measured and evaluated.

Issue Statement: ORV use at the Seashore could create noise that impact Seashore visitors, wildlife, and wildlife habitats by altering the natural quiet and natural soundscape of the Seashore.

WATER RESOURCES

Water Quality

Incidents of ORVs being overtaken by the tide have resulted in submersion of some vehicles. Oil, gas, and other materials can escape from the vehicle into the water and could negatively impact water quality. An average of ten vehicle submersions is documented each year. An ORV management plan might include restricting access to areas where these accidents are known to occur or remedy the conditions (i.e., encourage more responsible driving through safety education) that contribute to such accidents. However, NPS experts have stated that the submersion of these vehicles does not represent a considerable impact to water quality. Aside from full vehicle submersion, leakage from fuel tanks of ORVs may pose a threat to groundwater quality over time.

Issue Statement: Off-road vehicle accidents can involve total submersion of a vehicle in the ocean and the oil/gas and other materials in the vehicle could potentially have an adverse impact on water quality. Fluids leaking from vehicles could impact water quality over time.

Marine or Estuarine Resources

Cape Hatteras National Seashore has marine and estuarine resources and activities that occur on the beach, such as ORV use, can impact them. Specifically, ORV use creates tire ruts that divert sheetflow. Flow channels occur in these ditches and the flow, and any contaminants it may carry, is directed toward

the ocean or sound, resulting in possible impacts to the resource. Tire ruts are more permanent on the soundside of the island where sediment particles are smaller and more easily compacted. The ruts on the ocean beach are more ephemeral in nature and, in the absence of vehicles, they often naturally disappear. However, ORV use compacts the subsurface beach sand, thus having the potential to impact surface drainage.

Issue Statement: ORV use at the Seashore creates ditching, which results in flow channels that direct sediment and other contaminants toward the Seashore's marine or estuarine resources.

Wetlands

The entire shoreline of Cape Hatteras National Seashore is classified as a wetland (Cowardin et al. 1979). ORV use in these wetlands could damage vegetation and impact wetland habitats. Wetlands are of particular concern on the Bodie Island spit at Oregon Inlet where habitat loss is occurring due to accretion. The terminal groin constructed at Pea Island has stopped the natural accretion process from moving south. Although Pea Island stopped moving south, Bodie Island continues to do so, filling Oregon Inlet. This has led to the maintenance dredging of the inlet by the U.S. Army Corps of Engineers. The Corps has agreed to mitigate impacts resulting from this dredging activity. The Corps has proposed reducing the elevation of the spit to create low spots and foraging habitat for piping plover. The park views this as a short-term solution. As these wetland habitats become more limited, damage from ORV use is of increasing concern at the Seashore.

In addition, ORVs often denude estuarine wetlands of vegetation when they drive/park along the soundside shoreline. Many of the interior roads (upper beach/ beach access ramps or soundside trails) cross wetlands that do not have standing water all year. When standing water is present along an ORV route, drivers often attempt to drive around the water and over adjacent vegetation. This results in wider roads, new vehicle routes, and crushed or dead vegetation.

Issue Statement: ORV could damage vegetation and impact wetland habitats.

WILDLIFE AND WILDLIFE HABITAT

Colonial Waterbirds

Cape Hatteras National Seashore supports a rich and varied avian community. The Seashore was designated an Important Bird Area by the American Bird Conservancy to reflect this diversity. Ground nesting colonial waterbirds breed along the seashore beaches, which are also heavily used for recreational activities. Nesting numbers and breeding success can help indicate the health and state of the beach resources. Colonial waterbird breeding surveys have been conducted in the Seashore since 1977 by Seashore staff, North Carolina Wildlife Resources Commission (NCWRC), and Dr. James Parnell of the University of North Carolina (NPS 2003a).

The 2003 colonial waterbird breeding survey, the most recent available, found 11 active colonies at the Seashore, the same number found in 2002. Of the colonies found, one was on Bodie Island, eight were on Hatteras Island (five on east-facing beaches and three on south-facing beaches), and two on Ocracoke Island. Species breeding on Cape Hatteras National Seashore beaches in 2003 included least tern (*Sterna antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Sterna nilotica*), as well as black skimmers (*Rynchops niger*). All are listed as species of concern by North Carolina, except for the state-listed threatened gull-billed tern. None of these species are federally listed. Breeding activity occurred between May and August. In many cases, these birds use areas already closed to the public for breeding piping

plover (*Charadrius melodus*) and American oystercatchers (*Haemaphysalis palliatus*). In other areas, fencing was erected once birds were observed exhibiting courtship behavior or nests were found. As in recent years, most of the colonies were comprised of small groups of least terns. The largest and most diverse colony was located at Ocracoke Inlet flats. Park-wide nest counts were not conducted in 2003; however, counts were made of some individual colonies (NPS 2003a).

Many of the nesting colonies located on narrow beaches were in areas of high visitor use. Disturbance of colonies can lead to nesting failure and the *North American Colonial Waterbird Conservation Management Plan* recommends a minimum buffer of 50 yards to the nearest nest. Four least tern chicks between Ramps 23 and 30 and seven black skimmer chicks at Ocracoke Inlet were found dead or dying in vehicle tracks during the 2003 breeding season. In all cases the chicks were found adjacent to, but outside of, posted closures. Chicks become mobile after hatching, increasing their vulnerability. In addition, two American oystercatcher chicks were found crushed in tire tracks in 2003. Chick mortality from beach vehicles was not documented before 2003.

Incidents of visitors entering posted bird closures at the Seashore were documented between mid-April and September of 2003. These closures not only represented sites where colonial waterbirds nested but also where the American oystercatcher and the federally threatened piping plover nested. Most illegal entries were not witnessed but were documented based on vehicle or pedestrian tracks left behind. Numbers are conservative since some individual records involved more than one vehicle or pedestrian. A total of 105 incidents of ORVs entering posted bird closures were recorded in 2003. This number represents a substantial increase from the 52 and 63 incidents recorded in 2001 and 2002, respectively. Of the 105 incidents reported, 27 occurred on Bodie Island, 56 on Hatteras Island, and 22 on Ocracoke Island. These incidents required, at a minimum, repairs to twine strung between posts but often involved replacing broken posts and signs. In one incident, 43 closure signs were run over at Cape Point. At a Hatteras Inlet bird closure, vehicle tracks came within 10 feet of an oystercatcher nest (NPS 2003a).

Issue Statement: Documentation has shown that ORV use in the Seashore can impact colonial waterbirds and their habitat through direct conflict with the species or their habitats and other disturbance.

Wildlife

A resource management division has been in place at the Seashore since 1995, but research and monitoring efforts have increased in the past few years with an emphasis on sea turtles, seabeach amaranth, and piping plover. A recent study at the Seashore researched ghost crab as an indicator for determining ecosystem health, since it may show the impacts of ORVs and other recreational uses. The study considered the impacts of ORVs on ghost crab population densities and recovery rates in relation to ORV use and usage regulations. This study concluded that ORVs and high-energy weather events impact ghost crab populations at the Seashore, with ORVs reducing the ability for ghost crabs to inhabit the area and high-energy weather events changing the dynamics of the population, allowing more ghost crabs to inhabit the area. Ghost crabs are a top predator of the beach ecosystem and provide a simple method of analyzing the health of ecosystems (VIMS 2004).

Seashore staff expressed concerns that the direct conflicts between ORVs and wildlife could result in the loss of habitat due to physical disturbance and noise from ORV use.

Issue Statement: ORV use along the Seashore disrupts and/or causes a loss of habitat in high use areas. Habitat loss due to operation of ORVs could occur indirectly as a result of the noise and disturbance from this activity.

Coastal Barrier Ecosystem and Processes

Seashore staff expressed concerns that looking at single resource issues would not capture the whole picture of the natural processes that occur at the Seashore. At Cape Cod National Seashore, research was conducted for five years to determine the ecologic and geomorphic effects of ORVs on coastal ecosystems. The Cape Cod study looked at beach, dune, and salt marsh and tidal flat areas. The following conclusions were reached about each habitat type:

- **Beach:** The intertidal ocean beach was found to be the most naturally variable and resistant to long-term vehicle impacts. Because the area underwent constant change from tidal cycles as well as from annual and storm-induced beach cycles, the analysis of ORV impacts was difficult and of questionable reliability. The only long-term conclusion that could be reached for the beach area was that natural changes appeared to outweigh vehicle effects on this particular beach. In addition to the intertidal areas, the study looked at the high beach, or berm, areas. Impacts were more obvious in these areas than on the intertidal beach face. Since only the highest tides influence the high beach area, ORV use caused serious impacts evidenced by ruts.

The most sensitive zone identified in the high beach zone was the drift-line zone (an area of organic material deposited on the backshore during spring tides or storms). ORV use impacts the integrity of the drift line by breaking up and scattering this material on the beach, as well as decreasing organic decay that takes place in the drift-line ecosystem. The study found that vehicle traffic can crush and kill seedlings of annuals and young perennials associated with the drift-line, stating that the effect of 100 passes does not differ significantly from the effect of 10 passes. Even limited passes cause the break up of drift line zone deposits and kill all the vegetation.

Based on the findings, the study recommended ORV use be restricted, whenever possible, to the outer ocean beach, seaward of the drift-line zone and the expanding dune edge. The study suggested a variety of management measures for ORV use in this area including: prohibiting driving in the upper backshore areas, closing beaches that are so narrow as to force drivers to drive along the toe of the dune at high tide, closing beaches to vehicles during periods of exceptionally high tides, and protecting shorebird nesting areas.

- **Dunes:** Vehicle impacts on dunes varied depending on where they occurred on the dune. In some instances, continuous ORV use can induce or accelerate erosion and dune scarping, and prevent the healing of erosion scarps by inhibiting the colonization of vegetation that would normally occur in the foredune (the area of the dune expanding on to the beach). In other areas of the dunes, wheel disturbance that changes the sand composition inhibits the growth of rhizomes, which was documented with only 100 vehicle passes. Studies of the dune area also observed the time plant communities took to recover from vehicle impacts and found no difference in recovery rates between the sites that received heavy use and sites that received moderate use. However, the study found that when ORV use was removed, some dune communities recovered almost immediately, particularly if the final vehicle pass occurred before the end of the growing season. Recovery rates varied with location on the dune. Vegetation in the foredune recovered more rapidly than vegetation in the back dune. Management actions such as fencing and replanting were suggested to address these impacts.

Another noted impact was the lowering of the dune profile caused by the physical forces applied to the sand by climbing or descending wheels that resulted in the downward transport of sand. This transport of sand results in dune erosion and migration. The study suggested preventing vehicle entry into previously closed dune areas, planting ORV tracks when necessary, building

wooden ramps to provide access to the beach through the dunes, providing specific orientation of dunes and designation of dune routes, restricting traffic to marked routes, controlling and maintaining vehicle trails, closing off deteriorated dune routes and repairing dune damage, closing sensitive habitats, using more educational outreach such as signage, and using the concept of “no carrying capacity” on dunes for ORV planning.

- **Salt Marshes and Tidal Flats:** The salt marshes and tidal flats, which host a variety of marine and coastal organism and supply the primary productivity to the estuarine and nearshore marine food webs, are the most affected by vehicle impacts. In these areas, the study focused on marsh edge, high salt marsh, and the upper sand flats. The study found that the marsh edge is more susceptible to impact because it marks the easiest, and generally safest, ORV route. ORV use in marsh edge habitats disrupts the marsh edge and adjacent dunes. While the study found that ORV impacts in the high salt marsh were substantial, the zone was not extensively used for driving, and the study suggested that all traffic be restricted from the high marsh. The upper sand flats were identified as one of the most seriously affected regions in the intertidal environment and the level of vehicle use on certain sections of the flats prevented the natural development of salt marshes. In the upper sand flats, the study indicated that 25 passes were enough to crush and kill all existing plants. Because of these impacts, the study authors asserted that, in this particular environment, ORV use of salt marshes, intertidal flats, and the marsh/dune border causes a severe environmental impact that warrants a complete ban on vehicles in such areas. These environments cannot tolerate even minimal ORV use, and the study recommended complete protection of salt marshes and tidal flats with the implementation of educational programs describing the need for protecting the intertidal environment and the damaging effects that vehicles have in such habitats (UMASS 1979).

The study also noted that scientific data should be gathered for each individual region. The findings at Cape Cod cannot unilaterally be applied to all coastal areas. The study stated that individualized data will allow each region to tailor its management program. Cape Cod was concerned with the potential negative impacts ORVs could have on the coastal barrier ecosystem at the Cape Cod (UMAS 1979).

Issue Statement: ORV use at Cape Hatteras National Seashore may affect ecosystem processes and the dynamic nature of the coastal barrier ecosystem, such as increasing erosion and slowing down natural succession.

Unique or Important Fish Habitat

The Seashore staff expressed concern that ORV use may be impacting unique or important fish habitat, specifically on the soundside. More data is needed to determine if this would be an area of impact to consider when developing an ORV management plan at Cape Hatteras National Seashore.

Issue Statement: ORVs may impact unique or important fish habitat if driving is allowed in wetland areas or other areas of the Seashore where this habitat occurs.

RARE, UNIQUE, THREATENED, OR ENDANGERED SPECIES

Federally Listed Threatened and Endangered Species

Cape Hatteras National Seashore is home to federally threatened and endangered species year round. Due to its location, the Seashore is at the southern end of the habitat range for some species and the northern end for others. In addition to some species being year-round residents, human visitation has increased,

increasing the possibility for conflicts between visitor use and listed species. The Seashore is used by three populations of federally protected piping plover, both the Great Lakes and Northern Great Plains populations for wintering, and the Atlantic Coast population for breeding and migration. Piping plover are known to exhibit site fidelity, making consistent protection of breeding sites important. Piping plover are found using the ocean and soundside of the island. The sand flats at the south end of Ocracoke Island provide ideal habitat, while habitat also develops in areas where storm overwash has occurred. Prior to 1995, there were minimal closures to protect breeding birds. After 1995, when the natural resources branch at the Seashore was established, more proactive closures were established. In 2004, this policy changed and closures were made only after a request to the Superintendent was made and granted. These closures tended to be reactive rather than proactive, occurring only when breeding activity was seen and not before. In the 2006 breeding season, closures were directed by the draft interim protected species management strategy/EA modified preferred alternative, which was developed to address species protection while a long-term ORV management plan was being developed.

The 2006 piping plover activity report at the Seashore, the most recent available, recorded the presence of six breeding pairs and four nests. Three nests successfully hatched—two at Cape Point and one at Ocracoke Inlet. The average clutch size was 3.75 eggs with a four-egg and a three-egg nest laid at Cape Point, a four-egg nest at South Beach, and a four-egg nest at Ocracoke Inlet spit. Nine eggs (60%) hatched. Three chicks survived to fledgling age. The fledgling rate was 0.50 chicks/breeding pair.

Direct or indirect human disturbance can impact piping plover breeding success. From April 1 through August 31, 2006, resource staff recorded 255 pedestrian, 47 ORV, 22 dog, and 5 horse violations of bird closures. Numbers are conservative since sites are not monitored continuously, weather erases tracks, and staff did not disturb an incubating pair or young just to document disturbance. Most illegal entries were not witnessed but documented based on vehicle, pedestrian, or dog tracks left behind. Law enforcement documented most illegal ORV entries, but not all, and therefore their violation numbers may be different than those recorded by resource staff. Pedestrian entry required visitors to lift and stoop under the string that connected all posted signs. Vehicular entry required visitors to drive through or around a sign boundary (NPS 2007a).

Seabeach amaranth, a federally listed plant species, is found in limited numbers at the Seashore. The plant is found where no disturbance from ORV driving or other activities occurs. According to the USFWS, seabeach amaranth has been eliminated from two-thirds of its historic range and one of the most serious threats to its continued existence is disturbance by ORVs. NPS believes the plant would be more widespread if there were more areas with less human disturbance.

Federally listed sea turtles (loggerhead, green, and leatherback) nest at the Seashore. The Seashore began relocating some nests in 1999 to protect them from ORV and other visitor traffic, but the U.S. Fish and Wildlife Service expressed concern that too many nests were being relocated. In response, the Seashore started to sign and close areas to protect the nests in place, rather than relocate them. The park stated that they may not have communicated to the Seashore users why this change was made, resulting in complaints from Seashore users regarding the closures to ORV use. During the 2006 breeding season, park staff noted that the public appears more accepting of sea turtle closures than those for other protected species. Threats to listed sea turtles, their nesting sites, and young include storm events, predation, pedestrian disturbance, ORV use, artificial lighting, pets, and recreational beach equipment.

Issue Statement: Unregulated or illegal ORV use at the Seashore could impact federally threatened or endangered species and their habitat, on the beach and soundside of the Seashore. Conflicts between the listed species and ORVs could create direct losses to the species through contact with the vehicles or indirect losses through loss of habitat due to noise and disturbance.

Locally Sensitive Species

In 2004, the North Carolina Wildlife Resources Commission listed the American oystercatcher as significantly rare; however, it has since been recommended that due to decreasing population number that the state's listing of the American oystercatcher be changed to special concern. The American oystercatcher is listed as a species of concern by the Southeastern Shorebird Conservation Plan, but a categorization of special concern by the state would larger indicator the species decline. The 2003 Seashore American oystercatcher monitoring report states that the breeding efforts of this species have not been successful for the past four years. Because many shorebirds do not normally have high reproductive rates, it is often difficult to reverse declines and recover rapidly (NPS 2003b).

Contributing to these low reproductive rates at the Seashore is the need for large undisturbed areas for successful breeding. Frequent human disturbance can cause the abandonment of nest sites as well as direct loss of eggs and chicks. The 2004 report, the most recent available, documented 29 pairs of American oystercatchers, one less than in 2003. To what degree human activities directly or indirectly impact nesting within the Seashore is unknown. In 2003, 27 (67%) of the 43 nests were located in areas used by ORVs. Some nests were located in established seasonal closures. Some areas were closed to vehicles when territorial behavior or actual nests were discovered. Of these, 13 nests (48%) successfully hatched and 3 nests (11%) produced fledglings. Six (86%) of the 7 oystercatcher fledglings at the Seashore were found in areas seasonally closed to ORV traffic. No nesting or fledgling successes were found in day-use areas. These beach sites are served by adjacent parking lots and have heavy pedestrian use. As in 2001 and 2002, no breeding activity was found on beaches adjacent to villages. These beaches have the highest concentrations of pedestrian beach users at the Seashore. Thirteen clutches (48%) were found in "other" sites, not classified for day use or ORV. On a day-to-day basis, these areas were exposed to the least amount of potential human disturbance. The 2004 report noted that productivity was higher at Green Island, Oregon Inlet, and Hatteras Island than at Bodie Island (NPS 2004a). The most productive area in 2004 was Hatteras Island, with 15 nesting pairs that produced 18 nests. Of these, 78% hatched, resulting in 2004 having the highest recorded hatch success rate on Hatteras Island.

In addition to habitat loss, documented cases of direct loss from ORVs running over chicks exist. Of the 28 chicks observed during the 2003 breeding season, 2 (out of a total of 20) were run over and killed by ORVs. Studies at Cape Lookout National Seashore, located south of Cape Hatteras National Seashore, indicate chicks are attracted to vehicle lights and move toward the lights and into the path of the vehicles. Seashore staff stated this occurs at Cape Hatteras National Seashore in areas where American oystercatchers are present. In 2004, natural resource staff reported 5 dead chicks, including 1 oystercatcher, found dead on the beach after being run over by vehicle traffic. In one instance, 2 least tern chicks were found dead in tire tracks where signs and posts were illegally removed, and at least 3 vehicles had driven through the nesting colony between Ramps 23 and 27. Other incidents included NPS staff observing an agitated oystercatcher pair standing over their dead chick just outside a closure on South Beach. Apparently the chick was struck by a vehicle attempting to cross the "one lane" ORV corridor between the closure and the surf. A nest with 2 least tern chicks was run over by a vehicle in an area where symbolic fencing was removed at Hatteras Inlet.

Issue: Habitat for the American oystercatcher and other locally sensitive species may be vulnerable to the operation of ORVs. Extirpation of such species from the Seashore could occur due to conflicts with ORVs or habitat loss that is a result of ORV use.

VEGETATION

Rare or Unusual Vegetation

Cape Hatteras National Seashore allows driving in a few locations on the soundside of the island. No other national seashore allows soundside driving because of the fragility of soils and vegetation. The sensitive nature of vegetation on the soundside is considered as “unusual” for this impact topic. At Cape Hatteras National Seashore, designated trails to the shore on the soundside exist, but there is no designated parking. ORVs on the soundside drive off established trails and create their own trails. This is in part due to ORVs driving around obstacles in the road where no path is present or ORVs making the existing single-lane trail wider to allow vehicles to pass. When this occurs, the vegetation on the soundside is run over and is impacted by ORV use. This activity is increasing as visitor uses such as kite boarding and windsurfing increase, making the soundside more attractive to visitors. Vegetation damage is also occurring on the oceanside in areas where the beach is narrow. In addition to directly impacting vegetation by driving over it, ORV use is contributing to erosion, further impacting the soundside vegetation. Erosion occurs because the vegetation on the soundside is a shock absorber during storm events, protecting the soundside from erosion. Once this vegetation is removed by ORV or other uses, erosion during storm events increases. This also impacts invertebrates as the soils become more compacted and less suitable for habitat.

Cape Hatteras National Seashore contains maritime forests and upper beach strand plant communities. These areas have not been classified and it is uncertain at this time if they are considered rare or unusual vegetation.

Issue Statement: Off-road vehicle use at Cape Hatteras National Seashore could impact rare or unusual vegetation by running over such vegetation and/or causing soil compaction.

Non-Native Species

Seashore staff noted the presence of non-native, invasive vegetation species in Buxton Woods and these species may have been brought in on a vehicle from outside the Seashore. Since ORV use is not limited to area residents, the potential exists for non-native, invasive species to be brought in on ORVs from other regions. Non-native species have the potential to move into the habitat of native species, preventing native species from occupying an area. ORVs could carry non-native species and introduce them into various areas of Cape Hatteras National Seashore. ORV use may also bring in non-native animal species through accidental release by owners, but it is expected that the upcoming predator management plan would address any impacts from non-native animal species.

Issue Statement: ORV use could increase the potential for establishment of non-native plants as non-native species can be brought into the Seashore on vehicles.

LAND USE

Eight villages are located within the Seashore boundaries. Berms have been constructed between the villages and the beach to protect the villages from erosion and keep water off roadways. Individuals have expressed concern that if vehicles drive behind the berms, the berms would erode faster and the villages would be negatively impacted. These concerns would be considered during the planning process for the ORV management plan.

Issue Statement: ORV operations could impact adjacent land uses by contributing to the erosion of berms that protect adjacent communities from storm events.

VISITOR USE AND EXPERIENCE

Visitor Opportunities

The Seashore's enabling legislation provides for various recreational uses. ORV use is a principal activity because it is a recreational use in itself and because it facilitates other uses such as fishing, swimming, sunbathing, birding, etc. Many other beach users, however, wish to engage in these same activities on foot and away from the presence of motorized vehicles. For those seeking a non-motorized experience, deep tire tracks can make walking difficult; passing vehicles can interfere with relaxation while sunbathing, birding, or fishing; and the site and sounds of ORVs can destroy the solitude of a natural setting. Any ORV management activities would impact all user groups by either limiting or permitting ORV access to certain areas of the Seashore.

Issue Statement: ORV use at the Seashore may impact opportunities for other visitors such as enjoying a quiet beach atmosphere or observing the wildlife.

Viewsheds and Aesthetics

The visual signs of ORV use along the Seashore such as tire ruts and markings, trash, and other signs of ORV use are apparent. These signs may have negative impacts on the viewshed and aesthetics of the area for those who want a natural and unimpacted view. While just the sight of ORVs can destroy the viewshed and aesthetics for some visitors, they also change the viewshed in terms of altering the natural landscape. ORV use impedes or destroys coastal features like wave or wind ripples in the sand, tide wrack lines, overwash deposits, wind sorted sediments, dune formation, etc. As an example, the burrows of ghost crabs, the most common beach inhabitants, are nearly absent from beaches with heavy ORV use. The vegetation line is also altered. Instead of growing in irregular natural groupings and locations, some beach plants like sea rocket are regularly seen growing in two parallel rows down a length of tire tracks. The seeds of these plants apparently become trapped in tire ruts and then germinate there. Erecting carsonite posts around closure areas for protected species from ORVs could also have adverse impacts on the views and aesthetics of the area for those who want a natural view without evidence of man-made materials.

Issue Statement: ORV use at the Seashore influences the aesthetics of the area. Visual signs of ORV use are present along the shoreline and may impact the viewshed and aesthetics at Cape Hatteras National Seashore.

CULTURAL/HISTORIC RESOURCES

Cultural Resources

Cape Hatteras National Seashore is rich with history and culture. The 1997 resource management plan states that many events of national significance have occurred on or near the Outer Banks, including (NPS 1997a):

- Four centuries of shipwrecks resulting in enormous economic losses to this and other nations and affecting thousands of lives.

- The elimination of Blackbeard at Ocracoke. This event, which occurred in 1718, was doubtlessly a boon to all colonial shipping.
- The supply of the continental armies during the Revolution by the port of Ocracoke.
- The first modern amphibious operations, which resulted in the Union capture of Forts Hatteras and Clark. That victory was important for Union morale and diplomacy and Union control of the Carolina Sounds influenced the outcome of the Civil War.
- The development of commerce and transportation corridors in the late 1800s to support an industrial revolution and post Civil War expansion into world trade. Thus, came the need to provide dependable navigational aids and rescue organizations to support this new shipping industry. Consequently, the U.S. Lighthouse Service, U.S. Life Saving Service, and U.S. Weather Bureau Service were established.
- Torpedo and mine attacks on Allied shipping during World Wars I and II, which seriously threatened the Allies' strategic supply line. The elimination of this threat sped Allied victory.

Evidence of Native Americans (shell middens, beach debris, etc.), the first occupants of the Outer Banks, is present at the Seashore. There is also a rich history associated with shipping and military maritime activities. Atlantic shipping lanes just offshore, chronic storms, and treacherous waters contribute to the reputation of the Outer Banks as the "Graveyard of the Atlantic." This rich history needs to be preserved; it can at times be difficult to preserve some features, such as shipwrecks, due to the dynamic nature of the coastal barrier system. Some of the cultural resources at the Seashore are buried and become visible when the sands move. At this point the location of the resource can be marked and protected, but many times the sand will move again before this is possible. Once resources are submerged, or partially submerged, it is possible that they could be run over or hit by ORV users, unable to see them under the sand. In general, not many archeological sites occur on the oceanside, but some can be found on the soundside. In addition to unintentional impacts on the Seashore's cultural resources, some resources have been knowingly disturbed. This happens when ORV access allows visitors to reach a shipwreck and take large portions of the shipwreck that would normally be too large or heavy to remove if on foot. ORV management at the Seashore should provide for protection to both these indirect and direct threats to cultural resources.

Issue Statement: The presence of ORVs may affect the cultural and historic resources of the Seashore from indirect conflict between resources and ORVs (e.g., ORVs unknowingly running over cultural resources) or directly by providing unauthorized and unrestricted access to these resources.

SOCIOECONOMIC RESOURCES

Economy of Communities within the Seashore

During past efforts to develop a management plan, some groups have expressed concern that limiting ORV use at the Seashore would have a negative effect on local economies because these areas rely on ORV users purchasing goods and services for a large portion of their business. The eight villages located within the Seashore boundaries serve as access points to the Seashore for ORV users. These villages receive some level of economic benefit from the ORV users that take advantage of the goods and services these communities offer. The level of ORV use also affects these communities in terms of traffic and noise level. The communities are concerned that if a permit system or other ORV restrictions are implemented making it harder for ORV users to use the area, fewer tourists may come to the area,

resulting in impacts to the local economy. The Outer Banks Chamber of Commerce conducted studies on the economic impact of various types of recreation, but not ORV use. The Outer Banks Visitors Bureau conducted a conversion study to determine the effectiveness in getting people to visit the area, but the Bureau's study also did not specifically mention ORV use.

Two studies that specifically looked at ORV use are the 2003 East Carolina University study (Vogelsong 2003) and the Outer Banks Preservation Association 2002 and 2004 studies (OBPA 2002 and OBPA 2004a). Both of these studies looked at visitor use trends, and included ORV use in their analysis.

Issue Statement: Management or regulation of ORV use at the Seashore could impact the local economy by restricting ORV use and reducing the demand for goods and services from ORV users in these communities.

Local Commercial Fishing Activities

Currently, commercial fishermen have access to areas that are closed to other users because of safety (i.e., the beach is too narrow), but they do not have access to areas closed for resource protection. To qualify as a commercial fisherman, one must be a resident of the Outer Banks with identification stating the village of residence and obtain a commercial fishing permit issued by the state. Approximately 50 permits were issued in 2004.

On Ocracoke Island two soundside access points have been identified for commercial uses. A locked gate barricades one access point and approximately 28 keys are available to commercial fishermen to access this area. The other access is not barricaded but the public have generally respected the commercial designation.

Issue Statement: Limits placed on ORV use at the Seashore may limit the activities of local commercial fishermen. Disrupting the ability of commercial fishermen to conduct their activities could negatively impact them.

ENVIRONMENTAL JUSTICE

Local Sustenance Fishing Activities

Many of the fishermen who rely on sustenance fishing at the Seashore have low incomes. The development of an ORV management plan must account for and consider the needs of the low-income population.

Issue Statement: Limits placed on ORV use at the Seashore may also limit the activities of local sustenance fishermen. Disrupting the ability of sustenance fishermen to conduct their activities could negatively impact them.

CAPE HATTERAS NATIONAL SEASHORE MANAGEMENT AND OPERATION

Staff and Monetary Resources

Anecdotal evidence suggests that the Seashore currently does not have enough personnel for proper enforcement of ORV regulations and closures. As noted above, there has been evidence of ORVs in resource closures, without enforcement or other park staff monitoring closures to prevent the restriction.

The 2003 colonial waterbird, American oystercatcher, and piping plover studies all noted that increased enforcement of ORV closures was needed (NPS 2003a, 2003b, 2003c). Seashore staff expressed a concern about the level of staff time, and monetary resources required to implement an ORV management plan and any associated closures. The 2006 breeding season was the first season the Seashore implemented the interim protected species management strategy/EA. Park staff noted the labor intensive nature of this process including training new staff, adjusting closure areas, monitoring requirements, and continual installation and maintenance of silt fencing. Funding for this level of resource protection is available for the next two years. It was noted that after this time, this level of species management is probably not sustainable.

Issue Statement: Operational needs related to implementation of an ORV management plan (e.g., required monitoring, enforcement, etc.) that require direct NPS staff oversight of or involvement in management activities would require an increased commitment of limited NPS resources (staff, money, time, and equipment).

Coordination with Other Agencies

Within the Seashore boundaries, other federal and state agency activities must be coordinated with those of the NPS. For example, the North Carolina Department of Transportation conducts maintenance operations on NC-12 that runs the length of the Seashore. Additionally, the North Carolina State Ferry Division is planning to construct new offices and visitor facilities in Ocracoke Village. The facilities will sit on NPS land and the Ferry Division must meet NPS environmental requirements before proceeding with construction. These are two of many state activities that require coordination with the NPS. At the federal level, portions of the Bodie Island spit must regularly be closed to ORV use when the Army Corps of Engineers conducts ongoing maintenance dredging in Oregon Inlet. Also, Pea Island National Wildlife Refuge is located within the boundaries of the Seashore. The USFWS manages ORV use on the refuge.

Issue Statement: An ORV management plan would consider the plans and policies of the other federal and state entities operating within the Seashore.

ISSUES ELIMINATED FROM FURTHER CONSIDERATION

The following impact topics and/or issues should be removed from consideration:

- **Geohazards:** No known geohazards occur in the Seashore that would be affected by the implementation of an ORV management plan.
- **Streamflow Characteristics:** Actions related to ORV management would not have an effect on streamflow characteristics. The proposed action would not occur in any area that would impact streamflow.
- **Unique Ecosystems, Biosphere Reserves, World Heritage Sites:** There are no known biosphere reserves, World Heritage sites, or unique ecosystems listed in the Seashore; therefore, implementation of an ORV management plan would have no effect.
- **Energy Resources:** The implementation of an ORV management plan would not be expected to impact energy resources in the park.

- Urban Quality, Gateway Communities, etc.: A gateway community is defined by the NPS *Management Policies 2006* as a community that exists in close proximity to a unit of the national park system whose residents and elected officials are often affected by the decisions made in the course of managing the park. Because of this, there are shared interests and concerns regarding decisions. Gateway communities usually offer food, lodging, and other services to park visitors. They also provide opportunities for employee housing, and a convenient location to purchase goods and services essential to park administration. Although the communities within and adjacent to the Seashore would fall under this definition, the issues and interests that would be impacted by this plan would be addressed under the Socioeconomics impact topic. Thus, implementation of an ORV management plan would not impact urban quality or gateway communities.

PRELIMINARY ALTERNATIVE COMPONENTS

Alternatives must meet objectives to a large degree, while meeting the purpose of and need for action (see Director's Order 12, 2.7; 4.5 (EIS); 5.3 (EA)).

The discussion of preliminary alternatives during the internal scoping meeting focused on brainstorming components, concepts, or frameworks that could become part of an alternative. Because a discussion on alternatives would be part of the regulatory negotiation process, no attempt was made to develop a fixed range of reasonable alternatives during the internal scoping meeting. Therefore, this chapter describes the no-action alternative and potential components or concepts, which could be used individually or in combination for developing specific alternatives. These components or concepts were discussed within four separate frameworks used to generate discussion. The management prescriptions under each of these frameworks could possibly be used in another framework as well. The management prescriptions are not necessarily exclusive to the framework under which they are currently categorized.

Each component identified during the internal scoping meeting was developed to be consistent with the purpose and significance of Cape Hatteras National Seashore, and must meet the purpose of and need for action, as well as the management objectives. The potential management prescriptions address different methods to manage ORV use in the Seashore while achieving specific management objectives. The prescriptions could be used individually or in some combination that would be appropriate for achieving the overall management objectives. Alternatives may be further developed using the following framework and concepts and other issues derived from public and additional agency scoping.

The no-action alternative and the management prescriptions provided were considered in the framework of Seashore planning documents, including the 1978 *Draft Interim Management Plan: Off-Road Vehicle Use* (NPS 1978a) and the 1984 general management plan, and most recently, the *Cape Hatteras National Seashore Interim Protected Species Management Strategy/EA* (NPS 2006a).

NO-ACTION ALTERNATIVE

Regulations from the Council on Environmental Quality 40 CFR 1502.14(d) require that the alternatives analysis in an EIS must “include the alternative of no action.” The no-action alternative “sets a baseline of existing impacts continued into the future against which to compare impacts of action alternatives” (Director’s Order 12, sec. 2.7, NPS 2001c). Under the no-action alternative, ORV use at Cape Hatteras National Seashore would continue as currently managed. Current management is based on the 2006 interim protected species management strategy/EA as well as elements from the 1978 draft interim ORV management plan.

General Off-Road Vehicle Management Elements

ORV management at Cape Hatteras National Seashore would continue to include closures for natural resource management and safety. The following closures would continue under the no-action alternative:

- Seasonal closures in front of the villages – The beach in front of the villages would be closed to ORVs May 15 to September 15. In Buxton, Frisco, Hatteras, and south of Avon, a year-round closure would continue. Closures from May 15 to September 15 are to reduce conflict between

pedestrians and vehicles. September 16 to May 14, the remaining closures are safety closures for narrow beaches.

- **Administrative Closures** – The area in front of Cape Hatteras Lighthouse would continue to be closed year-round. This was defined as an administrative closure in the 1978 draft interim ORV management plan.
- **Safety Closures** – Safety closures would continue, some of which would be year round and some on an as-needed basis. The Ocracoke safety closure from 1.5 miles north of Ramp 67 to 1 mile south of Ramp 59 would continue and the seasonal closure of swim beaches in front of life guarded areas would continue. Ramp 1 to Ramp 2 would be closed year round on Bodie Island. Other beach safety closures would occur as needed, in areas where ORV use is unsafe because of narrow beaches.
- **Buxton Woods** – This area is currently closed to ORV use and would remain closed.
- **Natural Resource Closures** – As needed, areas are closed to ORVs on the beach to protect nesting migratory and protected shorebirds and their habitat. Closure size varies per species and breeding behavior, and is based on the proposed action in the interim protected species management strategy/EA. Full beach closures are only made when breeding behavior warrants. Natural resource closures also include those for nesting sea turtles. More details on species closures are provided below.

The park would continue the following actions in relation to ORV use: provide vehicle access at signed access routes or ramps; allow soundside access only on designated and marked trails; post signs at on ramps telling visitors to lower their tire pressure; post signs stating beaches may not be accessible at high tide; and post ORV regulations on the website and in a brochure. Under the no-action alternative, the speed limit would remain 25 miles per hour (or 15 miles per hour in front of the villages), ORV corridors would be marked, and press releases would be produced to identify safety closures. Visitor safety would continue to be promoted through the safety section in the park newspaper and the site bulletin. ORVs would not be allowed on the dunes and the park would continue to maintain signs stating that the dunes and vegetation are off limits to ORVs.

Current management of ORVs includes permits for commercial fishing, which allow access to areas that are closed to recreational ORV use. Commercial fishermen can access areas closed due to safety reasons, but not those closed for resource protection. To be considered a commercial fisherman, one must provide proof of residency in specific villages of the Outer Banks, and have a commercial fishing permit issued by the state. In 2004, approximately 50 permits for commercial fishing were issued at Cape Hatteras National Seashore. Two areas on Ocracoke Island on the soundside are designated for commercial use only. One of these areas, open only to commercial fishermen to fish for livelihood, is under a key system. Residents who qualify fill out a form and receive a key to access the area, used mainly for boat storage. Approximately 28 keys are available.

Off-Road Vehicle Management Elements Related to Species Protection

Natural resource management actions at the Seashore can impact Seashore users, including ORV users. These impacts take the form of use limitations because areas of the Seashore could be closed to visitor use for natural resource protection. Natural resource management at the Seashore is currently guided by the modified preferred alternative presented in the Finding of No Significant Impact (FONSI) of the interim protected species management strategy/EA, which was released in the Summer of 2007. The following

elements of the interim protected species management strategy/EA selected alternative would be applicable to an ORV management plan/EIS:

1. Implementation of this action would 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, natural resource 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) would be closed to recreational access.
4. Data collection under each alternative would 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 geographic information system and develop standardized protocols for collecting data.
5. Existing NPS regulations would continue to be implemented.
6. Predator management would continue with the removal of predators as needed. Use of predator exclosures over piping plover nests would 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 would continue until a Predator Control Plan/EA is drafted, published for public review, approved, and implemented.
7. The "Monitoring and Management of American Oystercatcher on Cape Hatteras National Seashore" study, conducted by Dr. Ted Simons and Shiloh Shulte, Cooperative Research Group, North Carolina State University, would continue for at least another year at the Seashore. The study will continue to monitor American oystercatcher nesting and chick success/survival, and document unfledged chick behavior.
8. ORV access would continue to be managed according to Superintendent's Order 7. Unless otherwise posted, the maximum speed would be 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 length of beach, the corridor is not marked in areas where the dune line provides a physical barrier. The 150-foot ORV corridor would be provided in areas of the Seashore outside of those areas specifically designated or managed for species protection, seasonal ORV closures, and safety closures. Implementation of the interim protected species management strategy will result in the review and update of Superintendent's Order 7: ORV Management, as determined necessary.

9. Essential use vehicles would 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 1996). Due to the soft sand conditions of the Seashore, the maximum speed of essential use vehicles would 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 would 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 would 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 would be hired using the following procedure:

Temporary/seasonal staff would be hired and trained by April 1 to begin bird monitoring and protection, education, and outreach activities. Returning, previously trained, experienced staff may start in mid-March to help prepare equipment, signs, etc., for the season; prepare the training; and permanent staff with initial monitoring before April 1. Any additional temporary/seasonal staff would 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 (NCWRC 2006). Job descriptions would be created with specific needs and standards for all skilled and unskilled positions. A standard for hiring seasonal employees, interns, and volunteers would 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 would 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 would be established.

All the training information would be available for transmittal to all new staff during training. This would provide consistent information to everyone, and managers would 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 would be directed to appropriate protected species projects. However, enforcement staff would 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 would include:
 - a. The Seashore would 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 would be published on the Seashore website and an initial bird posting plan for the upcoming season would be drafted that provides pre-nesting closures.
 - c. A variety of educational and outreach materials would be developed regarding the impacts of trash disposal, wildlife feeding, fireworks, and pets on sensitive Seashore species. These would be distributed through a variety of methods that could include press releases, email announcements, and the use of local volunteer and community organizations.
 - d. Interpretive signage would be developed for certain species.

Recreational access, including ORV access, under the no-action alternative would be impacted by resource closures that limit the amount of access to certain areas of the Seashore. The guidelines for resource closures for federally listed species are provided in table 1 and other aspects of the interim protected species management strategy/EA are provided in table 2. Table 3 shows recreation and seashore management.

For non-listed species, such as the American oystercatcher or colonial waterbirds, the size and location of closures and buffers would differ from that of listed species. No pre-nesting areas or resource closures, would be established specifically for American oystercatchers or colonial waterbirds, with closures for these species occurring once the species is observed. The size of the closures for courtship and mating for these species would be responsive to individual bird behavior. American oystercatcher nesting buffer/closure would be established based on adult reaction to human disturbance. Closures would vary in

size dependent on best professional judgment. If resource closures are created around nests, the Seashore would adjust the ORV corridor whenever possible to allow ORV passage and the ORV corridor width would be reduced if necessary. In areas in which the buffer zone would eliminate the ORV corridor, the Seashore would identify alternate ORV routes if available, or provide a bypass, if possible. The Seashore would 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. The park would standardize the proposed buffer distances for American oystercatchers and colonial waterbird chicks to 150- to 300-feet, based on bird behavior. The Seashore would provide an alternate route or bypass around listed and non-listed chicks, if possible.

The existing prohibition of pets outside the ORV corridor at the spits and Cape Point would continue.

For piping plover, an annual habitat assessment would be conducted in February or March. Based on this assessment, new habitat and suitable portions of recent breeding habitat, such as some shoreline foraging areas and nesting habitat, would be closed to the public with symbolic fencing by April 1 each year. This annual habitat assessment would include Bodie Island Spit; Green Island; Cape Point, South Beach, and Hatteras Spit; and South Ocracoke. A 150-foot buffer/closure would be established for piping plovers exhibiting courtship and mating behavior outside existing closures. Once nesting occurs, a 150-foot buffer/closure would be established around the nest, if the nest is outside of an existing closure. When resource closures are created around nests, the Seashore would adjust the ORV corridor whenever possible to allow vehicle passage and reduce the width of the ORV corridor if necessary. In areas in which the buffer zone would eliminate the ORV corridor, the Seashore would identify alternate ORV routes if available or provide a bypass. When unfledged chicks are present, the Seashore would establish a minimum 600-foot buffer on either side of the brood based on observation of bird behavior and terrain conditions. Based on observed behavior, the 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, the buffer zone could 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. The Seashore would close the bypass route at night if the buffer zone, is less than 600 feet

For management of sea turtles, the Seashore will follow the management guidelines defined by the NCWRC in its Handbook for Sea Turtle Volunteers in North Carolina (2006). Beaches would be patrolled for sea turtle crawls and nests beginning at dawn each day between May 1 and September 15. The current practice would continue: nests would be left in place unless there is a need to relocate them for environmental reasons. Any single nest left in place, or relocated, would be protected by an approximately 30-foot by 30-foot posted closure during the incubation period. These small closures would 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.

For seabeach amaranth, plants found outside existing resource closures would be protected by a 30-foot by 30-foot buffer around the plant.

TABLE 1: NO ACTION ALTERNATIVE — SPECIES OBSERVATION

| ACTIVITY | |
|--|---|
| Birds | |
| Survey Time and Frequency PRE-Nesting | <p>Piping plover:</p> <p>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.</p> <p>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.</p> <p>American oystercatcher: March 15 – June 15 survey recent breeding areas two times per week.</p> <p>Colonial waterbirds: May 1 – June 15 survey recent breeding areas two times per week.</p> |
| Survey Time and Frequency Life Stages | <p><u>Courtship/Mating:</u></p> <p>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.</p> <p>Survey potential new habitat two times per week.</p> <p><u>Nesting:</u></p> <p>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.</p> <p>American oystercatcher and colonial waterbirds: Observe nests at least three times per week.</p> <p>Wilson's plover: Observe nests incidental to piping plover monitoring.</p> <p><u>Unfledged Chicks:</u></p> <p>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.</p> <p>American oystercatcher: Observe once daily.</p> <p>Colonial waterbirds: Observe broods at one- to two-day intervals and record data.</p> <p>Wilson's plover: Observe broods incidental to piping plover monitoring.</p> <p>All Species: When broods are mobile, provide more frequent observation and enforcement presence. All observations end when all chicks have fledged.</p> <p><u>Non breeding/wintering:</u></p> <p>Piping plover: As provided in the USFWS Amended Biological Opinion (2007), 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.</p> <p>American oystercatcher, red knot, Wilson's plover: Survey with piping plover.</p> <p>Colonial waterbirds: Winter/Non-breeding habitat not surveyed.</p> |
| Data Collected | <p>Piping plover: Use GPS to document breeding areas and nest locations.</p> <p>Record locations where territorial/courtship behavior occurs.</p> <p>Record presence and abundance of birds.</p> <p>American oystercatcher and colonial waterbirds: Use GPS to document nest and colony locations.</p> <p>Record presence and abundance of pre-nesting birds.</p> |

| ACTIVITY | |
|------------------------------------|---|
| Sea Turtles | |
| Survey Time and Frequency | <p>May 1 – September 15</p> <p>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.</p> <p>Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.</p> |
| Data Collected | <p>Follow the North Carolina Wildlife Resources Commission Handbook and record:</p> <ul style="list-style-type: none"> -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 <p>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.</p> |
| Seabeach Amaranth | |
| Survey Time and Frequency | <p>April 1</p> <p>During bird and turtle surveys, note any seedlings or plants and record location.</p> <p>August</p> <p>Annual survey of potential habitat (some bird closure areas may not be surveyed due to potential to disturb nesting birds).</p> <p>April – September</p> <p>Before opening any species closure or identifying alternate ORV corridors, survey for seedling/plants.</p> <p>End observations when all plants have died back.</p> |
| 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. |

TABLE 2: NO ACTION ALTERNATIVE — SPECIES MANAGEMENT

| Activity | |
|------------------------------|--|
| Birds | |
| Closures/ Buffers | <p><u>Pre-Nesting:</u></p> <p>American oystercatcher: March 15 Activate closures if a territory is established or a nest located. Remove closures when areas have been abandoned for a 2-week period.</p> <p>Piping plover: April 1 In February or March of each year, NPS natural resource staff 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.</p> <p>Colonial waterbirds: May 1 Activate closures if a territory is established or a nest located. Remove closures when areas have been abandoned for a 2-week period.</p> <p>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 corridor width (i.e., narrower than 100 feet), post a reduced speed limit of 10 mph.</p> |
| | <p><u>Courtship/Mating:</u></p> <p>Piping plover: If courtship or copulations are observed outside of existing closures on two consecutive survey days, establish or expand the buffer to ensure 150-foot buffer for the observed birds.</p> <p>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.</p> <p>American oystercatcher and colonial waterbirds: If territorial or courting birds are observed outside of existing closures, based on bird behavior and suitable habitat, expand buffers to accommodate the birds. Provide an ORV/pedestrian corridor above the high tide line.</p> |
| | <p><u>Nesting:</u></p> <p>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. For areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available or provide a bypass if possible.</p> <p>American oystercatcher: Establish buffer/closure based on adults' reactions to human disturbance. Closures vary in size dependent on best professional judgment. When resource closures are created around nests, adjust the ORV corridor whenever possible to allow ORV passage. Reduce the ORV corridor width if necessary. For areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available, or provide a bypass if possible. Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around nests.</p> <p>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 reduce corridor width if necessary. For areas in which the buffer zone would eliminate the ORV corridor, identify alternate ORV routes if available, or provide a bypass if possible. Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around nests.</p> <p>Reducing the width of ORV/pedestrian corridors for American oystercatcher and colonial waterbirds will be approached as a research opportunity to gather data for testing for the distance at which vehicle disturbance to nesting American oystercatcher and colonial waterbirds occurs.</p> <p>All species: Allow observations to be responsive to individuality in bird behavior when determining adequate size of</p> |

| Activity | |
|---|---|
| | <p>closure zones around nests.</p> <p>If a nest is lost, buffers remain in place 2–3 weeks after nest is lost to determine if the pair will re-nest, if no other species nesting are in the area.</p> |
| | <p><u>Adult Foraging:</u></p> <p>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.</p> <p>Colonial waterbirds, American oystercatcher, and Wilson's plover: No additional buffers/closures.</p> |
| | <p><u>Unfledged Chicks:</u></p> <p>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. The buffer moves with the chicks. Close the bypass route at night if the buffer zone is less than 600 feet (as identified on p. 8 of the USFWS Amended Biological Opinion (2007)).</p> <p>When resource closures are created around broods, adjust the ORV corridor whenever possible to allow vehicle passage. Reduce the 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 (NPS 2006a). Close the beach to recreation access down to the waterline if necessary to allow chicks access to foraging areas.</p> <p>American oystercatcher: Establish 150-foot to 300-foot buffer zones when unfledged chicks are present. Adjust buffer zones as needed when chicks are mobile. Provide alternate ORV/pedestrian access route or bypass to open areas beyond the closure, if possible.</p> <p>Colonial waterbirds: Establish 150-foot to 300-foot buffer zones when unfledged chicks present. Adjust buffer zones as needed when chicks are mobile. Provide alternate ORV/pedestrian access route or bypass to open areas beyond the closure, if possible.</p> <p>For all species: Allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones around broods.</p> <p>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.</p> |
| Non Breeding/ Wintering Closures | <p>For piping plover: Provide 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, 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 due to natural processes.</p> |
| Sea Turtles | |
| Nest Closures/ Buffers | <p>Establish a buffer approximately 30 feet by 30 feet with symbolic fencing and signage around nest.</p> <p>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:</p> <ol style="list-style-type: none"> a. vehicle-free areas with little or no pedestrian traffic – 75 feet wide (total width); 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). <p>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.</p> <p>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.</p> <p>Use light filtering fence behind nests nearing hatch dates to block light pollution from the villages and vehicles operating on the beach after dark.</p> |

| Activity | |
|------------------------------|---|
| Nest Relocation | <p>When a nest is found, staff assess need for nest relocation and follows relocation guidance identified in the NCWRC handbook (2006).</p> <p>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.</p> <p>If a nest is threatened by a storm event, NPS will consult NCWRC to determine appropriate action.</p> |
| Light Management | <p>Establish turtle friendly lighting standards for all Seashore (NPS) structures.</p> <p>Encourage concessioners to install turtle friendly lighting.</p> |
| Research | Support research efforts looking at the sex ratios of turtles. |
| Seabeach Amaranth | |
| Buffers | <p>April 15 – November 30</p> <p>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.</p> <p>If a plant is found during the survey prior to reopening a bird closure to ORV and pedestrian use, the Seashore will protect the plant as described above and reopen the areas of the bird closure where no plants exist.</p> <p>Areas reopened if no plants are present by September 1. Where plants occur, the closed areas will be reopened after the plants have died.</p> |
| Predator Management | <p>Trappers will target red and gray fox, raccoons, cats and other predators for removal.</p> <p>Piping plover: Nests surveyed to count eggs and look for predator tracks.</p> <p>As applicable, predator exclosures are erected when nest found with eggs.</p> <p>American oystercatcher and colonial waterbirds: Nests surveyed to count eggs and look for predator tracks.</p> <p>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.</p> <p>Seabeach amaranth: No predator management.</p> |
| Conservation Measures | <p>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) will be considered for implementation. The Seashore will notify the USFWS when any of these conservation measures are implemented.</p> |

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 | <p>April 1 – August 31</p> <p>Piping plover: Designate approximately 100-foot-wide ORV corridor above mean high tide line in breeding areas used within past three years.</p> <p>Delineate corridor with posts placed up to 100 feet above the high tide line.</p> <p>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” (NPS 2006a). Seashore staff will allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones.</p> <p>If alternate route or bypass is not feasible, initiate an ORV closure.</p> <p>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” (NPS 2006a). Seashore staff will allow observations to be responsive to individuality in bird behavior when determining adequate size of closure zones.</p> <p>If alternate route or bypass is not feasible, initiate an ORV closure.</p> <p>Sea Turtles: May 1 – September 15</p> <p>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.</p> |
| Night Driving | <p>No restrictions.</p> <p>The Seashore will provide periodic night time patrols to observe and enforce compliance with regulations and closures.</p> |
| 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 | <p>36 CFR 3.6 prohibits launching non-commercial, recreational boats/vessels except at designated launch sites.</p> <p>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.</p> |

| Activity | |
|----------------------------------|--|
| | 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 | |
| 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 (<i>Charadrius melodus</i>), Atlantic Coast Population, Revised Recovery Plan (USFWS 1996). 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 | |
| | <p><u>General:</u> 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.</p> <p><u>Piping plover:</u> Provide periodic patrols to observe and enforce compliance with piping plover closures.</p> <p><u>Sea Turtles:</u> 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.</p> <p><u>Seabeach Amaranth:</u> Post information about seabeach amaranth at all ORV ramp bulletin boards. Notify public of resource closures and openings.</p> |

ELEMENTS COMMON TO ALL ACTION ALTERNATIVES

Although the various alternatives will address ORV management in different ways, each of these frameworks would include the following elements. The majority of these elements are related to vehicle

operation requirements, such as requiring a certain tire pressure or driver licensing requirements. These elements fall into three general categories: operator and vehicle requirements; operating requirements; and enforcement, park operations and other requirements. All of the potential components discussed below would be considered for ORV management on both the oceanside and soundside of Cape Hatteras National Seashore to address any safety or resource concerns at the Seashore from ORV use.

Operator and Vehicle Requirements

- Require ORV operators at Cape Hatteras National Seashore to have a valid driver's license and registration and the vehicle to have all the proper tags.
- Require the use of only four-wheel drive vehicles that are licensed and legally fit for driving on public roads ("street legal").
- Require ORVs to maintain less than a defined maximum tire pressure (psi).
- Continue to issue special use permits for handicap accessibility.

Operating Requirements

- Develop a system to determine which ORV yields the right-of way when there is only room for one ORV to pass.
- Set safety standards for ORV use, which could include lowering speed limits. One concept is to institute and enforce a lower speed limit of 10 miles per hour (this will not be possible unless the speed limit change is adopted within the rulemaking itself; that is, the speed limit will be whatever the state speed limit is, unless specifically changed by a rulemaking (36 CFR 4.2)).

Enforcement, Park Operations, and Other Requirements

- Ensure the park is compliant with the Endangered Species Act and the Biological Opinion issued in relation to the interim protected species management strategy/EA (NPS 2006a).
- Ensure funding is available, or could be available, to implement the plan.
- Allow for commercial fishing access, as detailed under the no-action alternative.
- Emergency operations take precedence over other matters, such as resource protection.
- Continue the current level of education for all recreational users at the Seashore, including website updates, flyers, email updates, etc.

PRELIMINARY ALTERNATIVE FRAMEWORKS AND PRESCRIPTIONS

To generate a possible range of alternatives, park staff at the internal scoping meeting were asked to think about various ORV management prescriptions that could fall within the following four preliminary frameworks: implementing a permitting system for ORVs at the Seashore, creating visitor use zones, allowing ORV use in a certain percentage of the Seashore at all times, and implementing ORV management with no additional funds (beyond what is currently available). These frameworks were

created to generate a list of possible management prescriptions for an ORV management plan. Each framework contains multiple concepts that could be combined with each other, or stand alone, or excluded. For example, requiring ORV users to watch an educational video before getting a permit could also fit under zoning or another framework. These frameworks were developed as a preliminary tool to generate discussion on possible alternative elements. As the alternatives are developed further with input from public scoping, the specific prescriptions under each alternative could be further expanded upon and these frameworks could be adjusted.

1. Zoning System

Implementing a zoning system is centered on designating various areas of the Seashore for different types of uses that are determined appropriate for that area. This system would provide for certain areas to remain open for these various types of uses. A zoning system would assist the park in managing the various recreational uses at the Seashore, and reduce conflicts between these uses. A zoning system would also assist the park with resource management and provide the visitor with a more concrete idea of what areas would be closed to recreational use during their visit due to species closures. The geographic areas presented for each zone are conceptual, and will be further developed as scoping continues. To accommodate both natural resource protection and the many visitor uses at the Seashore, the following zones were developed:

- **Resource Management Zone:** The resource management zone would limit certain types of recreational uses to provide for protection of both biological and cultural resources. In this zone, ORVs would not be allowed, however, depending on the nature of the resource concern, pedestrian use could be allowed. Areas that could fall under the resource management zone include all vegetated areas including dunes, vegetation on the soundside, etc. These areas would be in the Resource Management Zone year round. Shipwreck areas and migratory bird areas are other possible year-round Resource Management Zone areas. Other Resource Management Zones could be seasonal such as those related to bird and turtle breeding closures. Develop criteria to identify the areas that would be included in this zone and include areas or portions of areas with high populations of birds such as Ocracoke spit, south of Cape Point spit, Bodie Island spit, and other areas.
- **Safety Zone:** The Safety Zone would be designated anywhere sand conditions are steep, soft, difficult to navigate, or have dangerous substrates. In these areas, ORV access would be prohibited. Pedestrian access could be allowed, as conditions permit. This zoning designation would be seasonal in nature, and last only as long as the safety concern was present. Highly congested beaches could also be considered a seasonal safety closure.
- **Recreational Use Zone:**
 1. **Motorized recreation:** In the motorized recreation zone, a 100-foot corridor would be maintained where there was not prior exclusion. This corridor would be increased to 150 feet where possible. Issues to further address in the motorized recreation zone include soundside access, location of access ramps, and new recreational uses such as kite boarding.
 2. **Non-motorized recreation:** To provide for non-motorized recreation and pedestrian uses, areas of the Seashore could be designated for pedestrian use only. Potential alternative concepts in this zone could include providing a minimum area for this zone, to provide for an adequate non-motorized recreational experience. Provision of parking areas would be addressed for the non-motorized recreation zone.

2. Access Based on Percentages System

A framework based on percentages would designate a certain percentage of beaches that would always be open to ORV use. This system would provide recreational users with a level of certainty that when they visit the Seashore, there would be an area for them to engage in their desired recreational activity. This system would have the same benefits as the zoning system, but would provide more flexibility for the areas designated for use, since these areas could change as the landscape of the Seashore changes. The specific areas where ORV use is permitted could change based on Seashore conditions, but the percentage of the Seashore open for ORV driving would remain constant. Possible management prescriptions related to a system based on percentages include:

- Base the percentage open on seasonal use. For example, have a greater percentage open to ORV use in winter than summer to accommodate natural resource closures. For example, 50 to 60% of the beach would be open to ORV use in summer, 75% of the beach would be open to ORV use in the winter. Seasonal percentages could be based on the prime use at that time. For example, fall, winter, and spring are the best times for fishing and more access could possibly be allowed for ORVs at that time.
- Set a certain percentage of the Seashore that would be open to ORV use at all times.
- Set a certain percentage of the Seashore that would be open to ORV use at all time, but vary this amount in the different districts.
- Develop criteria for maintaining certain areas for resource closures. These criteria would address issues such as adaptive management for the changing Seashore landscape, species lifecycle requirements, level of protection required for different protected species, visitor and employee safety, financial feasibility, and the visitor uses that need to be accommodated.
- Consult stakeholders in determining areas to be closed, for example, the area in front of each village that should be open or closed.
- Percentage numbers could be justified based on requirements from the Endangered Species Act and visitor opinions and current use/trends.

3. No Additional Funds Available

Taking into consideration limitations on park staff resources, a scenario that considers no additional funding (such as the project funding currently available from the interim protected species management strategy/EA implementation) was developed. Under this scenario, the park would maintain current staffing and funding levels. No additional funding would be made available to the park for ORV management. Based on these assumptions, the following potential management prescriptions were developed:

- Create a zoning system: With no additional funds, the park could rely heavily on a zoning system that would have fixed, long-term closures. These types of closures would be less labor intensive for the park to manage and require less park resources. Resource management zones would also be identified and fixed, reducing the amount of effort the parks spends on moving fence lines and adjusting closures throughout the breeding season. Zoning could also consider visitor use and zones could be scheduled or adjusted on a temporal basis. For example, certain areas could be closed to ORV use at night, but open to use during the day.

- **Resource monitoring:** With no additional funding, to maintain the levels of staffing under the interim protected species management strategy, resource monitoring would need to be supplemented by volunteer programs. Piping plover management would follow the recovery plan and use less intensive monitoring with larger buffer distances. The park could also look to other organizations, such as state agencies, for assistance, use students on internships, relocate fewer sea turtle nests, and more selectively use filter fence to reduce resource management and monitoring requirements.
- **Control access:** With no additional funding, ORV management could include controlling access, such as limiting the number of ramps and routes open to ORV use. Improvement of interdunal roads or providing an alternate route system could be required to maintain access to the spits and points. Soundside road access would also be reevaluated and these routes open or closed as appropriate.
- **Education:** Under a no additional funding scenario, increasing education of all park users would be an important step. This could include a no fee permitting system that would require users to watch a video before getting their permits. Private businesses and groups could be enlisted to issue permits and provide educational information.
- **Other:** A variety of other components that could be part of a no additional funding scenario include larger or permanent resource closures, fixed closures around pre-nesting areas, identifying alternative funding sources and reallocation of existing resources, and selective use of silt fencing.

4. Permitting System

This framework focused on using a permitting system as an ORV management tool. If adopted, this framework could include the number of permits to be issued and their cost, how the permits should be issued and enforced, where the permits should be valid, etc. Within this permitting system, the following prescriptions were developed that address these questions. This framework started with concepts for initiating a permit system, including who would run the system, how permits would be obtained, etc. The following management prescriptions relate to initiating a permit system at Cape Hatteras National Seashore:

- Limit the number of permits by household or street address.
- Provide weekly passes. A limited number of these passes could be determined in coordination with the rental industry.
- Issue year-long permits only.
- Require ORV users to attend training before receiving a permit. This training could include watching a video on safely operating an ORV on the beach, the benefit of resource protection closures, etc.
- Require a permit for those attending events (such tournaments).
- Permit fees could include a sliding scale to accommodate low-income visitors.
- Permits should be highly visible, such as a window or bumper sticker.

- Conduct a study to determine the economic feasibility of a permit system. Determine the appropriate and acceptable level of permit fee.
- Use funds collected from a permit system to cover administrative costs of the system.
- Phase in the permit system. Require users to watch a video the first year and then start paying the fee in subsequent years.
- Provide a life-long permit. This would require an educational component annually when purchasing the permit for the year.
- Make permits convenient and affordable to obtain.
- Enlist ORV groups to help distribute the permits. Add ORV permit fees to group membership fees and have ORV groups provide the educational component.
- Hire a contractor to administer the permit system.
- Sell permits at local stores. Give stores the opportunity to indirectly benefit from the sales of these permits, and give the community a vested interest in the permitting program.

In addition to management related to beach access, alternative elements that could fit under any of the permitting scenarios were also developed.

- **Multiple Entrance Points:** Cape Hatteras National Seashore is unique compared to other areas with ORV management plans because it has multiple access points. Because ORV users can access the Seashore in many different areas, enforcement of a permitting system could be challenging. Assuming that the number of access points at the Seashore remained, park rangers would look for the permits on their normal beach patrols. Because Seashore law enforcement staff are limited, this scenario would rely on community outreach to encourage permittees to self-police. Initially, there would be no limit on the number of permits. Seashore staff would monitor and study the number of vehicles getting permitted and any potential impacts from these vehicles, and if necessary, a limit on the number of permits could later be imposed.
- **Limited Entrance Points:** Because multiple access points make ORV management more difficult to enforce, the number of access points to the Seashore could be limited. At these access points, a fee collection station would be established to issue permits and make sure those vehicles entering the beach have a permit and meet all operating requirements. To respond to the dynamic nature of the Seashore, these stations could be mobile to allow them to move to new access points if the beach in one area becomes unsafe, or the access point unusable. At these points, vehicles could also be counted to limit the number of vehicles on the beach. This limit could vary by area, season, condition of the beach, etc.
- **Limit ORV Use to Certain Areas:** Certain areas of the Seashore would be designated for ORV use. Within these areas, unlimited ORVs would be allowed, as long as each vehicle has a permit. In other areas of the Seashore, ORVs would be prohibited.
- **Other Components:** In addition to these geographic scenarios, the following management perceptions were developed:

1. Conduct a study to determine visitor and ORV user perceptions of ORV management practices and levels of use.
2. Do not limit the number of permits distributed, but limit the number of vehicles allowed on certain portions of beaches.
3. Permits are revocable with violations, including resource violations.
4. Provide different permits for different islands. Use a color coding system to differentiate between the permits.
5. Create an electronic pass system, similar to the EZpass system. This system would consist of an electronic transponder on vehicles that gets read by a receiver at park entrance points.

Additional Management Prescriptions

Outside of the four preliminary frameworks discussed above, additional potential ORV management prescriptions were developed. The above frameworks do not constitute developed alternatives, and were a tool to generate discussion on a possible range of alternatives. In addition to the tools that would fit within those frameworks, park staff discussed other potential elements that could be incorporated into an ORV management plan. As with the above elements, these components are not stand-alone alternatives, but can be combined with other concepts to create a range of ORV management alternatives. Park staff were asked to name elements of a plan that would address concerns regarding the existing use of ORVs at the Seashore. After this brainstorming session occurred, these elements were grouped into the following areas: beach access, resource-based closures, education and outreach, enforcement, and designating ORV routes. Each of the elements under these areas are elements that park staff felt in their best professional judgment, could be useful tools for managing ORVs at the Seashore.

Beach Access

- Address public access and lack of public parking in the villages. Many people do not know where to park and by providing information on where people can park in the villages, more pedestrian users could access the Seashore.
- Restrict certain areas to general public ORV use, but allow access to these areas through guided trips by providers with commercial use licenses.
- Close the beach to ORVs at night to reduce patrol requirements at that time.
- Develop a shuttle system to access some high-use areas if they are closed.
- Maintain the current level of ORV access at the Seashore, providing additional access if possible.
- Maintain access to interdunal trails/roads during high tides and when there are narrow beaches, including adding new access behind dune lines when needed.
- Only close the beach to ORV use for safety reasons if it is not wide enough for a vehicle to get through, instead of the current practice that permits for closures if the beach is less than 100 feet wide.

Resource-based Closures

- Create a policy to immediately close off areas of new bird habitat created by storms and hurricanes to allow birds to find and use them as new habitat.

Education and Outreach

- Establish a long-standing advisory committee for issues at Cape Hatteras National Seashore, with a subcommittee for ORV issues.
- Create a Friends of Cape Hatteras National Seashore group to support the Seashore's ORV management efforts as part of the greater resource protection mission of the Seashore.
- Provide condition reports for ramps, trails, etc., to assist ORV users in determining conditions and promoting safe operations.
- Provide educational opportunities for ORV users by hosting special events for the ORV community.
- Elicit assistance from ORV groups in providing educational programs for ORV users.

Enforcement

- Increase enforcement activities to deter prohibited activities such as dune busting and ORV use in closed breeding/germinating areas.
- Address prohibited ORV vehicle operations through increased enforcement of regulations related to ORVs. Increased enforcement could include creating a community policing program to regulate ORV use or hiring more NPS rangers to enforce existing regulations related to ORV use such as keeping vehicles out of closures and the continued enforcement of drunk driving regulations.

Designating ORV Routes

- Maintain ramp access by reopening or establishing all historic ramps. Ramp access alternatives could also include extending Ramp 72 to Ocracoke spit as a two-lane access.
- Reestablish the Pole Road as a two-lane road open to ORV use and extend the road to Hatteras Inlet so that ORVs can take boats down to that area.
- Establish an alternate route behind the dune line at Ramp 4 to provide access to Oregon Inlet spit.
- Only allow vehicular access on paved roads, except for administrative vehicles that would be able to use the beach, to ensure the preservation of the unique flora and fauna or the physiographic conditions prevailing in the area as stated in the enabling legislation.
- Only allow ORV access for administrative use such as law enforcement, maintenance, and resource management.

AFFECTED ENVIRONMENT

Director's Order 12 says (in accordance with NPOMA) that if information critical to decision-making is lacking, then the action should be modified to eliminate that portion of the action where impacts are uncertain. In addition, NEPA and CEQ specify what must be done in the absence of information: "When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (sec. 1502.22). The "Affected Environment" should state clearly what information is available, where conflicts exist in the data/interpretation, and what information is lacking.

See Director's Order 12 Handbook 2.8; and Director's Order 12 4.4 and 4.5 (unavailable information and use of technical and scientific analysis in decision-making).

The following documents on ORV management at Cape Hatteras National Seashore have been collected or will be collected. These documents and other references included in the Reference section of this internal scoping report, as well as other relevant documents from the previous management efforts at the Seashore, will be used to prepare the Affected Environment section of the environmental impact statement.

LEGISLATION

NPS 1937 Cape Hatteras National Seashore Enabling Legislation and Amendments (H.R. 7022)

House Report 7022 – Establishment of Cape Hatteras National Seashore in the State of North Carolina, July 19, 1937

North Carolina General Code: Article 25, Subchapter IV, Chapter 113: Endangered and Threatened Wildlife

Anti-Deficiency Act, as amended 2005

CAPE HATTERAS NATIONAL SEASHORE PLANNING DOCUMENTS

NPS 2006 *Cape Hatteras National Seashore Interim Protected Species Management Strategy/EA*

NPS 2003 Cape Hatteras Light Station Cultural Landscape Report

NPS 1998-2004 Cape Hatteras National Seashore Government Performance Results Act Reports

NPS 1997 Resource Management Plan Cape Hatteras National Seashore

NPS 1984 General Management Plan Cape Hatteras National Seashore

NPS 1980 ORV Plan North District Cape Hatteras National Seashore

NPS 1978 Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore

CAPE HATTERAS NATIONAL SEASHORE RESOURCE INFORMATION

NPS 2004 Synopsis: Off-Vehicle Planning Cape Hatteras National Seashore

NPS 2003 National Park Service Coastal Visitor Impact Monitoring Phase 2 Report

NPS 2003 Cape Hatteras National Seashore Visitor Use Study

NPS 1983-2004 Colonial Water Bird Breeding Study

NPS 1999-2004 American Oystercatcher Breeding Activity

NPS 1985-2006 Piping Plover Activities

NPS 1996-2006 Sea Turtle Summary Breeding and Stranding Activities

NPS 2002 Outer Banks Group Park Visitor Study Cape Hatteras National Seashore

NPS 1984 Plan Approval and Finding of No Significant Impact General Management Plan/ Development Concept Plan/ Environmental Assessment Cape Hatteras National Seashore

NPS 1984 Statement of Findings Cape Hatteras National Seashore/Development Concept Plan

NPS 1979 Cape Hatteras National Seashore Environmental Analysis of Off-Road Vehicle Use with Alternatives

NPS 1952 A Letter to the People of the Outer Banks (Conrad Wirth)

OBPA 1978 Proposed Alternate Plan for Management of Off-Road Recreational Vehicles in Cape Hatteras National Seashore

Strategic Marketing & Research, Inc. 2004 Outer Banks Visitors Bureau 2004 Awareness Study: Hurricane Isabel & 100th Anniversary of Flight Celebration

Strategic Marketing & Research, Inc. Outer Banks Visitors Bureau 2003 Outer Banks Visitors Bureau 2002 Conversion Research

USFWS 2003 Report to Cape Hatteras National Seashore and Recommendations for Maintenance and Improvement of Avian Habitat Following Hurricane Isabel

VIMS Assessing the Anthropogenic and Natural Impacts on Ghost Crab Populations at Cape Hatteras National Seashore

Vogelsong 2003 Cape Hatteras National Seashore Visitor Use Study. East Carolina University, Department of Recreation and Leisure Studies

ENVIRONMENTAL CONSEQUENCES

Important changes have been made in the way the National Park Service analyzes, describes, and documents (formats) its NEPA analysis. It is mandated by Director's Order 12 (sec. 4.5 (g)).

Using the best available data, the context, duration, and intensity of impacts, including cumulative impacts, must be defined. NPS must systematically analyze the impact of each alternative in terms of its context, duration, and intensity of effect on unit resources and values and based on this analysis determine the potential for impairment.

The park will be briefed on the methods that could be used for impact assessment, and how the park will be involved in setting up the criteria for impact intensity. The impact methodology, defined by Director's Order 12, sec. 4.5(G)(7)(a), describes methods used to determine impact.

- 1. Explain any assumptions.*
- 2. Define or explain how data will be interpreted.*
- 3. Describe thresholds used to measure context, duration and intensity of impacts.*

Impact indicators must be developed for each impact topic.

For each resource, thresholds help establish the sideboards for understanding the severity and the magnitude of the impact. The following is an example of intensity impacts to geological features:

Negligible — Impacts to park geologic features are not detectable based on standard scientific methodologies.

Minor — Low probability of impact because either (1) the activity would occur in an area or geologic layer not known to contain geologic features and the volume of disturbance would be negligible; or (2) the activity would occur in an area or geologic layer containing geologic features but the volume of disturbance would be nearly indiscernible. Monitoring would likely detect changes or loss of the features, and the loss of associated contextual information would be minimal.

Moderate — Moderate probability of impact because either (1) the activity would occur in an area or geologic layer not known to contain geologic features and the volume of disturbance would be large; or (2) the activity would occur in an area or geologic layer containing geologic features but the volume of disturbance would be small. Monitoring would identify most affected geologic features, but some features and/or associated contextual information would be lost.

Major — High probability of impact because the activity would occur in an area or geologic layer containing geologic features and the volume of disturbance would be large. Even with monitoring, many features and/or associated contextual information would likely be lost.

Impairment — Some of the major impacts described above might be an impairment of park resources if their severity, duration, and timing resulted in the elimination of geological features and the park's purpose could not be fulfilled as established in its enabling legislation.

Results of Discussion with Park: Preliminary discussion occurred with park staff on impact analysis. Before beginning the draft EIS, methodologies and impact thresholds that are appropriate for measuring impacts to park resources will be presented and discussed with park staff.

CONSULTATION AND COORDINATION

Coordination and consultation efforts for this planning process will focus on the means or processes to be used to include the public, interest groups, and local public entities. Park staff place a high priority on meeting the intent of public involvement in the NEPA process and giving the public an opportunity to have input into and comment on proposed actions. As part of the NPS NEPA process, issues associated with the action were identified during the internal scoping meeting with NPS staff. Future coordination with affected agencies and stakeholders is proposed.

Planning for ORV use at Cape Hatteras National Seashore has occurred since 1973. During this process, various regulations and plans were developed that allowed for public comment. These past comments and concerns would be taken into consideration during the development of an ORV management plan at the Seashore and parties that have shown interest in these past efforts (Hatteras Civic Association, Outer Banks Preservation Association, North Carolina Beach Buggy Association, private business owners, local hunters, sport fishermen, and commercial fishermen) will be included as interested parties during the development of the plan.

In addition to past outreach for ORV management, the Seashore recently conducted outreach as part of the interim protected species management strategy/EA. During the EA process, information sessions were conducted and 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 as well as four open-house style sessions where the public asked park staff questions and provided input to the park in a more informal atmosphere. Notices for these meetings were posted on the NPS Cape Hatteras National Seashore website and at local post offices, emailed or mailed to people on the mailing lists, and press releases were sent to several media/newspapers.

Three public scoping meetings were held for the strategy/EA in early November 2005 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. Notices for these meetings were posted on the NPS Cape Hatteras National Seashore website and at local post offices, emailed or mailed to citizens on the mailing lists, and press releases were sent to the several media/newspapers. The mailing list developed during this process will be incorporated into the mailing list for the ORV management plan/EIS.

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. The Superintendent provided an update of the planning process, summarized key points of the selected alternative, and facilitated the public question and comment portion. These meetings were held on February 6th from 2:00 p.m. to 4:00 p.m. at the Hatteras Village Civic Center; February 8th from 7:00 p.m. to 8:00 p.m. at the Ocracoke Community Center; February 9th from 6:00 p.m. to 8:00 p.m. at the Wright Brothers National Memorial First Flight Centennial Pavilion; and February 10th 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; a five-minute time limit was placed on comments at the Ocracoke, Wright Brothers National Memorial First Flight Centennial Pavilion and the Rodanthe/Waves/Salvo Community Center.

Public outreach related to ORV use and management was expanded in the summer of 2006 to address public concerns related to the interim protected species management strategy/EA. One step taken by the park was to hire a public liaison. This position was designated to contact local stakeholders and create a list of interested parties. Throughout the summer, the liaison kept contact with these groups and also sent to the stakeholders a weekly list of areas closed to ORV use and other updates. These weekly resource reports were distributed to a list of more than 400 people. The park also invited the public when pre-nesting closures were being established. The park used this opportunity to inform the public regarding resource closures and to answer questions and concerns of the community.

During the development of an ORV management plan, the Seashore will once again actively involve the public in the process. The Seashore's goals for public participation include acceptance of the management plan by the public; substantive and valuable input to help guide Seashore decisions; and minimization of conflicts through dissemination of information and starting discussion. The Seashore will elicit public participation in the discussion of issues, areas to be studied, and alternatives. Future scoping and public involvement efforts could include public meetings or open houses, newsletters, workshops, website postings, and dissemination of information and gathering of comments through the internet. Other ideas to encourage public involvement included having meetings at multiple locations, use of other organizations' newsletters to discuss the project, providing information on local government access channels, and submitting comments through the NPS Planning, Environment, and Public Comment (PEPC) system. All electronic comments for this project will occur through the PEPC site at <http://parkplanning.nps.gov/caha>. The public scoping process will be coordinated with the negotiated rulemaking process so members of the negotiated rulemaking committee would have the public scoping comments regarding potential alternatives to consider in their development of alternatives. A public participation plan has been developed and will be edited and updated as the plan progresses.

The internal scoping meeting included a discussion about the potential for cooperating agencies. Possible cooperating agencies were based on their special expertise on species affected by ORV use is the North Carolina Department of Natural Resources Coastal Resources Division.

CONGRESSIONAL DELEGATES

- Elizabeth Dole, Senator
- Richard Burr, Senator
- Walter B. Jones, 3rd District Representative

STATE REPRESENTATIVES

- Marc Basnight, State Senator
- Richard Burr, Senator

FEDERAL AGENCIES

- Advisory Council on Historic Preservation, if adverse effects on historic properties or eligible for listing on the National Register of Historic Places are identified
- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Fish and Wildlife Service, Ecological Services, Raleigh Field Office
- U.S. Fish and Wildlife Service, Pea Island National Wildlife Refuge
- U.S. Geological Survey, Biological Resources Division

STATE AND LOCAL GOVERNMENTS

- Dare County Board of Commissioners and Planning Department
- Hyde County Board of Commissioners and Planning Department
- North Carolina Department of Environment and Natural Resources
 - Division of Coastal Management
 - Division of Marine Fisheries
 - Coastal Resources Commission
 - Wildlife Resources Commission
- North Carolina Natural Heritage Program
- North Carolina Department of Transportation
- North Carolina Highway Patrol
- North Carolina State Historic Preservation Officer

ORGANIZATIONS/OTHER

- 4 Plus Four Wheel Drive Club
- American Sportfishing Association
- Avon Property Owners Association

- Bluewater Network
- Cape Hatteras Anglers Club
- Cape Hatteras Bird Club
- Cape Hatteras Recreational Alliance
- Capital City Four Wheelers
- Coalition of NPS Retirees
- Defenders of Wildlife
- Eastern Surfing Association
- Environmental Defense
- Frisco Rod and Gun
- Graveyard of the Atlantic Museum
- Hatteras Village Civic Association
- Hyde County Chamber of Commerce
- Kinnakeet Homeowners Association
- League of Conservation Voters
- Nags Head Fishing Club
- Nags Head Woods Preserve
- National Parks Conservation Association
- Natural Resources Defense Council
- Network for Endangered Sea Turtles
- North Carolina Audubon
- North Carolina Coastal Federation
- North Carolina Aquarium
- North Carolina Beach Buggy Association
- North Carolina Fisheries Association

- Ocracoke Civic Association
- Outer Banks Preservation Association
- Outer Banks Association of Realtors
- Outer Banks Chamber of Commerce
- Outer Banks Lighthouse Society
- Outer Banks Surf Fishing Schools
- Outer Banks Visitor Bureau
- Oregon Inlet Fishing Center
- Recreational Fishing Alliance
- Rodanthe/Waves/Salvo Civic Association
- Sierra Club, North Carolina Chapter
- Southern Environmental Law Center
- Surf Riders Association
- The American Sportfishing Association
- The Nature Conservancy
- The Wilderness Society
- United Mobile Surf Fishing Association
- Watersports Industry Association

LIBRARIES AND NEWSPAPERS

- Dare County Library System
- Hyde County Library System
- Ocracoke Library
- Charlotte Observer
- Hatteras Monitor
- Island Breeze

- Ocracoke Observer
- Outer Banks Sentinel
- The Coastland Times
- Raleigh News and Observer
- The Virginian Pilot
- Richmond Times Dispatch
- Beaufort-Hyde News
- Associated Press
- Elizabeth City Advance
- North Beach Sun

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Advisory Council on Historic Preservation (36 CFR 800)

- 2001 Protection of Historic Properties. Implementing Regulations for Section 106 of the National Historic Preservation Act of 1966, as amended.

Bluewater Network

- 1999a Letter correspondence from Russell Long, Ph.D., Sean Smith, and Sheila Gallagher from the Bluewater Network to Robert Stanton, Director, National Park Service. In reference to a petition requesting an immediate ban on the use of all-terrain vehicles, dune buggies, sand buggies, and other four-wheel drive vehicles on all off-road areas in our National Park System. December 9, 1999.
- 1999b Off-the-Track: America's National Parks Under Siege. January.

Broili, Thayer – Cape Hatteras National Seashore

- 2007 Personal communication with Lori Gutman of the Louis Berger Group by telephone regarding the planned U.S. Army Corps of Engineers EIS at Oregon Inlet. July 12, 2007.

Consensus Building Institute and Fisher Collaborative Services (CBI and FCS)

- 2006 Cape Hatteras National Seashore: Negotiated Rulemaking Feasibility Report. April.

Cowardin, Lewis M., et al.

- 1979 Classification of Wetlands and Deepwater Habitats of the United States. Performed for the U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services. Washington, D.C., FWS/OBS-79/31.

Dare County

- 2003 Dare County Land Use Plan Summary. Accessed at www.co.dare.nc.us/Planning.

Federal Highways Administration (FHWA)

- 2007 Administrative Action: Supplement to the 2005 Supplemental Draft Environmental Impact Statement and Draft Section 4(f) Evaluation NC 12 Replacement of the Herbert C. Bonner Bridge.

Hyde County

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REFERENCES

2006 Hyde County, North Carolina CAMA Core Land Use Plan.

National Marine Fisheries Service and U.S. Fish and Wildlife Service (NMFS and USFWS)

1991a Recovery plan for U.S. population of loggerhead turtle. National Marine Fisheries Service, Washington, D.C. 64 pp.

1991b Recovery plan for U.S. Population of Atlantic green turtle. National Marine Fisheries Service, Washington, D.C. 52 pp.

1992 Recovery plan for leatherback turtles in the U.S. Caribbean, Atlantic and Gulf of Mexico. National Marine Fisheries Service, Washington, D.C. 65 pp.

National Oceanic and Atmospheric Administration (NOAA)

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National Parks Conservation Association

2004 The Cape Hatteras Access Preservation Alliance vs. the United States Department of Interior.

National Park Service, U. S. Department of the Interior (NPS)

nda Southeast Region Bird Conservation Initiative. Accessed at <http://southeast.fws.gov/birds/npsbirds.htm>.

ndb Office of Special Park Uses Cape Hatteras National Seashore: Activities That Require Special Use Permits. Accessed at www.nps.gov/caha/fees.html.

ndc Beach Driving. National Park Service Regulations for off-road vehicle use at Cape Hatteras National Seashore. Accessed at www.nps.gov/caha/bdriv/htm.

ndd Managing Bird Use and Public Use: A Balancing Act. Accessed at www.nps.gov/caha/manbird.htm.

nde Off-Road Vehicle Use and Planning Law and Policy National Park Service and Cape Hatteras National Seashore.

ndf Superintendent's Compendium: Closures, Permit Requirements, and Other Restrictions.

ndg Talking Points- ORV Use and The Beach-Driving Fee Permit Issue. Accessed at www.nps.gov/caha/beachpermit.htm.

ndh Superintendent's Order 10: Monitoring and Protection of Species of Concern.

1937 Cape Hatteras National Seashore Establishing Legislation. Congress. August.

- 1952 A Letter to the People of the Outer Banks. Prepared by Conrad L. Wirth, Director, National Park Service.
- 1974 Proposed Rule by the National Park Service to Implement the Interim Management Plan for Off-Road Vehicles in Cape Hatteras National Seashore. January.
- 1978a Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore. Manteo, North Carolina. November.
- 1978b A Proposed New Plan for Management of Off-Road Recreational Vehicle Use in Cape Hatteras National Seashore. January.
- 1978c Management Guidelines for Parks on Barrier Beaches. Prepared by Paul J. Godfrey. January.
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APPENDIX A: EXAMPLE OF NPS ORV REGULATIONS

Table A-1: Operator and Vehicle Requirements

| | Driver Requirements | Vehicle Requirements | Equipment Requirements |
|-------------------------------------|---|--|---|
| Assateague Island National Seashore | NA | <p>Four-Wheel Drive: Max. vehicle length = 26 feet Max. vehicle width = 8 feet Min. vehicle ground clearance = 7 inches Gross vehicle weight rating may not exceed = 10,000 pounds Max number of axles = 2</p> <p>Two-Wheel Drive (in addition to above): Min width of tire tread contact on sand = 8 inches each wheel (tires with regular snow/mud grip tread not acceptable)</p> <p>Superintendent may issue a single trip permit for a vehicle of greater weight or length when such use is not inconsistent with the purposes of the regulations.</p> | Shovel, jack, tow rope or chain, board or similar support for the jack, and low pressure tire gauge. |
| Big Cypress National Preserve | Valid state operator's license or learner's permit and accompanied by a licensed 18 years or older. | <p>Street Legal 4X4 Requirements: Working headlights and taillights, tires must have a minimum of 9 inches of tread face, vehicle will be weighed, and a photo will be taken.</p> <p>Other vehicle requirements are provided for airboats, swamp buggies, and ATV (three or four wheelers).</p> | <p>During dry periods, spark arrestor that meets Standard 5100-1a of the Forest Service may be required.</p> <p>From one-half hour after sunset to one-half hour before sunrise, vehicles must display at least one forward-facing white headlight and one red lighted taillight.</p> |
| Cape Cod National Seashore | Valid state operator's license and view an educational orientation program each season, and abide by all Seashore and off-road regulations. | <p>Four-wheel/all wheel or self-contained recreational vehicles must have valid state registration, inspection sticker, insurance, tires meeting stated standards, and all required equipment.</p> <p>Drivers required to decrease tire pressure before entering beach off-road corridor; 12 psi recommended, should not exceed 15 psi.</p> <p>Drivers responsible for filling all ruts or holes when their vehicle is stuck in the sand and must remove all debris used to extricate the vehicle.</p> | <p>Shovel, towing device, jack, jack support board, tire pressure gauge, spare tire.</p> <p>RVs and pick-up truck campers must also have a fire extinguisher and permanently mounted holding tanks.</p> |

APPENDIX A

| | Driver Requirements | Vehicle Requirements | Equipment Requirements |
|--------------------------------|---|---|------------------------|
| Fire Island National Seashore | Valid permit or other authorization for operation on the island, issued by the local government agency within whose jurisdiction the travel is to be performed. | Capable of four-wheel drive operation. Have a rated gross vehicle weight not in excess of 10,000 pounds. Conform to all applicable state laws regarding licensing, registration, inspection, insurance, and required equipment. | NA |
| Padre Island National Seashore | Valid operator's license or learner's permit; if learner's permit, must be with an adult who has a valid operators license. | Operable horn, windshield wiper or wipers, brake lights, and a rearview mirror. Valid license plates and valid state vehicle inspection certificate. | NA |

Table A-2: Operating Requirements

| | Rights-of-Way | Speed Limit | Areas of Operation | Route Designation |
|-------------------------------------|--|---|---|---|
| Assateague Island National Seashore | When two vehicles approach from opposite directions in same track, both operators shall reduce speed and operator with the ocean on his right shall pull out of the track and allow other vehicle to pass. ORVs shall be operated only in established tracks on designated portions of the park area and no such vehicles shall be operated on any portion of a dune except at posted crossings nor shall such vehicles be driven so as to cut circles or otherwise needlessly deface the sand. | 15 mph within 100 feet of any person not in a motor vehicle; 25 mph at all other times. | Oversand vehicle travel is permitted south of Assateague State Park, daily throughout the year at any time, on a designated oversand route bayward of the primary dune and on designated portions of a beach seaward of the primary dune. Some geographical areas where vehicle travel is prohibited are designated. During an emergency, the Superintendent may close the park, or suspend for such as period as he shall deem advisable, any or all of the regulations in the interest of public safety. | Oversand vehicles shall not be parked as to interfere with the flow of traffic on designated routes. Vehicles may not park overnight seaward of the primary dune unless one member of the party is actively engaged in fishing at all times and towed travel trailers used as self-contained vehicles may not be parked on a beach seaward of the primary dunes. |

| | Rights-of-Way | Speed Limit | Areas of Operation | Route Designation |
|-------------------------------|---|---|---|--|
| Big Cypress National Preserve | NA | 15 mph | Geographic restrictions designate areas where ORV are allowed to operate (area south and west of Loop Road and north of Tamiami Trail). Exceptions in areas closed to ORV use for reasonable access by legal residents or to provide access by authorized oil and gas companies. | Superintendent may temporarily or permanently close or restrict the use of any areas and routes by the posting of appropriate signs, or marking on a map, which shall be available for public inspection. Factors to consider in closing areas include other visitor uses, safety, wildlife management, noise, erosion, geography, vegetation, resource protection, and other management considerations. |
| Cape Cod National Seashore | When two vehicles meet on the beach, vehicle with water on the right has right-of-way. | 15 mph unless otherwise posted and 5 mph through self-contained camping areas and posted shorebird nesting areas. | Geographic and water features delineate corridor where ORV use allowed. Driving through inner dune routes, posted shorebird nesting areas, and lifeguard protected beaches prohibited. | Travel allowed along a marked corridor defined by a 10-foot offset from the spring high tide line to the berm crest at the normal high tide line. Foreshore and foredune areas are off limits except travel in the foreshore area when a beach cut has eliminated the legal off-road vehicle corridor. |
| Fire Island National Seashore | When two vehicles approach, both operators shall reduce speed and operator with the water to left shall yield the right of way by turning out of the track to the right. Travel across Seashore lands by motor vehicles with valid permits authorized only on days in which the island location, the point or origin, or destination is not served by alternative transportation. On days when alternative transportation is not provided, travel is limited to one round trip per vehicle with time restrictions. | 20 mph speed and 5 mph upon approaching or passing within 100 feet of any person not in a motor vehicle or when passing through or over any dune crossings. | Legislation details specific routes to be used for ORV operation. Boundaries marked by geographic locations and water features. Restrictions include boundaries based on the beach grass line. Other routes provided for limited travel by public utility and law enforcement vehicles and fire fighting apparatus. | In providing for access to the Island, there shall be maximum reliance on those means of transportation other than private motor vehicles and which have the minimum feasible impact on Seashore lands, which include a waterborne conveyance that is licensed for hire. Guidelines for hours of operation and schedule provided. |

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| | Rights-of-Way | Speed Limit | Areas of Operation | Route Designation |
|--------------------------------|--|---|---|--|
| Gulf Islands National Seashore | When two vehicles meet on an oversand route, both drivers shall reduce speed and driver who is traveling south or west shall yield the right-of-way. | 15 mph within 100 feet of any person not in a motor vehicle, 25 mph at all other times. | Legislation details specific routes to be used for ORV operation. Boundaries are marked by both geographic locations and water features. Designated routes shown on maps available at park headquarters and other park offices. Signs at the entrance of each route designate the route as open to ORV. | On beach routes, travel is permitted only between water's edge and a line of markers on the landward side. On inland routes, travel permitted only in the lane designated by pairs of markers. |
| Padre Island National Seashore | When two vehicles meet, operator of vehicle in southbound traffic shall yield right-of-way by turning out of the track to right. | 25 mph where driving is permitted on the beach. | Legislation details specific routes to be used for ORV operation. Boundaries are marked by geographic locations and the channel. | NA |

Table A-3: Enforcement and Other Requirements

| | Prohibited Vehicle Operations | Requires Permits (Yes/No) | Permitting Details (If Applicable) | Penalty for Violations |
|-------------------------------------|---|---------------------------|---|------------------------|
| Assateague Island National Seashore | No permit will be issued for vehicles not equipped to travel over sand and that does not conform to applicable state laws having to do with licensing, registering, inspecting, and insuring of such vehicles. Passengers shall not ride in any position outside of a moving oversand vehicle and such vehicles shall not be used to tow a person on any recreational device over the sand or in the air or water. | Yes—\$70 fee | No vehicle, other than authorized emergency vehicles, shall be operated on the beach or designated oversand route except under an oversand permit issued by Superintendent. Permits are not transferable and shall be carried by the operator of the vehicle for which it has been issued. | NA |
| Big Cypress National Preserve | Vehicles shall not be operated in a manner causing, or likely to cause, significant damage to or disturbance of soil, wildlife habitat, improvements, cultural, or vegetative resources. Cutting, grading, filling, or ditching to establish new trails or to improve old trails is prohibited, except under written permit where necessary in the exploration for, extraction, or removal of oil and gas. Any device used to push aside, shear off, or otherwise damage vegetation is prohibited. Tire chains, bar grips, and other devices affixed to tires are prohibited. | Yes—\$50 | Following permits are required: inspection permit (free upon vehicle meeting specifications) ORV operator's license (free after taking orientation course) ORV permit on vehicle (\$50, must be renewed annually) backcountry use permit (free) Note: owners of private property within preserve boundaries issued a free special use permit that allows reasonable access to and from their property. | NA |

| | Prohibited Vehicle Operations | Requires Permits (Yes/No) | Permitting Details (If Applicable) | Penalty for Violations |
|--------------------------------|---|---|--|--|
| Cape Cod National Seashore | Riding on exterior portion of a vehicle not designed to carry passengers prohibited. Portions of beach may be closed to driving due to changing beach conditions. Parking permitted only on legal off-road vehicle corridor. | Yes—Annual \$150 Weekly \$30 Annual Self-Contained Vehicle = \$225 7-day Self-Contained Vehicle = \$75 | Number of annual permits limited to 150/day, up to 3,000 total. 400 seven-day permits issued. Purchasers of annual off-road or self-contained permits must pass vehicle and accessory equipment inspection. | NA |
| Fire Island National Seashore | No motor vehicle shall be operated on any portion of a dune on Seashore lands except at dune crossings. | Yes—not required for vehicles operated by a duly constituted law enforcement agency having jurisdiction within the Seashore. Permits issued for one-year period, with a fee of \$50. Not transferable to another motor vehicle or new owner. Permits may contain limitations or conditions as Superintendent deems necessary for resource protection, public safety, or visitor enjoyment including restrictions on locations where vehicles can travel, time, dates, or frequency of travel. | The following may apply for a permit: year-round residents persons who held part-time permits prior to January 1, 1978 those providing services essential to public facilities and the occupancy of island residents those who desire motor vehicle access to the Seashore to engage in fishing or hunting owners of estates in real property on the island who demonstrate a need for temporary access holders of reserved rights of use and occupancy Criteria for consideration of a permit are provided. No permits issued for the convenience of travel. Limits provided on the number of permits allowed for various use types. | Superintendent may suspend or revoke permit of a motor vehicle for violations. |
| Gulf Islands National Seashore | Two-wheel drive vehicles; motorcycles; all-terrain vehicles; or any vehicle not meeting state requirements for on-road use. Towing of trailers on oversand routes prohibited. | Yes—fee based | No vehicle shall operate on a designated oversand route without valid permit. Permits are not transferable to another vehicle or driver and the driver on the permit must be present in the vehicle. No permit shall be valid for more than one year, but may be issued for lesser periods. | Superintendent may revoke permit of the person committing a violation or in whose vehicle a violation was committed. No person whose permit has been revoked shall be issued a permit for a period of one year following revocation. |
| Padre Island National Seashore | Ground effect or aircushion vehicles; vehicles propelled by wind (sail cars); towing of persons behind vehicle in any way; and riding on any position outside the vehicle. | No – because of road status of the beach | NA | NA |

**APPENDIX B: CAPE HATTERAS NATIONAL SEASHORE ORV
MANAGEMENT TIMELINE**

SUMMARY OF ORV MANAGEMENT AT CAPE HATTERAS NATIONAL SEASHORE

- 1937 – Cape Hatteras becomes the nation’s first national seashore.
- 1954 – North Carolina State Highway 12 (NC-12) was paved, providing a formal transportation route for local residents.
- 1963 – Completion of Bonner Bridge, connecting Bodie and Hatteras Islands.
- 1972 – In response to Executive Order 11644, Use of Off-Road Vehicles on the Public Lands, Cape Hatteras National Seashore develops a draft management plan for ORV use.
- 1977 – In response to Executive Order 11989, Off-Road Vehicles on Public Lands, Cape Hatteras National Seashore initiated the development of an ORV management plan.
- 1978 – *Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore* was issued (November).
- 1980 – The North District Ranger prepared the *ORV Plan North District Cape Hatteras National Seashore*, which included the comments and suggestions of concerned individuals.
- 1984 – The *General Management Plan/Development Concept Plan/Environmental Assessment: Cape Hatteras National Seashore* was completed, which set forth the basic philosophy to guide management, development, and use of the Seashore.
- December 9, 1999 – A petition was submitted, on behalf of the Bluewater Network and 70 environmental organizations, requesting rulemaking for some affected parks in the national park system. Cape Hatteras National Seashore was specifically mentioned as one of these parks.
- 2004 – Superintendent’s Order #07, ORV Management, was issued, which aimed to resolve ORV issues created by Hurricane Isabel.
- A Petition for Rulemaking Governing Off-Road Vehicle Use in Cape Hatteras National Seashore was submitted by the National Parks Conservation Association, the Wilderness Society, and the Natural Resources Defense Council to the Secretary of the Interior, the Director of the NPS, and the Superintendent of the Seashore.
- March 2005 – The negotiated rulemaking process at Cape Hatteras National Seashore was initiated, beginning with the feasibility assessment.
- May 17, 2005 – Defenders of Wildlife, a non-profit environmental organization, issued a notice of intent to sue the NPS for alleged violations of the Endangered Species Act, 16 USC 1531 et seq., National Environmental Policy Act, 42 USC 4321 et seq., the Migratory Bird Treaty Act, 16 USC 703 et seq., the NPS Organic Act, 16 USC 1601 et seq., and the enabling legislation for Cape Hatteras National Seashore, 50 Stat. 669 (1937).
- January 2006 – The interim protected species management strategy/environmental assessment was released for public review and comment.

April 2006 – The final feasibility report for the Negotiated Rulemaking process was released, recommending that the park proceed with the negotiated rulemaking process.

The proposed list of negotiated rulemaking representatives was released.

December 11, 2006 – The Seashore released a Notice of Intent to Begin the Off-Road Vehicle Management Plan and Environmental Impact Statement process.

2007 – Public scoping meetings for the long-term ORV plan/EIS were held on February 26 (Buxton, NC), February 27, (Kill Devil Hills, NC), February 28 (Raleigh, NC), and March 1 (Washington, DC).

February – The Seashore holds a workshop on “Participating in the Negotiated Rulemaking Process” as pre-convening meeting to the Negotiated Rulemaking Committee.

May – A second pre-convening workshop for the proposed Negotiated Rulemaking Committee was held.

July – A draft Notice of Intent to Proceed with Negotiated Rulemaking was published in the Federal Register and the Finding of No Significant Impact for the interim protected species management strategy/EA was signed.

APPENDIX C: ENVIRONMENTAL SCREENING FORM

Appendix 1 – Environmental Screening Form (November 2003)

This form should be attached to all documents sent to the regional director's office for signature. Sections A and B should be filled out by the project initiator (may be coupled with other park project initiation forms). Sections C, D, E, and G are to be completed by the interdisciplinary team members. While you may modify this form to fit your needs, you must ensure that the form includes information detailed below and must have your modifications reviewed and approved by the regional environmental coordinator.

A. PROJECT INFORMATION

Park Name Cape Hatteras National Seashore
Project Number _____

Project Type (Check):

- Cyclic
- Cultural Cyclic
- Repair/Rehab
- ONPS
- NRPP
- CRPP
- FLHP
- Line Item
- Fee Demo
- Concession Reimbursable
- Other
(specify) ORV Management Plan/EIS

Project Location North Carolina
Project Originator/Coordinator _____
Project Title _____
Contract # _____
Contractor Name _____
Administrative Record Location _____
Administrative Record Contact _____

B. PROJECT DESCRIPTION/LOCATION [To begin the statutory compliance file, attach to this form, maps, site visit notes, agency consultation, data, reports, categorical exclusion form (if relevant), or other relevant materials.]

Preliminary drawings attached? Yes No
Background info attached? Yes No
Date form initiated _____
Anticipated compliance completion date _____
Projected advertisement/Day labor start _____
Construction start _____

C. RESOURCE EFFECTS TO CONSIDER (Tailor the following to meet individual park/unit project needs.)

Please see section F (Instructions for Determining Appropriate NEPA Pathway) prior to completing this section. Also, use the process described in DO-12, 2.9 and 2.10; 3.5; 4.5(G) to (G)(5) and 5.4(F) to help determine the context, duration and intensity of effects on resources.

| Are any impacts possible on the following physical, natural or cultural resources? | Yes | No | Data Needed to Determine |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Geological resources-soils, bedrock, streambeds, etc. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. From geohazards | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Air quality | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Soundscapes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Water quality or quantity | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Streamflow characteristics | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Marine or estuarine resources | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Floodplains or wetlands | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Land use, including occupancy, income, values, ownership, type of use | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Rare or unusual vegetation-old growth timber, riparian, alpine | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Unique ecosystems, biosphere reserves, World Heritage sites | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13. Unique or important wildlife or wildlife habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Unique or important fish or fish habitat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Introduce or promote nonnative species (plant or animal) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Recreation resources, including supply, demand, visitation, activities, etc. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Visitor experience, aesthetic resources | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Cultural resources, including cultural landscapes, ethnographic resources | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Minority and low-income populations, ethnography, size, migration patterns, etc. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 21. Energy resources | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 22. Other agency or tribal land use plans or policies | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 23. Resource, including energy, conservation potential | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 24. Urban quality, gateway communities, etc. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 25. Long-term management of resources or land/resource productivity | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Other important environmental resources (e.g., geothermal, paleontological resources) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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| D. Mandatory Criteria: If implemented, would the proposal: | Yes | No | Data Needed to Determine |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| A. Have material adverse effects on public health or safety? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Have highly controversial environmental effects? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| K. involve unresolved conflicts concerning alternative uses of available resources (NEPA sec. 102(2)(E)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| L. Have a disproportionate, significant adverse effect on low income or minority populations (EO 12898). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| O. Contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth or expansion of the range of nonnative invasive species (EO 13112). | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| R. Have the potential to be controversial because of disagreement over possible environmental effects. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| S. Have the potential to violate the NPS Organic Act by impairing park resources or values? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

E. OTHER INFORMATION (Please answer the following questions/provide requested information.)

- Are personnel preparing this form familiar with the site? Yes No
- Did personnel conduct a site visit? Yes No *(If yes, attach meeting notes or additional pages noting when site visit took place, who attended, etc.)*
- Is the project in an approved plan such as a General Management Plan or an Implementation Plan with an accompanying environmental document? Yes No
If so, plan name _____
- Is the project still consistent with the approved plan? Yes No *(If no, prepare plan/EA or EIS.)*
- Is the environmental document accurate and up-to-date? Yes No *(If no, prepare plan/EA or EIS.)* FONSI/ ROD (Check) Date approved _____
- Are there any interested or affected agencies or parties? Yes No
- Did you make a diligent effort to contact them? Yes No
- Has consultation with all affected agencies or tribes been completed? Yes No
(If so, attach additional pages detailing the consultation, including the name, the dates, and a summary of comments from other agencies or tribal contacts.)
- Are there any connected, cumulative, or similar actions as part of the proposed action?
 Yes No *(If so, attach additional pages detailing the other actions.)*

F. INSTRUCTIONS FOR DETERMINING APPROPRIATE NEPA PATHWAY

First, always check DO-12, section 3.2, "Process to Follow" in determining whether the action is categorically excluded from additional NEPA analyses. Other sections within DO-12, including sections 2.9 and 2.10; 3.5; 4.5(G)(4) and (G)(5), and 5.4(F), should also be consulted in determining the appropriate NEPA pathway. Complete the following tasks: conduct a site visit or ensure that staff is familiar with the site's specifics; consult with affected agencies, and/or tribes; and interested public and complete this environmental screening form.

If your action is described in DO-12 section 3.3, "CE's for Which No Formal Documentation is Necessary," follow the instructions indicated in that section.

If your action is not described in DO-12, section 3.3, and IS described in section 3.4, AND you checked yes or identified "data needed to determine" impacts in any block in section D (Mandatory Criteria), this is an indication that there is potential for significant impacts to the human environment, therefore, you must prepare an EA or EIS or supply missing information to determine context, duration and intensity of impacts.

If your action is described in section 3.4 and NO is checked for all boxes in section D (Mandatory Criteria), BUT you have initially checked "yes" in section C (Resource Effects to Consider) during internal scoping, this means that the team should do additional analyses to determine the context, duration and intensity of effects. If the magnitude of effects is then determined to be at the negligible or minor level, then usually there is no potential for significant impacts, then an EA or EIS is not required. If, however, during internal scoping and further investigation, resource effects still remain unknown, or are at the minor to moderate level of intensity, and the potential for significant impacts may be likely, an EA or EIS is required.

In all cases, data collected to determine the appropriate NEPA pathway must be included in the administrative record.

G. INTERDISCIPLINARY TEAM SIGNATORY (All interdisciplinary team members must sign.)

By signing this form, you affirm the following: you have either completed a site visit or are familiar with the specifics of the site; you have consulted with affected agencies and tribes; and you, to the best of your knowledge, have answered the questions posed in the checklist correctly.

| Interdisciplinary Team Leader Name | Field of Expertise | Date Signed |
|------------------------------------|--------------------|-------------|
| | | |
| Technical Specialists Names | Field of Expertise | Date Signed |
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H. SUPERVISORY SIGNATORY

Based on the environmental impact information contained in the statutory compliance file and in this environmental screening form, environmental documentation for the subject project is complete.

Recommended:

| Compliance Specialist | Telephone Number | Date |
|-----------------------|------------------|------|
| | | |

Approved:

| Superintendent | Telephone Number | Date |
|----------------|------------------|------|
| | | |