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CAHA

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*1st draft - please print
from L drive*

Hi Sandy,
Here is Chapter 1 for your review. Either Lori or I will get you an update on Chapter 3 as I get through more of it.
Regards,
Nancy

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TABLE OF CONTENTS

1

2

3 Purpose of and Need for Action 1

4 Purpose of the Plan / Environmental Impact Statement 1

5 Need for Action 1

6 Objectives in Taking Action 2

7 Management Methodology 3

8 Natural Physical Resources 3

9 Threatened, Endangered, and Other Protected Species 3

10 Vegetation 3

11 Other Wildlife and Wildlife Habitat 3

12 Cultural Resources 4

13 Visitor Use and Experience 4

14 Visitor Safety 4

15 Park Operations 4

16 Project Study Area 4

17 Park Background 4

18 History of Cape Hatteras National Seashore 4

19 Summary of Off-Road Vehicle Use and Management at Cape Hatteras National Seashore 7

20 Purpose and Significance of Cape Hatteras National Seashore 13

21 Interim Protected Species Management Strategy / Environmental Assessment (2006) and Finding of

22 No Significant Impact (2007) 14

23 Legal Framework and History of Litigation 15

24 Scoping Process and Public Participation 18

25 Public Scoping Meetings 18

26 Public Alternative Development Workshops 19

27 Regulatory Negotiation Process 19

28 Issues and Impact Topics 20

29 Geologic Resources 20

30 Air Quality 21

31 Soundscapes 21

32 Floodplains and Wetlands 22

33 Wildlife and Wildlife Habitat 22

34 Rare, Unique, Threatened, and Endangered Species 23

1 Visitor Experience.....24
2 Cultural and Historic Resources.....26
3 Socioeconomics.....26
4 Seashore Management and Operations27
5 Issues Considered but Dismissed from Further Consideration27
6 Federal Laws, Policies, Regulations and Plans Directly Related to Off-Road Vehicle Management30
7 Other Applicable Federal Laws, Policies, Regulations and Plans.....31
8 Relationship to Other Cape Hatteras National Seashore Planning Documents, Policies and Actions 43
9 Relationship to Other Federal Planning Documents and Actions50
10 Relationship to Other State and Local Planning Documents, Policies, Actions, Laws, and
11 Regulations.....51
12 REFERENCES.....57

13
14
15
16
17
18
19
20
21
22
23
24

1 **PURPOSE OF AND NEED FOR ACTION**

2 This "Purpose of and Need for Action" chapter explains what this plan intends to accomplish and why the
 3 National Park Service (NPS) is taking action at this time to evaluate a range of alternatives and
 4 management actions for off-road vehicle (ORV) use at Cape Hatteras National Seashore (the Seashore or
 5 park). This *ORV Management Plan and Environmental Impact Statement* (plan/EIS) presents three action
 6 alternatives for managing ORV use and assesses the impacts that could result from continuing current
 7 management (the no-action alternative) or implementation of any of the action alternatives. Upon
 8 conclusion of this plan and decision-making process, the alternative selected for implementation will
 9 become the ORV management plan, which will guide the management and control of ORVs at the
 10 Seashore for the next 15 to 20 years. It will also form the basis for a special regulation to manage ORV
 11 use at the Seashore. Brief summaries of both the purpose and need are presented here; however, more
 12 information is available in the "Park Background" section of this chapter.

13 **PURPOSE OF THE PLAN / ENVIRONMENTAL IMPACT STATEMENT**

14 The purpose of this plan/EIS is to develop regulations and procedures that manage ORV use/access in the
 15 Seashore to protect and preserve natural and cultural resources and natural processes, provide a variety of
 16 appropriate visitor use experiences while minimizing conflicts among various users, and promote the
 17 safety of all visitors. [for DEIS, include sidebar definition of ORV]

18 **NEED FOR ACTION**

19 Cape Hatteras National Seashore provides a variety of visitor experiences, including the use of ORVs. In
 20 addition to recreation opportunities, the Seashore is home to important habitats created by the Seashore's
 21 dynamic environmental processes, including habitats for several federally listed species such as the piping
 22 plover (*Charadrius melodus*); three species of sea turtles (loggerhead [*Caretta caretta*], green [*Chelonia*
 23 *mydas*], and leatherback [*Dermochelys coriacea*]); and one plant species, the seabeach amaranth
 24 (*Amaranthus pumilus*). Two other federally listed sea turtle species, the hawksbill (*Eretmochelys*
 25 *imbricata*) and Kemp's ridley (*Lepidochelys kempii*), occupy the surrounding waters. In addition, the
 26 Seashore provides nesting habitat for several species of state-listed colonial waterbirds, including the
 27 common tern (*Sterna hirundo*), least tern (*Sterna antillarum*), gull-billed tern (*Sterna nilotica*), and black
 28 skimmer (*Rynchops niger*). Solitary nesters, such as the American oystercatcher (*Haematopus*
 29 *palliatu*s) and Wilson's plover (*Charadrius wilsonia*), also use Cape Hatteras National Seashore as a
 30 breeding ground, and the red knot (*Calidris canutus rufa*) uses the Seashore as wintering habitat during

1 spring and fall migrations. This ORV management planning effort is based on recognition by the NPS
 2 that ORVs must be regulated in a manner that is not only consistent with applicable law, but also
 3 appropriately addresses resource protection (including protected, threatened, and endangered species),
 4 potential conflicts among the various Seashore users, and visitor safety.

5 Executive Order 11644, issued in 1972 and amended by Executive Order 11989 in 1977, states that
 6 federal agencies allowing ORV use must designate specific areas and trails on public lands on which the
 7 use of ORVs may be permitted and areas in which use may not be permitted. Agency regulations to
 8 authorize ORV use provide that designation of such areas and trails will be based on protecting resources
 9 of public lands, promoting the safety of all users of those lands, and minimizing conflicts among the
 10 various uses on those lands. Executive Order 11644, *Use of Off-Road Vehicles on the Public Lands*, was
 11 issued in response to the widespread and rapidly increasing use of ORVs on public lands “often for
 12 legitimate purposes but also in frequent conflict with wise land and resource management practices,
 13 environmental values, and other types of recreational activity.” Code of Federal Regulations (CFR) Title
 14 36, Section 4.10(b) contains regulations regarding vehicles and traffic safety on National Park Service
 15 lands and requires that “routes and areas designated for ORV use shall be promulgated as special
 16 regulations” and that the designation of routes and areas “shall comply with §1.5 of this chapter and E.O.
 17 11644 (37 FR 2887)”. In addition, such routes and areas may be designated only in national recreation
 18 areas, national seashores, national lakeshores, and national preserves.

19 Therefore, an ORV management plan for Cape Hatteras National Seashore is needed at this time to

- 20 • Bring the Seashore in compliance with Executive Orders 11644 and 11989 respecting ORV
 21 use, and with NPS laws, regulations (36 CFR 4.10), and policies to minimize impacts to
 22 Seashore resources and values.
- 23 • Address the lack of an approved plan, which has led over time to inconsistent management of
 24 ORV use, user conflicts, and safety concerns.
- 25 • Provide for protected species management in relation to ORV use upon expiration of the *Cape*
 26 *Hatteras National Seashore Interim Protected Species Management Strategy/Environmental*
 27 *Assessment* (interim strategy/EA) (NPS 2006a) and associated Biological Opinion and
 28 Amendment (USFWS 2006 and 2007).

29 **OBJECTIVES IN TAKING ACTION**

30 Objectives are “what must be achieved to a large degree for the action to be considered a success” (NPS
 31 2001, 22). All alternatives selected for detailed analysis must meet project objectives to a large degree and

1 resolve the purpose of and need for action. Objectives must be grounded in the Seashore’s enabling
2 legislation, purpose, significance, and mission goals, and must be compatible with direction and guidance
3 provided by the Seashore’s general management plan, strategic plan, and/or other management guidance.
4 The following are objectives identified by Seashore staff for developing this ORV management plan/EIS.

5 **MANAGEMENT METHODOLOGY**

- 6 • Identify criteria to designate ORV use areas and routes.
- 7 • Establish ORV management practices and procedures that have the ability to adapt in response to
8 changes in the Seashore’s dynamic physical and biological environment.
- 9 • Establish a civic engagement component for ORV management.
- 10 • Establish procedures for prompt and efficient public notification of beach access status including
11 any temporary ORV use restrictions for such things as ramp maintenance, resource and public
12 safety closures, storm events, etc.
- 13 • Build stewardship through public awareness and understanding of NPS resource management and
14 visitor use policies and responsibilities as they pertain to the Seashore and ORV management.

15 **NATURAL PHYSICAL RESOURCES**

- 16 • Minimize impacts from ORV use to soils and topographic features, for example, dunes, ocean
17 beach, wetlands, tidal flats, and other features.

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

- 19 • Provide protection for threatened, endangered, and other protected species (e.g., state-listed
20 species) and their habitats, and minimize impacts related to ORV and other uses as required by
21 laws and policies, such as the *Endangered Species Act*, the *Migratory Bird Treaty Act* (MBTA),
22 and NPS laws and management policies.

23 **VEGETATION**

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

25 **OTHER WILDLIFE AND WILDLIFE HABITAT**

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

1 **CULTURAL RESOURCES**

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

4 **VISITOR USE AND EXPERIENCE**

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

7 **VISITOR SAFETY**

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

9 **PARK OPERATIONS**

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

13 **PROJECT STUDY AREA**

14 The geographic study area for this ORV management plan/EIS is Cape Hatteras National Seashore in
15 North Carolina (figure 1), unless otherwise noted under each resource topic.

16 **PARK BACKGROUND**

17 **HISTORY OF CAPE HATTERAS NATIONAL SEASHORE**

18 Officially authorized in 1937 along the Outer Banks of North Carolina, Cape Hatteras is the nation's first
19 national seashore. Consisting of more than 30,000 acres distributed along approximately 64 miles of
20 shoreline, the Seashore is part of a dynamic barrier island system. The Outer Banks of North Carolina
21 formed as a result of changes in sea level, wave and wind action, and ocean currents. These factors
22 continue to influence the islands today through the processes of erosion and accretion of the shoreline;
23 overwash across the islands; and the formation, migration, and closure of the inlets (NPS 1979, 7). Since

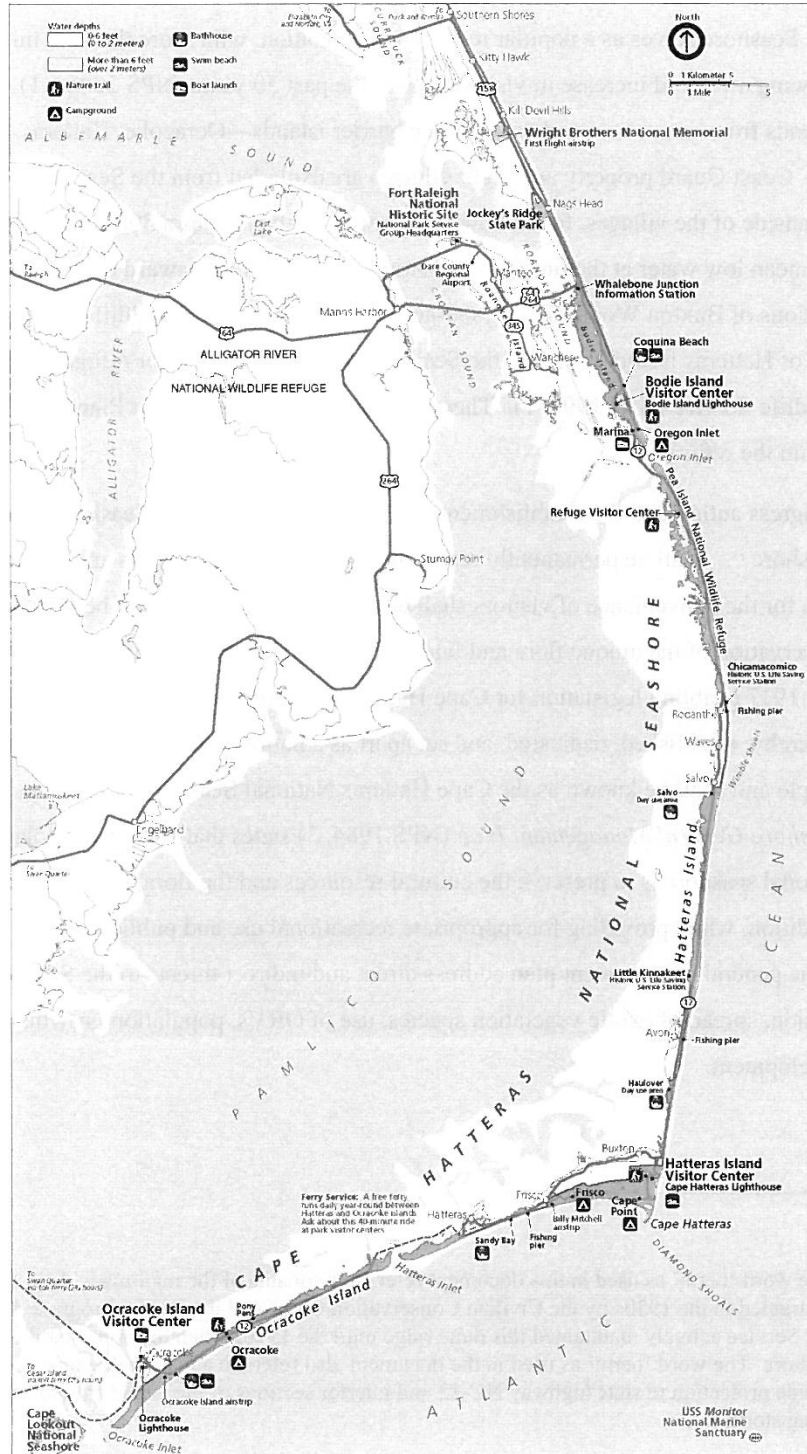
1 the 1930s, these natural processes have been influenced by human actions such as building sand berms¹ to
2 protect roads and homes and dredging inlets.

3 The Seashore serves as a popular recreation destination, with more than 2.2 million visitors in 2007
4 showing a 12-fold increase in visitation over the past 50 years (NPS 2008a, 1). Federal ownership
5 extends from ocean to sound across three barrier islands—Ocracoke, Hatteras, and Bodie (figure 1). The
6 U.S. Coast Guard property and eight villages are excluded from the Seashore boundaries. On the
7 oceanside of the villages, federal ownership was established as a 500-foot strip measured landward from
8 the mean low water at the time of acquisition. A larger area seaward of Buxton and Frisco includes
9 portions of Buxton Woods. The 5,880-acre Pea Island National Wildlife Refuge, located at the northern
10 end of Hatteras Island, is part of the Seashore, but administered for refuge purposes by the U.S. Fish and
11 Wildlife Service (NPS 1997, 1). Therefore, this ORV Management Plan/EIS will not include the area
12 within the refuge.

13 Congress authorized the establishment of Cape Hatteras National Seashore as a unit of the NPS so that the
14 Seashore "...shall be permanently reserved as a primitive wilderness and no development of the project or
15 plan for the convenience of visitors shall be undertaken which would be incompatible with the
16 preservation of the unique flora and fauna or the physiographic conditions now prevailing in this area."
17 The 1937 enabling legislation for Cape Hatteras National Seashore also states that "... areas shall be, and
18 is hereby, established, dedicated, and set apart as a national seashore for the benefit and enjoyment of the
19 people and shall be known as the Cape Hatteras National Seashore." The *Cape Hatteras National*
20 *Seashore General Management Plan* (NPS 1984, 3) states that "the overall planning objective for the
21 national seashore is to preserve the cultural resources and the flora, fauna, and natural physiographic
22 condition, while providing for appropriate recreational use and public access..." Management proposals
23 in the general management plan address direct and indirect threats to the Seashore such as shoreline
24 erosion, spread of exotic vegetation species, use of ORVs, population growth, and increasing
25 development.

¹ The word 'berm' as used in this document 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 document 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 Figure 1: Cape Hatteras National Seashore Map (will be 11x17 foldout)



1 Cape Hatteras National Seashore's enabling legislation provides for both visitor use and resource
2 protection. Visitors to the Seashore participate in a variety of recreational activities, including beach
3 recreation (swimming, windsurfing, waterskiing, kiteboarding, etc.), fishing (surf and boat), beach
4 driving, motorized boating, camping, shell collecting, historical tourism, nature study, harvesting of
5 shellfish, non-motorized boating (sailing, kayaking, canoeing), hunting, hiking, and photography.

6 Seashore visitors use ORVs for fishing, sightseeing, traveling to and from swimming and surfing areas,
7 and pleasure driving. The number of recreation visitors to the Seashore has grown from 1,510,237 in
8 1980 to 2,237,378 in 2007, a growth of approximately 48%. Over the last few years, visitation to the
9 Seashore has stabilized at approximately 2.2 million visitors per year (NPS 2008a, 1)

10 Current management allows ORV users to drive on the beach in front of the primary dune line. Users can
11 drive vehicles on ramps to cross between the beach and NC-12 that runs behind the primary dune line.
12 This road is critical for vehicles because it allows a way around full beach closures or areas where the
13 high tide line limits beachfront access. Vehicles are allowed to cross from the beach to NC-12 only using
14 ramps.

15 In addition to a multitude of visitor use opportunities, the Seashore provides a variety of important
16 habitats created by the Seashore's dynamic environmental processes, including those for the federally
17 listed piping plover; sea turtles, and one listed plant species, the seabeach amaranth. As noted in the
18 "Need for Action" section, the Seashore also hosts colonial waterbirds, the American oystercatcher, and
19 other species of concern such as the Wilson's plover and red knot. Cape Hatteras National Seashore is
20 home to many other ecologically important habitats such as marshes, tidal flats, and riparian areas.
21 Management of these habitats and species at the Seashore occurs within the context of visitor use
22 patterns, which include the use of ORVs.

23 **SUMMARY OF OFF-ROAD VEHICLE USE AND MANAGEMENT AT CAPE HATTERAS NATIONAL** 24 **SEASHORE**

25 ORV management has become an issue of concern in many NPS parks in recent years. Management plans
26 and regulations were developed for multiple units including Cape Cod National Seashore, Fire Island
27 National Seashore, Assateague Island National Seashore, Padre Island National Seashore, and Big
28 Cypress National Preserve. Before 1954, local residents and visitors used the beaches at Cape Hatteras
29 National Seashore for vehicular transportation purposes because there were few formal roads in this
30 remote area. Since the main purpose of beach driving was transportation, and not recreation, the number
31 of ORVs on the beach was much less than it is today. In 1954, NC-12 was paved, providing a formal

1 transportation route. The paving of NC-12, the completion of the Bonner Bridge connecting Bodie and
2 Hatteras Islands in 1963, and the introduction of the State of North Carolina ferry system to Ocracoke
3 Island facilitated visitor access to the sound and ocean beaches and resulted in increased vehicle use on
4 beaches for recreational purposes (NPS 2004a, 1). Residents adopted the use of ORVs for commercial
5 netting of fish, while sport fishermen used ORVs to pursue migrating schools of game fish and reach
6 more productive areas, such as Cape Point or the inlets, often a mile or more from the nearest paved
7 surface. Presently, at the sound and ocean beaches, ORVs are used for commercial and recreational
8 fishing, sightseeing, travel to and from swimming and surfing areas, and pleasure driving (NPS 2004b, 1).
9 ORVs access the sounds and beaches via a system of ramps located off NC-12. The ramps began as an
10 informal system of unimproved access points connecting the roadway to the sounds and beaches. Over
11 time, this system was formalized and the oceanside ramps are now numbered, maintained, and identified
12 on the Seashore's ORV route maps as official vehicle access routes for beach access. In 1978 there were
13 28 identified ramps, 22 of which were located on NPS lands. Although the NPS opened a new ramp to the
14 public in 1998, the number of ramps has decreased since 1978 as some were lost to erosion and others
15 were closed to the public and are now used for administrative vehicle access only (NPS 2004a, 2). The
16 NPS currently has 17 oceanside access ramps available for public ORV use (NPS 2008b, 1). ORV use at
17 Cape Hatteras National Seashore has been managed through various plans. In 1973, in response to
18 Executive Order 11644, *Use of Off-Road Vehicles on the Public Lands* (February 8, 1972), the Seashore
19 developed a plan for ORV management (NPS 2004b, 1) that included:

- 20 • Designation of 27 beach access routes or ramps;
- 21 • Identification of a permitted area for travel from the toe of the dune to the ocean;
- 22 • License requirements for vehicles and operators;
- 23 • Closure of one heavily eroded section of the beach near the Cape Hatteras lighthouse year round;
24 and
- 25 • Designation of seasonal closures in five areas heavily used by pedestrians between May 26 and
26 September 10 (NPS 1978, 3)

27 This management plan was not finalized or published as a special regulation, as required by the executive
28 order.

29 A few years later, in response to Executive Order 11989, *Off-Road Vehicles on Public Lands* (May 24,
30 1977), the Seashore began developing an ORV management plan for Cape Hatteras National Seashore. In
31 response to this plan, which was released in January 1978, the North Carolina Beach Buggy Association

1 and the Outer Banks Preservation Association each issued proposed alternative plans for ORV
 2 management at the Seashore. These proposed plans were considered by the Seashore, along with public
 3 comment, and in November 1978 the *Draft Interim Management Plan: Off-Road Vehicle Use, Cape*
 4 *Hatteras National Seashore* was issued (NPS 1978a, 2). The Seashore implemented the following plan
 5 components:

- 6 • Consolidating and clearly marking entrance and exit points to soundside areas;
- 7 • Establishing sea turtle and bird nesting protection zones;
- 8 • Increasing efforts to provide signage and other information concerning beach conditions and open
 9 and closed areas; and
- 10 • Providing better maintenance of access routes and ramps.

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

- 16 • Zone 1 – Ocean Beach: In this zone ORVs will be permitted landward from 150 feet of the
 17 existing tideline, but no closer than 20 feet to the toe of the dune or vegetation line. Portions of
 18 Zone 1 may be closed seasonally (May 15 through September 15), or closed temporarily to
 19 protect nesting birds or sea turtles, or when the distance between the existing tide and the toe of
 20 the dune or the vegetation line is reduced to less than 100 feet. Permits must be issued for
 21 vehicles that have less than four weight-bearing wheels and do not meet all vehicular licensing
 22 and inspection requirements of their state of origin.
- 23 ▪ Zone 1(a) – Seasonally closed areas include:
 - 24 Those Zone 1 areas, which due to seasonal heavy pedestrian, swimming, wildlife or other
 25 use, are deemed seasonally unsuitable for ORV use;
 - 26 Seasonally closed areas shall be identified by signs at both ends of the area, and shall be
 27 indicated on maps available for viewing at the offices of the Superintendent and of each
 28 District Ranger;

1 Dates of seasonal closures shall be May 15 through September 15 of each year, except on
 2 Pea Island National Wildlife Refuge, where the Refuge Manager shall post such closures
 3 as he may find necessary to implement the regulations of the USFWS; and

4 Seasonally closed areas shall consist of, but not be limited to, the following areas: Bodie
 5 Island, milepost 0 to milepost 3; beach areas fronting villages of Rodanthe, Waves,
 6 Salvo, and Avon; northern boundary of Buxton to one mile south of the Cape Hatteras
 7 Lighthouse; beach fronting the villages of Frisco and Hatteras; milepost 49 to milepost
 8 54; and Ocracoke Island milepost 65 to 70.

9 ▪ Zone 1(b) – Temporarily closed sections include:

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

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

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

- 26 • Zone 2 – Soundside: Marsh and flat land west and northwest of NC-12. Vehicular traffic shall be
 27 confined to marked trails, posted as open. No permit shall be required.
- 28 • Zone 3 – Buxton Woods, Open Ponds: That area of grassed dunes and forest lands lying between
 29 Headquarters, Cape Hatteras Group Coast Guard, and Frisco Campground. The area is roughly
 30 bounded on the south by the ocean dunes; on the east by a northeast-southwest trending line lying
 31 west of the Cape Point Campground, Coast Guard Group Headquarters, and NPS residence-
 32 maintenance area complex; on the north by the NPS boundary through Buxton Woods; and on the

1 west by a south-north trending line lying east of the Frisco Campground. In this zone, limited
2 vehicular access on ORV routes posted as open shall be permitted only upon application in
3 person to the Hatteras District Ranger (or designee) and there shall be no more than 30 total
4 ORVs in this zone at any one time. Limited access permits for vehicular entry shall not exceed 24
5 hours in duration and shall not be issued more than 7 days in advance. Permits are renewable
6 upon request except when vehicular capacity has been reached.

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

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

15 In 1980, the North District Ranger prepared the *ORV Plan North District Cape Hatteras National*
16 *Seashore* (NPS 1980). During development of the plan, the North District Ranger asked concerned
17 individuals for comments and suggestions regarding ORV use at the Seashore. Based on these comments
18 and suggestions, the plan included recommendations for improvements and a general description and
19 project status of each soundside and oceanside access point from Bodie Island to Hatteras Inlet. The plan
20 recommended that the general management plan consider additional parking needs on the soundside and
21 oceanside and at comfort station locations. It also recommended that the general management plan
22 consider impacts of traffic flow changes as a result of corridor and road closures (NPS 1980, 17). The
23 general management plan addressed these concerns by incorporating additional parking lots and parking
24 turnouts along NC-12 (NPS 1984, 23).

25 The 1984 *General Management Plan/Development Concept Plan/Environmental Assessment: Cape*
26 *Hatteras National Seashore* (NPS 1984) sets forth the basic philosophy to guide management,
27 development, and use of the Seashore. The general management plan describes specific strategies to
28 resolve current issues and to achieve identified management objectives. Management proposals in the
29 general management plan address direct and indirect threats to the Seashore, with ORV use cited as one
30 such threat. The general management plan calls for additional planning and research on ORV use and for
31 monitoring impacts of ORVs, but does not set forth an ORV management plan. Therefore, management
32 of ORVs continued under the draft 1978 plan.

1 The general management plan specified five visitor experience zones. ORV use was listed as an
2 appropriate activity in three of these five zones: ocean/beach, interior dunes/maritime forests, and
3 marsh/sound. The general management plan also called for an existing action plan to regulate ORV use.
4 The most current ORV planning document known to have existed at that time was the 1978 draft interim
5 management plan (NPS 1978a). The plan was drafted after consideration of public comment to the earlier
6 1978 proposed ORV management plan (NPS 1978b). The permitting portion of the 1978 proposed plan
7 was controversial and was removed before release of the 1978 *Draft Interim Management Plan: Off-Road*
8 *Vehicle Use, Cape Hatteras National Seashore* (NPS 1978a).

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

15 Potential impacts to the natural environment from ORV use at the Seashore were examined in the
16 *Determination of Status of Existing Natural Resource Impacts from Recreational Use of Cape Hatteras*
17 *National Seashore: Literature Review* (Perry and Mitchell nd, 3). The literature review was part of an
18 effort to assist the management of Cape Hatteras National Seashore in developing policy and making
19 management decisions regarding ORV use. The literature review compiled a database of 1,012 relevant
20 citations, 89 of which were specific to ORV use and habitat disturbance. These citations covered five
21 major categories: (1) references pertaining to fauna; (2) references pertaining to sand/sediment processes;
22 (3) references pertaining to vegetation; (4) references pertaining specifically to Cape Hatteras National
23 Seashore; and (5) all other subjects.

24 In the first category, a total of 30 sources discussed the negative impacts of ORVs on bird populations in
25 general. These sources concluded that negative impacts are higher in a stable coastal dune system due to
26 the natural processes of a dune ecosystem, their relationship to bird habitat, and the potential for
27 disruption of bird breeding and nesting behavior from ORV use. The studies concluded that ORV use is
28 the highest during breeding season, pedestrian impacts account for more than half the disturbances to
29 birds, and that natural forces have a greater impact than ORVs. Many specific studies on endangered
30 species, such as the piping plover, show well-documented effects from ORVs. Although the studies in
31 this category documented impacts to birds from ORV use, research was lacking on the effectiveness of
32 management plans.

33 In the remaining categories, the research showed:

- 1 • ORV traffic has a negative impact on sand and sediments due to compaction, decreased
2 infiltration, and moisture availability.
- 3 • ORV traffic causes direct damage to vegetation, and indirect impacts to adjacent, non-dune plant
4 communities need to be addressed further.
- 5 • ORV traffic has a negative direct impact on the ability of soil to support dune vegetation due to
6 changes in moisture retention, soil compaction, and soil salinity. Indirect impacts need further
7 examination.

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

11 The development of the interim strategy/EA was undertaken to ensure for the proper management of
12 protected species and to comply with the *Endangered Species Act*, while providing for adequate use of the
13 Seashore's recreational resources until a long-term ORV management plan/EIS for the Seashore could be
14 completed. The species addressed in the interim strategy/EA are those specifically affected by
15 recreational use within the Seashore that are listed either federally or by the state as threatened,
16 endangered, or species of special concern and/or are of special concern to the Seashore.

17 **PURPOSE AND SIGNIFICANCE OF CAPE HATTERAS NATIONAL SEASHORE**

18 All units of the national park system were formed for a specific purpose (their reason for being) and to
19 preserve significant resources or values for the enjoyment of future generations. The purpose and
20 significance identify uses and values that individual NPS plans should support. The following provides
21 background on the purpose and significance of Cape Hatteras National Seashore.

22 As stated in the Seashore's enabling legislation, Congress established Cape Hatteras National Seashore in
23 1937 as a national seashore for the enjoyment and benefit of the people, and to preserve the area. As its
24 enabling legislation states:

25 Except for certain portions of the area, deemed to be especially adaptable for recreational
26 uses, particularly swimming, boating, sailing, fishing, and other recreational activities of
27 similar nature, which shall be developed for such uses as needed, the said areas shall be
28 permanently reserved as a primitive wilderness and no development of the project or plan
29 for the convenience of visitors shall be undertaken which would be incompatible with the

1 preservation of the unique flora and fauna or the physiographic conditions now prevailing in
2 this area.

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

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

11 A 1940 amendment to the enabling legislation re-designated the area as the Cape Hatteras National
12 Seashore Recreational Area to permit hunting in the Seashore.

13 Park significance statements capture the essence of the park's importance to the nation's natural and
14 cultural heritage. Understanding park significance helps managers make decisions that preserve the
15 resources and values necessary to the park's purpose. The following significance statements recognize the
16 important features of the Seashore. As stated in the 2005-2008 Strategic Plan, the Seashore has the
17 following significance (NPS 2005a, 6):

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

25 **INTERIM PROTECTED SPECIES MANAGEMENT STRATEGY / ENVIRONMENTAL ASSESSMENT**
26 **(2006) AND FINDING OF NO SIGNIFICANT IMPACT (2007)**

27 The implementation of the interim strategy/EA (NPS 2006a) will be considered as part of the baseline
28 condition for this plan/EIS. The development of the interim strategy/EA was undertaken to ensure for the
29 proper management of protected species and to comply with the *Endangered Species Act*, while providing
30 for adequate use of the Seashore's recreational resources until a long-term ORV management plan/EIS for
31 the Seashore could be completed. The species addressed in the interim strategy/EA are those specifically

1 affected by recreational use within the Seashore that are listed either federally or by the state as
2 threatened, endangered, or species of special concern and/or are of special concern to the Seashore.

3 To implement the interim strategy, the NPS completed an EA in accordance with NEPA and several
4 alternatives were evaluated in the interim strategy/EA. Alternative D, as modified in the *Finding of No*
5 *Significant Impact* (NPS 2007a), of the interim strategy/EA was identified as the selected alternative and
6 outlines a multifaceted strategy (including an increased program of monitoring, recreational and ORV
7 closures, education and enforcement) for minimizing impacts to wildlife, threatened and endangered
8 species, and other protected species, from visitor uses, including ORV use. The actions described under
9 the selected alternative in the interim strategy/EA will become a component of the no-action alternative
10 for this long-term ORV management plan/EIS and provide the baseline against which to compare the
11 action alternatives. While some elements of the interim strategy/EA could be incorporated into the action
12 alternatives for managing ORVs, the current interim strategy/EA is an interim document that provides
13 only a portion of the baseline condition at the Seashore.

14 **LEGAL FRAMEWORK AND HISTORY OF LITIGATION**

15 The development of this plan/EIS is partially the result of two petitions for rulemaking submitted to the
16 NPS. The first petition was submitted on December 9, 1999, on behalf of the Bluewater Network and 70
17 environmental organizations. This petition requested an immediate ban on the use of all-terrain vehicles,
18 dune buggies, sand buggies, and other four-wheel drive vehicles on all off-road areas in the national park
19 system. This petition was servicewide, and while it included Cape Hatteras National Seashore, it was not
20 specific to the Seashore. Petitioners stated that allowing off-road use of all-terrain vehicles, dune buggies,
21 sand buggies, and four-wheel drive vehicles in 23 national park units fails to leave these parks
22 “unimpaired for the enjoyment of future generations” (Bluewater Network 1999, 7). Furthermore, the
23 Bluewater Network stated that one 1999 survey of ORV use in the parks found 40 park units (including
24 Cape Hatteras National Seashore) with high amounts of illegal use. To address this, the petition requested
25 the NPS issue an advisory to increase the enforcement of the present rules (Bluewater Network 1999, 2).

26 The second petition was specific to actions occurring at Cape Hatteras National Seashore. On June 7,
27 2004, a Petition for Rulemaking Governing Off-Road Vehicle Use in the Cape Hatteras National
28 Seashore was submitted to the Secretary of the Department of the Interior, the Director of the NPS, and
29 the Superintendent of the Outer Banks Group by the National Parks Conservation Association, the
30 Wilderness Society, and the Natural Resources Defense Council, also referred to as the petitioners. This
31 petition requested that the NPS promulgate regulations regarding the use of ORVs in the Cape Hatteras
32 National Seashore. The petitioners first stated that the informal authorization of ORV use at the Seashore

1 violates the federal *Endangered Species Act* because it does not conserve endangered and threatened
2 species and was implemented without consultation for all affected species with the USFWS. Second, the
3 petitioners stated that the absence of a formal, promulgated ORV management plan violates executive
4 orders and federal regulations regarding ORV use in the national park system. The third claim stated that
5 the informal authorization does not protect the Seashore's natural resources and, consequently, violates
6 the *NPS Organic Act of 1916*, the *General Authorities Act of 1970*, the Cape Hatteras National Seashore
7 enabling legislation, and various NPS management policies (NPCA 2004, 7).

8 The petition requested the NPS take the following five actions (NPCA 2004, 15):

9 (1) initiate the *Endangered Species Act* Section 7 formal consultation process with the USFWS,
10 and ensure that interested parties, including the petitioners, are kept informed of any and all
11 developments in the consultation process;

12 (2) promptly develop and promulgate, by special regulation, a formal ORV management plan for
13 Cape Hatteras National Seashore;

14 (3) close any and all ORV areas or routes at the national Seashore where ORV use will cause or is
15 causing adverse effects to the soil, vegetation, wildlife, or wildlife habitat, as required by
16 Executive Order 11989;

17 (4) immediately enlarge the size of the areas at Cape Hatteras National Seashore that are closed to
18 ORVs in order to protect endangered and threatened species pending the enactment of a formal,
19 promulgated ORV management plan; and

20 (5) make public any and all records and information related to ORV use at the Seashore

21 On May 17, 2005, Defenders of Wildlife (Defenders), a non-profit environmental organization, issued a
22 notice of intent to sue the NPS for alleged violations of the *Endangered Species Act*, 16 USC 1531 et seq.,
23 NEPA, 42 USC 4321 et seq., the MBTA, 16 USC 703 et seq., the *NPS Organic Act*, 16 USC 1601 et seq.,
24 and the enabling legislation for Cape Hatteras National Seashore, 50 Stat. 669 (1937). Defenders alleged
25 that the NPS continuing authorization of ORV use at Cape Hatteras National Seashore without first
26 engaging in formal consultation with the USFWS "violates the agency's obligations under the
27 [*Endangered Species Act*] to carry out programs for the conservation of endangered and threatened
28 species and may be resulting in the take of those species." Defenders alleged that the continued
29 authorization of ORV use at Cape Hatteras National Seashore without an assessment of environmental
30 impact violates NEPA. Defenders alleged that NPS actions have also caused the death of numerous
31 migratory birds in violation of the MBTA. Lastly, Defenders argued that "the NPS has flagrantly acted
32 contrary to two executive orders, agency regulations, and the organic acts of both [Cape Hatteras National

1 Seashore] and the NPS by authorizing ORV use without first developing a long-term ORV management
2 plan/EIS in a national seashore area intended to be ‘permanently reserved as a primitive wilderness’
3 (NPS 1937; Public Law 89-366; 50 Stat. 669). Partly as a result of this notice of intent to sue, Cape
4 Hatteras National Seashore prepared the previously described interim strategy/EA to provide for the
5 proper management of protected species and comply with the *Endangered Species Act* during the
6 development of a long-term ORV management plan.

7 In October of 2007, Defenders, Southern Environmental Law Center, and the National Audubon Society
8 sued the NPS regarding perceived deficiencies in the interim strategy/EA (NPS 2006a), and filed a 60-day
9 notice of intent to sue the USFWS for perceived violations of the *Endangered Species Act*, specifically
10 compliance with Section 7 requiring formal consultation.

11 In February 2008, Defenders and the National Audubon Society filed a lawsuit against the NPS alleging
12 inadequacies in management of protected species at Cape Hatteras National Seashore and failure of the
13 Seashore to comply with the requirements of the ORV executive order and NPS regulations regarding
14 ORV use. The plaintiffs sought to discontinue the use of ORVs (except essential vehicles) at certain
15 critical bird nesting areas on the Seashore until the NPS could implement an adequate long-term plan and
16 regulation to manage ORV use of the Seashore.

17 The species identified for protection included: the piping plover (federally listed threatened), several
18 species of colonial waterbirds (state-listed threatened and species of concern), the American oystercatcher
19 (state-listed significantly rare), and several species of sea turtles (federally-listed threatened and
20 endangered).

21 In April 2008, the U.S. District Court Judge signed a consent decree to settle the lawsuit. The consent
22 decree was agreed to by the plaintiffs and the NPS; and by Dare and Hyde counties and a coalition of
23 local ORV and fishing groups (Cape Hatteras Access Preservation Alliance), which participated in the
24 lawsuit as interveners. The consent decree, which is enforceable by the court, provides for specific species
25 protection mandates and requires the NPS to complete the ORV management plan and required special
26 regulation by December 31, 2010 and April 11, 2011 respectively.

27 To meet the legal requirements of the consent decree, the NPS must:

- 28 • increase the frequency and degree of monitoring and protection of certain shorebird and all sea
29 turtle species;
- 30 • establish and enforce larger closures around nesting areas;
- 31 • mark, monitor, and enforce pedestrian and ORV corridors along the shoreline; and

- 1 • enforce a prohibition of vehicles on beaches between 10:00 p.m. and 6:00 a.m., May 1 –
2 November 15, with a permit system to be established for night driving September 16 – November
3 15.

4 If protected species closure violations result in disturbing or harassing wildlife or vandalizing fencing,
5 nests, or plants, the closures are mandated to expand 50 meters for the first violation, 100 meters for the
6 second, and 500 meters or more for the third. These violations may result in a \$5,000 fine and/or
7 imprisonment up to 6 months.

8 To meet the requirements of NEPA, NPS statutes and regulations, and executive orders, NPS is
9 developing this ORV management plan/EIS and accompanying special regulation to address ORV use at
10 the Seashore. A notice of intent was published in the Federal Register on December 11, 2006, to
11 announce the beginning of the ORV planning process. Until this long-term ORV management plan/EIS is
12 complete, the NPS is implementing the interim strategy/EA to protect sensitive species and provide for
13 recreational use as directed in the enabling legislation (NPS 2006a), NPS *Management Policies 2006*, and
14 other laws and mandates, such as the *Endangered Species Act*. The interim strategy/EA is part of the
15 baseline condition (no-action alternative) analyzed in this long-term ORV management plan/EIS.

16 **SCOPING PROCESS AND PUBLIC PARTICIPATION**

17 NEPA regulations require an “early and open process for determining the scope of issues to be addressed
18 and for identifying the significant issues related to a proposed action.” To determine the scope of issues to
19 be analyzed in depth in this plan/EIS, meetings were conducted with Seashore staff, other parties
20 associated with preparing this document, and members of the public. Additional public meetings were
21 held to examine the range of alternatives and provide input on alternative elements. Chapter 5 of this
22 plan/EIS contains more details about the public meetings.

23 **PUBLIC SCOPING MEETINGS**

24 The public was given the opportunity to learn about the planning process and provide input during four
25 public scoping meetings held in late February and early March 2007. All four meetings were open-house
26 style sessions with short presentations, which allowed the public to ask Seashore staff questions and
27 provide input to the Seashore in a more informal atmosphere.

28 Though comments varied greatly, many commenters expressed concerns about the impacts of ORV use
29 on threatened and endangered species as well as special status species. Conversely, a number of
30 commenters noted potential negative impacts of decreased ORV access at the Seashore on both visitor use
31 and experience and the local economy.

1 **PUBLIC ALTERNATIVE DEVELOPMENT WORKSHOPS**

2 After the public scoping meetings, suggestions and ideas for alternative elements for ORV management
3 were gathered and compiled into an extensive list of alternative elements. These alternative elements
4 were organized by topic areas and formatted into a workbook for presentation to the public to obtain
5 further comments on these preliminary alternative elements. The workbooks were designed as a means of
6 assisting the public to comment on whether the different options might or might not meet the objectives
7 of this ORV management plan and how the alternative elements could be improved. Members of the
8 public were also encouraged to identify possible new alternative options for ORV management at the
9 Seashore All workbooks were reviewed and considered during the alternatives development process.

10 **REGULATORY NEGOTIATION PROCESS**

11 The *Negotiated Rulemaking Act of 1990* (5 USC 561-570) establishes a statutory framework for agency
12 use of negotiated rulemaking to reach a consensus with stakeholders on a proposed regulation. Concurrent
13 with the NEPA process, the Seashore initiated a negotiated rulemaking process in March 2005 to develop
14 a proposed rule for long-term ORV management at the Seashore. Because negotiated rulemaking allows
15 interested, affected parties more direct input into the development of the proposed regulation, NPS
16 expects the negotiated rulemaking process to result in a rule that is sensitive to the needs and limitations
17 of both the parties and the agency.

18 The negotiated rulemaking process begins with a team comprised of neutral parties conducting a
19 feasibility assessment to determine if the stakeholders for the issue are willing to participate and if it is
20 feasible to conduct the process. The U.S. Institute for Environmental Conflict Resolution was hired as a
21 neutral team to evaluate whether a consensus-based negotiation process could be convened and, if so,
22 whether it might be successful in resolving issues related to Cape Hatteras National Seashore ORV
23 management and regulations. A feasibility report was released in April 2006 which concluded that “a
24 consensus-based negotiation to develop a management plan and proposed implementing regulations can
25 be convened, can yield important benefits even if agreement is not reached, and has a modest chance of
26 success if the conditions described below are met” (CBI and FCS 2006, iii). This finding was contingent
27 on the following recommendations:

- 28 • The NPS and resulting committee should establish a set of key milestones for assessing the
29 committee`s progress and determining if the process is meeting the interests of the participants. If
30 the committee is not meeting these interests, then the committee process can be ended, even if the
31 committee has not completed their work.

- 1 • The NPS and Secretary of the Interior should establish a committee exceeding the 25 member
2 limit in the *Federal Advisory Committee Act* to adequately represent all interests. The team
3 recommended increasing the committee to 28 members.

4 The negotiated rulemaking process began informally in February 2007 when the Seashore held a
5 workshop titled “Participating in the Negotiated Rulemaking Process.” The workshop was followed by
6 two more pre-convening meetings of the proposed committee (see chapter 5 of this plan/EIS for
7 additional information). In January 2008, the regulatory negotiation committee was formally established
8 and committee members began to work toward consensus, which is included as one of the alternatives in
9 this plan/EIS.

10 Comments and concerns raised by the regulatory negotiation committee and during public scoping
11 included several issues and impact topics that require further consideration in this plan/EIS.

12 **ISSUES AND IMPACT TOPICS**

13 Issues associated with implementing an ORV management plan at Cape Hatteras National Seashore were
14 identified by Seashore staff during the internal scoping meeting using the Environmental Screening Form
15 through the public scoping process, and by the regulatory negotiation committee. The following text
16 discusses the issues, which were the basis for the impact topics discussed in chapters 3 and 4 of this
17 plan/EIS.

18 **GEOLOGIC RESOURCES**

19 Natural processes including hurricanes and other storm events may alter, create, or remove areas of the
20 Seashore requiring adaptive management of both recreational uses and natural resources to avoid
21 conflicts. The USFWS describes coastal barrier systems as unique land forms that provide protection for
22 diverse aquatic habitats and serve as the mainland’s first line of defense against the impacts of severe
23 coastal storms and erosion (USFWS nd, 43). Ongoing processes such as rising sea level and predominant
24 winds from the northeast have caused a landward migration of the islands. In addition to ongoing
25 processes, environments on the islands can change in a matter of hours by storm events, during which
26 overwash occurs by the sea pushing sand to the mainland side in large quantities. As a result,
27 environments are transformed as dunes intrude into marine forests, areas once vegetated become open
28 sandy beaches, and inlets are closed and formed. Cape Hatteras National Seashore is part of a dynamic
29 coastal barrier ecosystem, resulting in frequent changes in the nature and extent of habitats on the
30 Seashore that impact the management of recreational uses (including ORVs) and natural resources.

1 ORV use has the potential to impact the ocean beach at Cape Hatteras National Seashore by disturbing
2 sand, compacting sand, creating ruts, and changing local topography. ORV use could also impact tidal
3 flats when vehicles drive over sand through the algae crust, creating noticeable tracks. Other ORV related
4 activities that could impact geologic resources include ORVs driving through dunes where there is no
5 marked trail or designated ramp, creating new paths for ocean overwash and changing its distribution.
6 ORVs cutting through dunes in areas not designated as ramps are rare occurrences. Where ORV routes
7 and ramps are established, these openings allow ocean surf to reach the middle of the barrier islands,
8 altering geological resources.

9 ORV use also has the potential to impact beach escarpments, creating a potential hazard to visitors at the
10 Seashore. Escarpments occurring along Cape Hatteras National Seashore beaches result from shoreline
11 currents, wave patterns, and accretion and erosion. If ORV users drive along the edge of tall escarpments,
12 the escarpment could collapse and result in a vehicle rollover even at very slow speeds. Along with the
13 issue of human safety, the collapse of escarpments can also accelerate beach erosion. [include accretion
14 definition as a sidebar]

15 **AIR QUALITY**

16 Cape Hatteras National Seashore is located in an area classified by the U.S. Environmental Protection
17 Agency as being in attainment for all six criteria pollutants. Despite being in attainment, activities
18 associated with ORVs (driving, idling engines, and running generators) could create localized increases in
19 air pollution, potentially degrading the visitor experience and contributing to greenhouse gas emissions
20 that have been linked to global warming. Driving on sand may be less fuel-efficient and, therefore, more
21 polluting than driving on a hard surface.

22 Discussion of air quality to be completed once models are completed by the NPS.

23 **SOUNDSCAPES**

24 Vehicular noise, although currently a component of the soundscape at the Seashore, has the potential to
25 impact other recreational uses, such as bird watching or enjoying the solitude and natural soundscape of
26 the Seashore. In addition to impacting soundscapes in relation to visitor enjoyment, vehicular noise could
27 create unsuitable habitat for Seashore wildlife. Impacts related to soundscapes could occur wherever
28 ORVs are allowed on the oceanside or soundside.

1 FLOODPLAINS AND WETLANDS

2 The entire shoreline of Cape Hatteras National Seashore is classified as a wetland (Cowardin et al. 1979,
3 1). ORV use in wetland areas could damage vegetation and impact wildlife habitats. Wetlands are of
4 particular concern on the Bodie Island spit at Oregon Inlet where habitat loss occurs due to accretion. The
5 terminal groin constructed at Pea Island has stopped the natural accretion process from moving south.
6 Although Pea Island stopped moving south, Bodie Island continues to do so, filling Oregon Inlet.
7 Therefore, the U.S. Army Corps of Engineers (Corps) conducts ongoing maintenance dredging of Oregon
8 Inlet. The Corps agreed to mitigate impacts resulting from this dredging activity and proposed reducing
9 the elevation of the spit to create low spots and foraging habitat for piping plover. As these wetland
10 habitats become more limited, damage from ORV use is of increasing concern at the Seashore. [define
11 terminal groin in sidebar]

12 Estuarine wetlands are often denuded of vegetation when ORVs are driven and parked along the
13 soundside shoreline. Many of the interior roads (upper beach/ beach access ramps or soundside trails)
14 cross wetlands that do not have standing water all year. When standing water is present along an ORV
15 route, drivers often attempt to drive around the water and over adjacent vegetation. This results in wider
16 roads, new vehicle routes, and crushed or dead vegetation.

17 All of Cape Hatteras National Seashore is located within the 100-year floodplain. In this ORV
18 management plan/EIS, the issue of floodplains is considered under any alternative that includes
19 development, such as expanding or changing existing parking lots, because these actions have the
20 potential to impact the function and value of the floodplain.

21 WILDLIFE AND WILDLIFE HABITAT

22 Cape Hatteras National Seashore provides important habitats and plays a vital role in the survival of many
23 wildlife species. Whether for nesting, resting, or feeding, the Seashore provides for a diverse assemblage
24 of birds. Rich, varied habitats and locations along the Atlantic Flyway attract birds to the Seashore. In
25 1999, the American Bird Conservancy designated Cape Hatteras National Seashore as a Globally
26 Important Bird Area in recognition of the Seashore's value in bird migration, breeding, and wintering
27 (American Bird Conservancy 2005, 1). This diverse ecosystem includes both those species that sensitive
28 species rely on for survival, as well as predators of sensitive species. ORV use along the Seashore can
29 disrupt or cause a loss of habitat in high use areas. Habitat loss due to ORV use could occur indirectly as a
30 result of the noise and disturbance from this activity.

31 Invertebrates are impacted by ORV use. A recent study at the Seashore researched the ghost crab
32 (*Ocypode quadrata*) as an indicator of ecosystem health, since it may show the impacts of ORVs and

1 other recreational uses. The study considered the impacts of ORVs on ghost crab population densities and
2 recovery rates in relation to ORV use and usage regulations. Data to determine the impacts of off-road
3 vehicles on crab populations was collected in several areas in the Seashore. Closures of the beaches to
4 vehicles were initiated to study short-term effects and recovery rates. It was found that ORVs had a
5 detrimental impact on ghost crab populations at the Seashore and that areas subject to vehicle use had
6 significantly fewer ghost crab burrows than those areas without vehicles. As shown by Steiner and
7 Leatherman (1981, 111), ghost crabs can be killed or mortally injured by ORVs driving over them, or
8 through the alteration of their environment by ORVs. This study concluded that high-energy weather
9 events change the dynamics of the population, allowing more ghost crabs to inhabit the area, but ORVs
10 reduce the ability for ghost crabs to inhabit the area (VIMS 2004, 47).

11 Impacts of predators on other species at the Seashore may occur as a result of an ORV management plan
12 and the human activity related to ORV use. The population of predators is influenced in part by the trash
13 and food scraps human visitors leave behind at the Seashore. Predators within Cape Hatteras National
14 Seashore include raccoons, ghost crabs, sea gulls, herring gulls, bald eagles, snakes, and feral cats. Nest
15 exclosures have been implemented in the past to protect threatened and endangered species at the
16 Seashore from predation.

17 **RARE, UNIQUE, THREATENED, AND ENDANGERED SPECIES**

18 **Federally Listed Threatened and Endangered Species**

19 ORV use at the Seashore could impact federally threatened or endangered species and their habitats on
20 the ocean beach of the Seashore. Conflicts between listed species and recreational use (including ORV
21 use) could create direct or indirect losses to a listed species. Cape Hatteras National Seashore is home to
22 federally threatened and endangered species year round. Increased year-round visitation results in a
23 greater potential for conflicts between visitor use and listed species. The Seashore is used by both the
24 Great Lakes population of piping plover (for wintering) and the Atlantic Coast population (for breeding
25 and wintering). Seabeach amaranth, a federally listed plant species, is found in limited numbers at the
26 Seashore. According to the USFWS, seabeach amaranth has been eliminated from two-thirds of its
27 historic range and one of the most serious threats to its continued existence is disturbance by ORVs.

28 Nesting sea turtles at the Seashore include the loggerhead, green, and leatherback turtles, and Kemp's
29 ridley turtles are occasional visitors. Threats to listed sea turtles, their nesting sites, and young include
30 storm events, predation, pedestrian disturbance, ORV use, artificial lighting, pets, and recreational beach
31 equipment.

1 As of May 2008, the red knot is listed as a candidate for the endangered or threatened species list. Current
2 and possible future management alternatives for ORV and other recreational uses would take into
3 consideration the needs of federally listed threatened and endangered species in determining management
4 measures.

5 **State-Listed and Special Status Species**

6 Habitat for locally sensitive species, such as the American oystercatcher and colonial beach nesters, may
7 be vulnerable to disturbances caused by recreational uses, including ORV use. In May 2008, the
8 American oystercatcher and Wilson's plover were listed by the North Carolina Wildlife Resources
9 Commission as species of special concern. The American oystercatcher is also listed as a species of
10 concern by the Southeastern Shorebird Conservation Plan and both the American oystercatcher and the
11 Wilson's plover are identified in the U.S. Shorebird Conservation Plan as "Species of High Concern."
12 These locally sensitive species have had historically low reproductive rates. Contributing to these low
13 rates at the Seashore is the need for large undisturbed areas required for successful breeding. Frequent
14 human disturbance can cause the abandonment of nest sites as well as direct loss of eggs and chicks.
15 Despite high human disturbance in the area, the 2004 survey for the American oystercatcher showed 45
16 fledged chicks, the highest number ever recorded and totaling half of the numbers from the past nine
17 years (NPS 2004e, 29), with survey numbers in 2006 at the second highest number recorded (NPS 2006d,
18 11).

19 **VISITOR EXPERIENCE**

20 ORV use at the Seashore is an integral component of the experience for some visitors and may be
21 impacted by ORV management activities. Other Seashore visitors who do not use ORVs may be impacted
22 by ORV use. The Seashore's enabling legislation provides for the public use and enjoyment of both
23 natural and recreational values. Currently, the mix of recreational users at the Seashore includes ORV
24 users, day-users without vehicles, swimmers, anglers, bird watchers, and other users. Although many
25 visitors use an ORV to access the Seashore, other visitors wish to engage in recreational activities on foot
26 and away from the presence of motorized vehicles. Restricting ORVs from areas of the Seashore could
27 enhance the recreational experience for some and diminish the experience for others. Visitor experience
28 could be affected by conflicts between motorized and non-motorized recreation users. A further
29 component of visitor experience is providing for the safety of all visitors at the Seashore.

30 Other issues related to visitor use and experience include viewsheds, aesthetics, and night skies. While the
31 sight of ORVs can destroy the viewshed and aesthetics for some visitors, they also change the viewshed

1 in terms of altering the natural landscape. Some visual signs of ORVs include tire ruts and markings and
2 trash left behind. ORV use impedes or destroys coastal features like wave or wind ripples in the sand, tide
3 wrack lines, overwash deposits, wind sorted sediments, dune formation, etc. As an example, the burrows
4 of ghost crabs, the most common beach inhabitants, are nearly absent from beaches where ORVs are
5 allowed. The vegetation line is also altered. Instead of growing in irregular natural groupings and
6 locations, some beach plants like sea rocket are regularly seen growing in two parallel rows down a length
7 of tire tracks. The seeds of these plants apparently become trapped in tire ruts and then germinate there.
8 Installing posts around closure areas for protected species from ORVs could also impact the views and
9 aesthetics of the area for those who want a natural view without evidence of man-made materials.

10 Headlights and other artificial lights associated with nighttime ORV use may affect visitors' opportunities
11 to enjoy night skies at Cape Hatteras National Seashore. Conversely, lack of artificial lights may make it
12 more difficult to see, posing hazards to ORV users and pedestrians. Issues related to night skies include
13 night driving, headlights, campfires, and all other light uses associated with human activity after dusk.
14 Cape Hatteras National Seashore is one of the few places on the Atlantic Coast where visitors can
15 experience the magnificence of a dark night sky. Cape Hatteras National Seashore has been ranked, along
16 with Cape Lookout National Seashore, as the 9th best place to view the night sky by the NPS Night Sky
17 Program. ORV use at night has the potential to affect the brilliance of the night sky, which many visitors
18 value as one of the many great resources at Cape Hatteras National Seashore. In addition to visitors,
19 animals are also impacted by lights at night. The stars, planets, and moon are visible during clear nights
20 and influence many species of animals, such as birds that navigate by the stars or prey animals that reduce
21 their activities during moonlit nights. Additionally, the phosphorescence of waves on dark nights helps
22 sea turtle hatchlings orient to the ocean. Excessive artificial light has the potential to disorient turtle
23 hatchlings and disrupt their crawl to the ocean. Pursuant to NPS Management Policy 4.10 (NPS 2006b,
24 54), to prevent the loss of natural night skies, the NPS should minimize light that emanates from park
25 facilities, and also seek the cooperation of park visitors, neighbors, and local government agencies to
26 prevent or minimize the intrusion of artificial light into the night scene of the ecosystems of parks.
27 Furthermore, the NPS will not use artificial lighting in areas such as sea turtle nesting locations where the
28 presence of the artificial lighting could disrupt a park's dark-dependent natural resource components
29 (NPS 2006b, 54). Impacts of artificial light sources on animals will be discussed under the wildlife and
30 wildlife habitat impact topics.

1 **CULTURAL AND HISTORIC RESOURCES**

2 Cape Hatteras National Seashore is rich with history and culture. The 1997 resource management plan
3 states that many events of national significance have occurred on or near the Outer Banks, including four
4 centuries of shipwrecks; the elimination of Blackbeard at Ocracoke in 1718; the supply of the continental
5 armies during the Revolution by the port of Ocracoke; the first modern amphibious operations, which
6 resulted in the Union capture of Forts Hatteras and Clark; and the development of commerce and
7 transportation corridors in the late 1800s to support an industrial revolution and post Civil War expansion
8 into world trade. Evidence of Native Americans, the first occupants of the Outer Banks, is present at the
9 Seashore. This rich history needs to be preserved, although it can at times be difficult to preserve some
10 features, such as shipwrecks, due to the dynamic nature of the coastal barrier system. Some of Seashore's
11 cultural resources could be run over or hit by ORV users, who might not see the features under the sand.
12 In addition to unintentional impacts on the Seashore's cultural resources, some resources have been
13 knowingly disturbed. This happens when ORV users take large portions of a shipwreck that would
14 normally be too large or heavy for a pedestrian to remove. ORV management at the Seashore should
15 provide for protection of these indirect and direct threats to cultural and historic resources (NPS 1997, 2).

16 **SOCIOECONOMICS**

17 Management or regulation of ORV use at the Seashore could impact the local economy by changing the
18 demand for goods and services from ORV users in these communities. The eight villages located within
19 the Seashore boundaries serve as access points to the Seashore for ORV users. These villages receive
20 some level of economic benefit from the ORV users who take advantage of the goods and services these
21 communities offer. The communities are concerned that if a permit system or other ORV restrictions are
22 implemented making it harder for ORV users to use the area, fewer tourists may come to the area,
23 resulting in impacts to the local economy.

24 **Local Sustenance Fishing Activities and Environmental Justice**

25 Many of the fishermen who rely on sustenance fishing at the Seashore have low incomes. Limits placed
26 on ORV use at the Seashore may also limit the activities of local sustenance fishermen and result in
27 economic impacts. The development of this ORV management plan accounted for and considered the
28 needs of the low-income population.

29 **Local Commercial Fishing Activities**

30 Commercial fishermen currently have access to areas that are closed to other users because of safety
31 reasons (i.e., narrow beach conditions), but they do not have access to areas closed for resource

1 protection. On Ocracoke Island two soundside access points have been identified for commercial use. A
2 locked gate barricades one access point and approximately 28 keys are available to commercial fishermen
3 to access this area. The other access point is not barricaded but the public have generally respected the
4 commercial designation. Limits placed on ORV use at the Seashore may limit the activities of local
5 commercial fishermen. Disrupting the ability of commercial fishermen to conduct business could
6 negatively impact them.

7 **SEASHORE MANAGEMENT AND OPERATIONS**

8 **Staff and Monetary Resources**

9 Accommodating recreational uses while protecting sensitive species requires a sufficient number of
10 personnel and an adequate level of funding. Anecdotal evidence suggests that the Seashore currently does
11 not have enough personnel to properly enforce existing ORV management decisions. Operational needs
12 related to implementing an ORV management plan that require direct NPS staff oversight of or
13 involvement in management activities would require an increased commitment of limited NPS resources
14 (staff, money, time, and equipment).

15 **Coordination with Other Agencies**

16 Within the Seashore boundaries, other federal and state agency activities must be coordinated with those
17 of the NPS. State agencies such as the North Carolina Department of Transportation and the North Carolina
18 Ferry Division manage transportation facilities within the Seashore and coordination with the NPS is
19 required for some of their proposed projects. At the federal level, portions of the Bodie Island spit must
20 regularly be closed to ORV use when the Corps conducts ongoing maintenance dredging in Oregon Inlet.
21 Also, Pea Island National Wildlife Refuge is located within the boundaries of the Seashore and is
22 managed by the USFWS.

23 **ISSUES CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION**

24 The following issues and impact topics were dismissed from further analysis, as explained below:

- 25 • **Geohazards:** There are no known geohazards in the Seashore that would be affected by the
26 implementation of an ORV management plan.
- 27 • **Unique Ecosystems, Biosphere Reserves, World Heritage Sites:** There are no known biosphere
28 reserves, World Heritage sites, or unique ecosystems listed in the Seashore; therefore,
29 implementation of an ORV management plan would have no effect.

- 1 • **Water Quality / Marine and Estuarine Resources:** ORV use has the potential to impact water
2 quality at the Seashore due to fluids leaking from submerged vehicles or tire ruts altering natural
3 drainage patterns. However, water quality impacts from submerged vehicles would not rise
4 above the level of negligible impacts to water quality as long as the vehicle were removed from
5 the water in a timely fashion. Also, due to the ephemeral nature of tire ruts in beach sand, they
6 would not result in impacts to water quality. Therefore, this impact topic was dismissed from
7 further analysis.
- 8 • **Prime Farmlands:** There are no designated prime farmland soils in the Seashore.
- 9 • **Streamflow Characteristics:** Actions related to ORV management would not have an effect on
10 streamflow characteristics. The proposed action would not occur in any area that would impact
11 streamflow.
- 12 • **Introduce or Promote Non-Native Species:** While the potential for vehicles to bring non-native
13 species to the Seashore occurs, only a small number of non-native species can live in the salt and
14 wind of the seashore environment. Phragmites (*Phragmites australis* Cav.), a non-native plant
15 species, is present at the Seashore, but is not likely to be transported by ORVs because its primary
16 method of colonization is by rhizomes (underground root extensions) and not by seeds, which are
17 prone to spreading by vehicle tires (Wisconsin DNR 2007, 1).
- 18 • **Ethnographic Resources:** An ethnographic study for Cape Hatteras National Seashore was
19 completed in 2005 (Impact Assessment, Inc. 2005). The study looked at the eight villages in the
20 Seashore that reflect the nearly 300-year history and culture of the Outer Banks to support the
21 Seashore in interpretation of its cultural resources, stewardship of ethnographic resources, and
22 community relations with the villages. Archival/documentary research and ethnographic
23 fieldwork was completed as part of the study to further socio-cultural understanding of the
24 villages adjoining the Seashore. The villages contain a mix of populations that have evolved from
25 the original British settlers, European seafarers, farmers, and other more recent migrants to the
26 Outer Banks. No discrete, continuous ethnic groups or ethnographic populations are documented
27 at the Seashore; therefore, no ethnographic populations would be impacted by the implementation
28 of an ORV management plan.
- 29 • **Museum Collections:** The Seashore has collections at the lighthouse; however, these collections
30 would not be impacted by implementation of an ORV management plan.
- 31 • **Energy Resources:** This topic involves assessing energy requirements and the potential for
32 energy conservation associated with the various alternatives, but is most relevant to facility

1 construction projects. The majority of ORV use at the Seashore involves gaining access to
2 fishing areas, where vehicles are then turned off once the desired fishing spot is reached. Because
3 vehicular access to the beach would be maintained under this ORV Management Plan/EIS at
4 current or reduced levels, there would only be negligible impacts on energy resources, as fuel
5 consumption would not change to a large degree as a result of the implementation of this plan.
6 The Seashore would continue to operate under the wise energy use guidelines and requirements
7 stated in the NPS 2006 Management Policies, Executive Order 13123 (Greening the Government
8 Through Effective Energy Management), Executive Order 13031 (Federal Alternative Fueled
9 Vehicle Leadership), Executive Order 13149 (Greening the Government Through Federal Fleet
10 and Transportation Efficiency), and the 1993 NPS Guiding Principles of Sustainable Design.

- 11 • **Urban Quality, Gateway Communities:** A gateway community is defined by the NPS
12 *Management Policies 2006* as a community that exists in close proximity to a unit of the national
13 park system whose residents and elected officials are often affected by the decisions made in the
14 course of managing the park. Because of this, there are shared interests and concerns regarding
15 decisions. Gateway communities usually offer food, lodging, and other services to park visitors.
16 They also provide opportunities for employee housing and a convenient location to purchase
17 goods and services essential to park administration. Although the communities within and
18 adjacent to the Seashore would fall under this definition, the issues and interests that would be
19 impacted by this plan would be addressed under the Socioeconomics impact topic.
- 20 • **Paleontological Resources:** No paleontological resources are located within the Seashore that
21 would be impacted by ORV use; therefore, paleontological resources would not be impacted by
22 implementation of an ORV management plan.
- 23 • **Health and Safety:** Health and safety issues related to ORV use are discussed in under the visitor
24 use topic.
- 25 • **Topography and Soils (Physiographic, except for Geology):** Issues related to topography and
26 soils include impacts to the sand and beach environment, which are discussed under geologic
27 resources. Since no other impacts would occur to soils or topographic conditions, these were not
28 included as separate impact topics.

1 **FEDERAL LAWS, POLICIES, REGULATIONS AND PLANS DIRECTLY RELATED**
2 **TO OFF-ROAD VEHICLE MANAGEMENT**

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

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

8 The executive order directs agencies to develop and issue regulations and administrative instructions to
9 designate the specific areas and trails on public lands on which ORV use may be permitted, and areas in
10 which ORV use may not be permitted. The location of areas and trails shall:

- 11 • minimize damage to soil, watershed, vegetation, or other resources of the public lands;
- 12 • minimize harassment of wildlife or significant disruption of wildlife habitats;
- 13 • minimize conflicts between ORV use and other existing or proposed recreational uses of the same
14 on neighboring public lands, and ensure the compatibility of such uses with existing conditions in
15 populated areas, taking into account noise and other factors; and
- 16 • areas and trails shall not be located in officially designated wilderness areas or primitive areas
17 and shall be located in areas of the national park system, natural areas, or national wildlife refuges
18 and game ranges only if the respective agency head determines that ORV use in such locations
19 will not adversely affect their natural, aesthetic, or scenic values.

20 **Executive Order 11989: Off-Road Vehicles on Public Lands**

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

1 **Code of Federal Regulations 36 Section 4.10 Travel on Park Roads and Designated Routes**

2 This CFR section states that “operating a motor vehicle is prohibited except on park roads, in parking
3 areas and on routes and areas designated for off-road motor vehicle use.” Additionally, routes and areas
4 designated for ORV use shall be promulgated as special regulations, with designations complying with
5 Executive Order 11644. As a result of the long-term ORV management plan/EIS and special regulation,
6 Cape Hatteras National Seashore will be in compliance with this regulation.

7 **OTHER APPLICABLE FEDERAL LAWS, POLICIES, REGULATIONS AND PLANS**

8 This ORV Management Plan/EIS must be in conformance with the following federal laws, policies,
9 regulations and plans described in this section. Although some of the following documents may not be
10 directly related to ORV management, they are relevant to issues at the Seashore that may be indirectly
11 influenced by or associated with ORV use.

12 **Code of Federal Regulations, Title 36 (1992)**

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

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

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

- 21 1. Possessing a pet in a public building, public transportation vehicle, or location designated as a
22 swimming beach, or any structure or area closed to the possession of pets by the superintendent.
23 This does not apply to guide dogs accompanying visually impaired persons or hearing ear dogs
24 accompanying hearing-impaired persons.
- 25 2. Failing to crate, cage, restrain on a leash which shall not exceed six feet in length, or otherwise
26 physically confine a pet at all times.
- 27 3. Leaving a pet unattended and tied to an object, except in designated areas or under conditions
28 which may be established by the superintendent.

- 1 4. Allowing a pet to make noise that is unreasonable considering location, time of day or night,
2 impact on park users, and other relevant factors, or that frightens wildlife by barking, howling, or
3 making other noise.
- 4 5. Failing to comply with pet excrement disposal conditions which may be established by the
5 superintendent.

6 Where pets are allowed at Cape Hatteras National Seashore, this regulation applies. Pet issues are
7 addressed in this plan/EIS as they are transported in ORVs and are indirectly related to this use.

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

9 Section 3.6 prohibits the launching of a vessel “propelled by machinery” from any location within the
10 park other than a designated launch site. According to 3.6(i) of the Superintendent’s Compendium,
11 designated launch sites for non-commercial, recreational boats/vessels propelled by machinery are located
12 at Oregon Inlet Fishing Center, Ramp 23, Milepost 46 soundside access, Cable Crossing, Ocracoke
13 Marina parking area, Prong Road, Ramp 72, South Point Road, and Quork Hammock.

14 **Coastal Zone Management Act, 1966**

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

27 The *North Carolina Coastal Area Management Act* (CAMA) establishes a cooperative program of coastal
28 area management between local and state governments through comprehensive planning for the
29 protection, preservation, orderly development, and management of the coastal area of North Carolina. The
30 CAMA program was federally approved in 1978 and is the state’s CZMP under the CZMA. Localities are

1 responsible for planning while the state establishes areas of environmental concern. A project must obtain
2 a CAMA permit if it:

- 3 • is in one of the 20 counties covered by the Act (including Dare and Hyde counties),
- 4 • is considered “development” under the act,
- 5 • is in or affects an area of environmental concern, and
- 6 • does not qualify for an exemption.

7 As a part of this program, the Coastal Resources Commission designated “areas of environmental
8 concern” in the 20 coastal counties and set rules for managing development in these areas. An area of
9 environmental concern is an area of natural importance that may be easily destroyed by erosion or
10 flooding or that may have environmental, social, economic, or aesthetic values that make it valuable to
11 North Carolina. A determination would be made as to whether a long-term ORV management plan/EIS
12 would have effects on state coastal zone management resources. If there would be an effect, a consistency
13 determination would need to determine if and how the long-term ORV management plan/EIS should
14 comply with CAMA permitting procedures, policies, and the land use plans for Dare and Hyde counties.

15 **Endangered Species Act of 1973, as Amended**

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

23 **Antideficiency Act**

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

27 **Historic Sites Act of 1935**

28 This act declares as national policy the preservation for public use of historic sites, buildings, objects, and
29 properties of national significance. It authorizes the Secretary of the Interior and NPS to restore,

1 reconstruct, rehabilitate, preserve, and maintain historic or prehistoric sites, buildings, objects, and
2 properties of national historical or archaeological significance.

3 **Marine Mammal Protection Act, 1972**

4 The *Marine Mammal Protection Act* prohibits, with certain exceptions, the taking of marine mammals in
5 U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine
6 mammal products into the United States. The act defines “take” as “to harass, hunt, capture, or kill, or
7 attempt to harass, hunt, capture, or kill any marine mammal.” It defines harassment as “any act of pursuit,
8 torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the
9 wild; or has the potential to disturb a marine mammal or marine mammal stock in the wild by causing
10 disruption of behavioral patterns, including but not limited to, migration, breathing, nursing, breeding,
11 feeding, or sheltering.” This act recognizes that some marine mammal species or stocks may be in danger
12 of extinction or depletion as a result of human activities, and that these species or stocks must not be
13 permitted to be depleted. The act, as amended in 1994, provides for certain exceptions to the take
14 prohibitions, such as Alaska Native subsistence and permits and authorizations for scientific research; a
15 program to authorize and control the taking of marine mammals incidental to commercial fishing
16 operations; preparation of stock assessments for all marine mammal stocks in waters under U.S.
17 jurisdiction; and studies of pinniped-fishery interactions. This act is relevant to this plan because ORVs
18 are used to assist marine mammals that have become stranded on the beach.

19 **Migratory Bird Treaty Act of 1918**

20 The MBTA implements various treaties and conventions between the United States and Canada, Japan,
21 Mexico, and the former Soviet Union for the protection of migratory birds. Under this act, it is prohibited,
22 unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill,
23 possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped,
24 deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means
25 whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any
26 migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any
27 part, nest, or egg of any such bird” (16 USC 703). Subject to limitations in the Act, the Secretary of the
28 Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing,
29 killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part,
30 nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic
31 value, breeding habits and migratory flight patterns.

1 **National Environmental Policy Act, 1969, as Amended**

2 NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR
3 1500–1508). The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as
4 found in *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision*
5 *Making*, and its accompanying handbook (NPS 2001). Section 102(2) (c) of NEPA requires that an EIS
6 be prepared for proposed major federal actions that may significantly affect the quality of the human
7 environment.

8 **National Historic Preservation Act of 1966, as Amended**

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

12 **National Parks Omnibus Management Act of 1998**

13 Both the *National Parks Omnibus Management Act of 1998* (NPOMA) (16 USC 5901 et seq.) and NEPA
14 are fundamental to NPS park management decisions. Both acts provide direction for articulating and
15 connecting the ultimate resource management decision to the analysis of impacts, using appropriate
16 technical and scientific information. Both also recognize that such data may not be readily available and
17 provide options for resource impact analysis in this case.

18 NPOMA directs the NPS to obtain scientific and technical information for analysis. The NPS handbook
19 for *Director's Order 12* states that if “such information cannot be obtained due to excessive cost or
20 technical impossibility, the proposed alternative for decision will be modified to eliminate the action
21 causing the unknown or uncertain impact or other alternatives will be selected” (NPS 2001, 13).

22 **NPS Organic Act**

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

1 Despite these mandates, the *Organic Act* and its amendments afford the NPS latitude when making
2 resource decisions that balance visitor recreation and resource preservation. By these acts Congress
3 “empowered [the NPS] with the authority to determine what uses of park resources are proper and what
4 proportion of the park’s resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*,
5 82 F.3d 1445, 1453 [9th Cir. 1996]).

6 Yet courts consistently interpret the *Organic Act* and its amendments to elevate resource conservation
7 above visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991)
8 states: “Congress placed specific emphasis on conservation.” The court in *National Rifle Association of*
9 *America v. Potter*, says “in the *Organic Act* Congress speaks of but a single purpose, namely,
10 conservation.” The NPS *Management Policies 2006* also recognize that resource conservation takes
11 precedence over visitor recreation. The policy dictates: “when there is a conflict between conserving
12 resources and values and providing for enjoyment of them, conservation is to be predominant” (NPS
13 2006b, sec. 1.4.3, 10).

14 Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on
15 park resources and values. Yet, the NPS has discretion to allow negative impacts when necessary (NPS
16 2006b, sec. 1.4.3, 10). While some actions and activities cause impacts, the NPS cannot allow an adverse
17 impact that constitutes resource impairment (NPS 2006b, sec. 1.4.3, 10). Specifically, NPS *Management*
18 *Policies 2006*, Section 1.4.3.1 states: “In the administration of authorized uses, park managers have the
19 discretionary authority to allow and manage the use, provided that the use will not cause impairment or
20 unacceptable impacts.” The *Organic Act* prohibits actions that permanently impair park resources unless a
21 law directly and specifically allows for the action (16 USC 1a-1). An action constitutes “an impairment”
22 when its impacts “harm the integrity of park resources or values, including the opportunities that
23 otherwise would be present for the enjoyment of those resources or values” (NPS 2006b, sec. 1.4.5, 11).
24 To determine impairment, the NPS must evaluate “the particular resources and values that would be
25 affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and
26 the cumulative effects of the impact in question and other impacts” (NPS 2006b, sec. 1.4.5, 11).

27 Park managers must also not allow uses that would cause unacceptable impacts (NPS 2006b, sec. 1.4.7.,
28 12) These are impacts that fall short of impairment, but are still not acceptable within a particular park’s
29 environment. For the purposes of these policies, unacceptable impacts are impacts that, individually or
30 cumulatively, would

31 • be inconsistent with a park’s purposes or values, or

- 1 • impede the attainment of a park’s desired future conditions for natural and cultural resources as
- 2 identified through the park’s planning process, or
- 3 • create an unsafe or unhealthful environment for visitors or employees, or
- 4 • diminish opportunities for current or future generations to enjoy, learn about, or be inspired by
- 5 park resources or values, or
- 6 • unreasonably interfere with
 - 7 ○ park programs or activities, or
 - 8 ○ an appropriate use, or
 - 9 ○ the atmosphere of peace and tranquility, or the natural soundscape maintained in
 - 10 wilderness and natural, historic, or commemorative locations within the park, or
 - 11 ○ NPS concessioner or contractor operations or services.

12 Because park units vary based on their enabling legislation, natural resources, cultural resources, and
 13 missions, management activities appropriate for each unit, and for areas in each unit, vary as well. An
 14 action appropriate in one unit could impair or cause unacceptable impacts to resources in another unit.
 15 Thus, the EIS analyzes the context, duration, and intensity of impacts related to the implementation of an
 16 ORV management plan at Cape Hatteras National Seashore, as well as the potential for resource
 17 impairment or unacceptable impacts, as required by *Director’s Order 12: Conservation Planning,*
 18 *Environmental Impact Analysis and Decision-making* (NPS 2001, 45).

19 **Redwood National Park Act of 1978, as Amended**

20 Reasserting the system-wide standard of protection established by Congress in the original *Organic Act*,
 21 the Redwood Amendment stated:

22 The authorization of activities shall be construed and the protection, management, and
 23 administration of these areas shall be conducted in light of the high public value and integrity of
 24 the National Park System and shall not be exercised in derogation of the values and purposes for
 25 which these various areas have been established, except as may have been or shall be directly and
 26 specifically provided by Congress (P.L. 95-250, USC Sec 1a-1).

27 Congress intended the language of the *Redwood Amendment* to the *General Authorities Act* to reiterate
 28 the provisions of the *Organic Act*, not to create a substantively different management standard. The
 29 House committee report described the Redwood Amendment as a “declaration by Congress” that the

1 promotion and regulation of the national park system is to be consistent with the *Organic Act*. The Senate
 2 committee report stated that under the *Redwood Amendment*, “The Secretary has an absolute duty, which
 3 is not to be compromised, to fulfill the mandate of the 1916 Act to take whatever actions and seek
 4 whatever relief as will safeguard the units of the national park system.” Although the *Organic Act* and the
 5 *General Authorities Act*, as amended by the *Redwood Amendment*, use different wording (“unimpaired”
 6 and “derogation”) to describe what the NPS must avoid, both acts define a single standard for the
 7 management of the national park system—not two different standards. For simplicity, NPS *Management*
 8 *Policies 2006* uses “impairment,” not both statutory phrases, to refer to that single standard.

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

10 Migratory birds are of great ecological and economic value to this country and to other countries. They
 11 contribute to biological diversity and bring tremendous enjoyment to millions of people who study,
 12 watch, feed, or hunt these birds throughout the United States and other countries. The United States has
 13 recognized the critical importance of this shared resource by ratifying international, bilateral conventions
 14 for the conservation of migratory birds. Such conventions include the Convention for the Protection of
 15 Migratory Birds with Great Britain on behalf of Canada 1916, the Convention for the Protection of
 16 Migratory Birds and Game Mammals–Mexico 1936, the Convention for the Protection of Birds and Their
 17 Environment–Japan 1972, and the Convention for the Conservation of Migratory Birds and Their
 18 Environment–Union of Soviet Socialist Republics 1978. These migratory bird conventions impose
 19 substantive obligations on the United States for the conservation of migratory birds and their habitats, and
 20 through the MBTA, the United States has implemented these migratory bird conventions with respect to
 21 the United States. This executive order directs executive departments and agencies to take certain actions
 22 to further implement the MBTA.

23 **Executive Order 11593: Protection and Enhancement of the Cultural Environment**

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

28 **Executive Order 11990: Protection of Wetlands**

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

1 **Executive Order 11988: Floodplain Management**

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

5 **NPS Management Policies 2006**

6 NPS *Management Policies 2006* address management of ORVs in Section 8.2.3.1, Off-Road Vehicle Use.
7 This section states (NPS 2006b, 104):

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

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

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

29 Management polices relating to resource protection also were considered in developing this ORV
30 management plan/EIS. For example, NPS *Management Policies 2006* instructs park units to maintain, as
31 parts of the natural ecosystems of parks, all plants and animals native to park ecosystems, in part by

1 minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the
2 processes that sustain them (NPS 2006b, sec. 4.4.1, 43).

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

7 The NPS will survey for, protect, and strive to recover all species native to national park system units
8 that are listed under the *Endangered Species Act*. The NPS will fully meet its obligations under the
9 NPS *Organic Act* and the *Endangered Species Act* to both proactively conserve listed species and
10 prevent detrimental effects on these species. To meet these obligations, the NPS will:

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

1 Section 4.4.2.3 of the NPS Management Policies 2006 also states that the “NPS will inventory, monitor,
2 and manage state and locally listed species in a manner similar to its treatment of federally listed species,
3 to the greatest extent possible. In addition, the Service will inventory other native species that are of
4 special management concern to parks (such as rare, declining, sensitive, or unique species and their
5 habitats) and will manage them to maintain their natural distribution and abundance” (NPS 2006b, sec.
6 4.4.2.3, 45).

7 **Superintendent’s Compendium: Closures, Permit Requirements, and Other Restrictions**

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

18 **Superintendent’s Order #07: ORV Management**

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

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

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

6 1a2A: 41% of federally listed species that occur or have occurred in parks are making progress
7 towards recovery.

8 1a2B: 70% of populations of native plant and animal species of management concern are
9 managed to self-sustaining levels, in cooperation with affected states and others, as defined in
10 approved management documents.

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

13 NPS *Director's Order #12* and its accompanying handbook (NPS 2001) lay the groundwork for how the
14 NPS complies with NEPA. *Director's Order #12* and handbook set forth a planning process for
15 incorporating scientific and technical information and establishing a solid administrative record for NPS
16 projects.

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

22 **Director's Order 28: Cultural Resource Management**

23 This director's order sets forth the guidelines for management of cultural resources, including cultural
24 landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic
25 resources. This order calls for the NPS to protect and manage cultural resources in its custody through
26 effective research, planning, and stewardship in accordance with the policies and principals contained in
27 the *NPS Management Policies 2006*.

28 **Director's Order 77: Natural Resource Protection**

29 Director's Order 77 addresses natural resource protection, with specific guidance provided in *Reference*
30 *Manual #77: Natural Resource Management*. The Natural Resource Management Reference Manual #77

1 offers comprehensive guidance to National Park Service employees responsible for managing,
2 conserving, and protecting the natural resources found in National Park System units. The Manual serves
3 as the primary guidance on natural resource management in units of the National Park System. Reference
4 Manual chapters that are particularly relevant to this ORV Management Plan/EIS include air resources
5 management; endangered, threatened, and rare species management; geologic resources management;
6 native animal management; shoreline management; vegetation management; special use permitting;
7 wetland protection (Director's Order 77-1); and floodplain management (Director's Order 77-2).

8 **RELATIONSHIP TO OTHER CAPE HATTERAS NATIONAL SEASHORE PLANNING DOCUMENTS,** 9 **POLICIES AND ACTIONS**

10 The following plans, policies, and actions occurring at the Seashore were considered during the
11 development of this plan/EIS:

12 **Biological Opinion**

13 The Biological Opinion associated with the interim strategy/EA was prepared by the USFWS Raleigh
14 Field Office in response to their review of the Cape Hatteras National Seashore's biological assessment
15 (NPS 2006c, January 6, 2006), the *Cape Hatteras National Seashore Interim Protected Species*
16 *Management Strategy/EA* (NPS 2006a, January 18, 2006), and other sources of published and
17 unpublished biological information. The Biological Opinion evaluated the proposed action of the interim
18 strategy/EA and its potential impact to protected species at the Seashore to determine if there would be a
19 "take" as defined in the *Endangered Species Act*. The USFWS concluded that incidental takes of
20 protected species would occur from management actions under the interim strategy/EA, but that this level
21 of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification
22 of designated or proposed critical habitat (USFWS 2006, 75).

23 The actions called for in the Biological Opinion have been modified due to the Consent Decree signed
24 April 30, 2008. Terms of the Consent Decree require the NPS to follow the Biological Opinion, except as
25 modified by the provisions of the Consent Decree. Modifications in the Consent Decree include changes
26 to the buffers provided for various species at the Seashore, as well as added restrictions related to night
27 driving. If there is a conflict between the interim strategy/EA and the measures described in the Consent
28 Decree, the Consent Decree is used as the guide.

29 Seashore actions related to ORV management began in response to Executive Order 11644 (*Use of Off-*
30 *Road Vehicles on the Public Lands*, February 8, 1972), with the establishment of draft guidelines for
31 ORV use. Following this, Executive Order 11989 (*Off-Road Vehicles on Public Lands*, May 24, 1977)

1 was issued and the Seashore began developing an ORV management plan. The result was the 1978 draft
2 interim ORV management plan (NPS 1978a), which established guidelines and controls for off-road use
3 of vehicles in Cape Hatteras National Seashore the general management plan was promulgated and
4 adopted. As described previously, this plan divided the Seashore into zones and described management in
5 each zone. ORV management was also addressed in the *ORV Plan North District Cape Hatteras National*
6 *Seashore* (NPS 1980) and the 1984 *General Management Plan/Development Concept*
7 *Plan/Environmental Assessment for Cape Hatteras National Seashore* (NPS 1984). More recently,
8 Superintendent's Order #07, ORV Management was issued in 2004 (NPS 2004c). Through this order,
9 after reviewing the 1984 general management plan and 1978 draft interim ORV management plan, the
10 Seashore decided that implementing the 1978 draft interim ORV management plan, without the
11 permitting portions, would be appropriate.

12 **General Management Plan**

13 The 1984 *General Management Plan/Development Concept Plan/Environmental Assessment for Cape*
14 *Hatteras National Seashore* was developed to guide the preservation, use, development, and operation of
15 the Seashore for a 5- to 10-year period. In the general management plan, reference to ORV use is made as
16 a part of Additional Planning and Research Requirements, which calls for monitoring the impact of ORVs
17 at the Seashore. The general management plan allows for ORV use on selected beaches in accordance
18 with existing use regulations and also prohibits ORVs from the Cape Hatteras Lighthouse/museum
19 parking area to minimize use conflicts. Under the general management plan, NPS will review and update
20 as necessary the existing action plan regulating ORV use to reduce visitor use conflicts and to protect
21 dunes, vegetation, wildlife, and cultural resources. The general management plan states that the action
22 plan will designate ORV routes and sensitive resource areas periodically closed to ORV use and continue
23 to set safety regulations for ORV operation in the Seashore (NPS 1984, 5). The Seashore has requested
24 funding to revise the 1984 general management plan.

25 **Resource Management Plan**

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

1 **Fire Management Plan**

2 The fire management plan for Cape Hatteras National Seashore describes the proposed actions necessary
3 to carry out fire management policies and objectives for the three parks in the Outer Banks Group. NPS
4 Director's Order 18 requires that all NPS units with vegetation capable of supporting fire develop and
5 implement a fire management plan. Furthermore, this order directs the parks to implement fire related
6 objectives in the park's planning documents, such as general management and resource management
7 plans, while providing for visitor, employee, and public facility protection (NPS 2005b, 5).

8 **Commercial Services Plan**

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

12 **Government Performance Result Act Surveys**

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

17 **Visitor Services Project Report**

18 The visitor services project report, or the *Outer Banks Group Parks Visitor Study Cape Hatteras National*
19 *Seashore Visitors* report, resulted from a visitor study conducted at the Seashore July 12 through 18,
20 2002. The study found that the most popular activities for current and past visitors were
21 sunbathing/swimming and visiting historic sites. The three most important reasons for visiting Cape
22 Hatteras National Seashore were the lighthouses, swimming, and uncrowded/solitude/low population.
23 Also, when asked about crowding, 27% of visitors said they felt "crowded" to "extremely crowded" while
24 43% of visitors felt "somewhat crowded." Many visitor groups (49%) felt that crowding "detracted from
25 their park experience" (NPS 2002, 2).

26 **Visitor Use Study**

27 The *Cape Hatteras National Seashore Visitor Use Study* (Vogelsong, 2003) collected and analyzed data
28 to better understand how visitors use the Seashore. Researchers collected data from May 2001 through
29 May 2002 on the distribution and character of use, as well as on visitor attitudes/norms toward visitor

1 density, ORV use, aircraft flyovers, and other activities. To determine levels of visitor use, counts were
2 conducted for visitors, parked vehicles, ORVs, and people per vehicle at several designated locations
3 throughout the Seashore. Interviews were conducted throughout the Seashore to represent a wide variety
4 of activity choices. In relation to visitor experience and ORV use, the study found that, although ORV use
5 in the Seashore was high, there was not a negative impact on visitor experiences. Many visitors were
6 positive or neutral toward ORV use, especially when reporting on the acceptability of the number of
7 ORVs seen. It was noted that ORV use was concentrated in areas receptive to it and that over 76% of the
8 respondents had driven an ORV at the Seashore. Respondents that did not feel positive about ORV use
9 did not appear to be in areas where ORV use was occurring. The study also stated that, although there was
10 a lack of negative social impacts, ORV levels were high in some areas and should be continually
11 monitored. Statistically significant differences between user groups (activity, site related, and ORV users
12 vs. non-users) were found in regard to ORV attitudes and preferences, indicating a potential for conflict
13 between user groups (Vogelsong 2003, 3). More detailed information on this study is available in the
14 Visitor Use section in Chapter 3 of this plan.

15 **Long-Range Interpretation Plan**

16 A long-range interpretation plan for Cape Hatteras National Seashore was completed in September 2007.
17 This plan provides recommended actions to be taken over the next five to seven years to improve the
18 Seashore's personal services program and interpretive media, and provides an achievable implementation
19 strategy (NPS 2007b, 49). Because this plan addresses exhibits, interpretive information, outreach, and
20 education, it was considered in the development of this ORV management plan/EIS.

21 Funding was approved for developing a predator management plan in 2007. The plan will address native
22 and non-native predators; specifically, those that prey on federal and state-listed species. The U.S.
23 Department of Agriculture, Wildlife Services in Raleigh, North Carolina, will develop the plan and
24 associated EA in cooperation with the NPS.

25 **Special Use Permit**

26 A special use permit is required for activities at Cape Hatteras National Seashore that provide a benefit to
27 an individual, group, or organization, rather than the public at large, and that require some degree of
28 management from the NPS to protect park resources and the public interest. Examples include: religious
29 ceremonies, weddings, fishing tournaments, surfing tournaments, commercial filming, bike tours,
30 marathons, car rallies, and public speeches and assemblies. Permit fees vary and generally range between
31 \$100 and \$500. However, an additional fee is charged for any activity that requires NPS personnel

1 participation or monitoring, or that creates extraordinary administrative work. The full cost is charged for
2 restoration of park resources including litter cleanup (NPS nd, 1).

3 **Concessioner Operations Permits**

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

8 **Hurricane Plan**

9 The *2004 Hurricane Plan* developed by the NPS Outer Banks Group sets forth objectives of protecting
10 visitor and employee health and safety; protecting visitor and employee property; protecting and securing
11 park resources, facilities, and property; assisting surrounding agencies and communities; and resuming
12 normal park operations as soon as possible after a storm event (NPS 2004d, 1). The plan established an
13 Incident Command System that is responsible for managing most large planned and unplanned events as
14 well as emergencies within or involving the Outer Banks Group. Included in the Incident Command
15 System is a Hatteras Island Division Supervisor, who is to supervise all operations in the Hatteras Island
16 District.

17 **Ocracoke Island Transportation Study**

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

23 **Research of ORV Impacts on Natural Resources**

24 In cooperation with the Virginia Institute of Marine Science, Cape Hatteras National Seashore has
25 conducted research for assessing natural resource impacts from ORV use at the Seashore. A cooperative
26 agreement between the NPS and the Institute guided this research and called for a literature review and
27 ecological assessment. These studies included conducting a bibliographic search of previous scientific
28 research on impacts of ORV use on ecosystems and their components as the first phase. The second phase
29 assessed impacts to the primary dune and beach communities to determine through scientifically
30 defensible and established methods any correlation between highly disturbed or unhealthy communities

1 and ORV activities at the Seashore. The results of these studies were considered during the development
2 of this ORV management plan/EIS.

3 **Other Recreational Activities**

4 Other recreational activities were considered during the development this ORV management plan/EIS.
5 Recreational users access the Seashore for shelling, sunbathing, and walking, to name but a few activities
6 both with and without ORVs. Some birdwatchers access the Seashore on foot and other local bird
7 watching clubs use ORVs to conduct tours of the area. These tours, which start in Buxton, are not
8 sponsored by the Seashore, but are advertised in the Seashore.

9 **Weather**

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

14 **Annual Monitoring**

15 Cape Hatteras National Seashore conducts annual monitoring of piping plover, American oystercatcher,
16 and colonial waterbirds. Management of piping plover at the Seashore consists of locating breeding
17 plovers and nests, protecting territories and nests, and monitoring nests and broods. The 2007 report of
18 piping plover activities at the Seashore states that fledging rates remain well below what the USFWS
19 believes is necessary to sustain or rebuild a piping plover population at the Seashore and the reduced
20 number of breeding piping plover at the Seashore is a dire situation. Six breeding pairs of piping plover
21 were documented at Cape Hatteras National Seashore during both the 2006 and 2007 breeding seasons,
22 which is double that found in 2004 and 2005 and the most known pairs since 1999. Since 1989, the
23 productivity rates for piping plover have ranged from 0.2 to 1.3 fledglings per breeding pair. In 2006,
24 there were 0.50 fledglings per breeding pair. This is below the level set forth in the USFWS federal
25 recovery plan of 1.5 fledglings per breeding pair. Data collected from these surveys were used to help
26 determine the potential impacts of this plan/EIS on the birds at the Seashore.

27 The Seashore has monitored American oystercatcher for the past six years. In 2002, 31 pairs of
28 oystercatchers produced 48 nests. Of these, 10 nests (21%) hatched and 38 nests (79%) were
29 unsuccessful. Overall productivity was 0.29 fledglings per breeding pair. Of the 38 unsuccessful
30 oystercatcher nests, 12 (or 32%) were known to have been lost to predation. This includes 11 clutches lost
31 to fox and one lost to an unknown predator. In 2002, 39 of the 48 nests were located in areas normally

1 used by ORVs. Of these, seven nests (18%) successfully hatched and five nests produced fledglings. Six
2 (67%) of the nine oystercatcher fledglings at Cape Hatteras National Seashore were found in areas
3 seasonally closed to ORV traffic. In 2004, 29 pairs of oystercatchers were documented. This was one pair
4 less than found in 2003 and represents a 29% decline in breeding pairs since monitoring began in 1999.
5 Of the 39 nests located in 2004, 23 nests (59%) were known to have hatched and 15 nests (38%) were
6 known to be unsuccessful. Overall productivity was 0.66 fledglings per breeding pair. Of the 15
7 unsuccessful oystercatcher nests, four (or 27%) were known to have been lost to predation based on
8 predator sign at nests. They include one clutch lost to grey fox (*Urocyon cinereoargenteus*), one to
9 raccoon (*Procyon lotor*), one to domestic dog (*Canis familiaris*), and one to an unknown canid, either fox
10 or dog. Two nests (13%) were believed lost through intentional human vandalism (See Human
11 Disturbance below). The largest proportion of failed nests (38%) was lost without definitive evidence
12 contributing to egg disappearance. Nesting data from 2007 revealed that 22 pairs of oystercatchers
13 produced 39 nests, producing 31 nestlings, and fledging 11 chicks. Overall productivity was 0.50
14 fledglings per breeding pair.

15 The *Southeastern Shorebird Conservation Plan* (USFWS 2004, 48) lists the American oystercatcher as a
16 species of concern. Data collected from these surveys was used to help determine the potential impacts of
17 this ORV management plan on the birds at the Seashore.

18 Since 1997, the Seashore has surveyed colonial waterbird activity. The 2006 survey found 13 active
19 colonies at the Seashore, with one on Bodie Island, 10 on Hatteras Island and two on Ocracoke Island.
20 This survey did not provide productivity levels for various species of colonial waterbirds, but concluded
21 that productivity during the 2006 season was low in terms of nest numbers and nest success. Possible
22 reasons noted for lack of success were raccoon and feral cat colonies located in the area of the colonial
23 waterbird activity, as well as human disturbance (NPS 2006d, 1).

24 The Seashore lies near the northern edge of nesting sea turtles and conducts annual monitoring of sea
25 turtle nesting. Non-breeding sea turtles can be found offshore at the Seashore during much of the year.
26 The North Carolina Wildlife Resources Commission issues the Seashore a permit for managing the turtle
27 population yearly, under the authority of the USFWS. In 2006, ocean beaches of Cape Hatteras National
28 Seashore were patrolled daily from May 15 to September 15 in search of turtle crawls and nesting
29 activity. After September 15, the beaches were surveyed through November 15 two to three times per
30 week for possible late nests or hatchling emergence events from possible missed nests. Volunteers and
31 Seashore staff monitored approximately 55 miles of beach covering Bodie, Hatteras, and Ocracoke
32 Islands. A total of 149 activities were documented of which 76 were confirmed nests, 8 were digs, and 65

1 were false crawls. Two species were known to have nested within the Seashore with a total of 72
2 loggerhead turtle nests and 4 green turtle nests. No leatherback turtle nests were documented in 2005 or
3 2006. Twenty-three nests and digs were lost to storm activity either before hatching or before a post-
4 hatching excavation could take place to confirm species and egg numbers. The report also documents
5 violations by ORV drivers who disregarded posted closures and states that more staff would be needed to
6 monitor closures and direct traffic (NPS 2007d, 4). Data collected from these studies was used to help
7 determine the potential impacts of this ORV management plan on sea turtles at the Seashore.

8 The Seashore has been surveying for seabeach amaranth since 1985. Over last 10 years, amaranth
9 numbers were highest in 2002 with 93 plants recorded. More recently, numbers have declined with
10 only one plant found in 2004 and two plants found in 2005. No plants were found in 2006 and 2007,
11 and seabeach amaranth is currently thought to be extirpated from the Seashore. Seabeach amaranth
12 numbers have declined in both protected areas and areas with ORV access (NPS 2007d, 50)

13 **RELATIONSHIP TO OTHER FEDERAL PLANNING DOCUMENTS AND ACTIONS**

14 In addition to the laws and policies above, other federal planning documents exist that directly or
15 indirectly relate to ORV use at the Seashore and were taken into consideration during the development of
16 this plan/EIS.

17 **Piping Plover Atlantic Coast Population Recovery Plan**

18 ORV management activities described in this plan/EIS considered the 1996 USFWS *Piping Plover*
19 *Atlantic Coast Population Recovery Plan*. This population of piping plovers was listed as threatened in
20 1986 and has increased from approximately 800 pairs to almost 1,350 pairs in 1995. However, pressure
21 on Atlantic Coast beach habitat from development and human disturbance is pervasive and unrelenting,
22 and the species is sparsely distributed. Increased visitation to Atlantic coast parks, which includes
23 increased ORV use, is cited as one of the many reasons the piping plover was listed.

24 **Recovery Plan for the Great Lakes Piping Plover**

25 This plan/EIS considered the USFWS *Recovery Plan for the Great Lakes Piping Plover*. The Great Lakes
26 population, which winters at the Seashore, was listed as endangered under provisions of the *Endangered*
27 *Species Act* on January 10, 1986. Critical habitat was designated on the Great Lakes breeding grounds on
28 May 7, 2001, and for all populations of piping plovers on the wintering grounds on July 10, 2001. The
29 Great Lakes population had declined from a historic size of several hundred breeding pairs to 17 at the
30 time of listing. From 1986 through 2002, the population fluctuated between 12 and 51 breeding pairs,

1 with breeding areas remaining largely confined to Michigan. The restricted breeding range of this
2 population creates a gap in the distribution of piping plovers across North America, with the Great Lakes
3 population isolated from the two other breeding populations (Atlantic and Northern Great Plains)
4 (USFWS 2003, ii).

5 **Atlantic Green, Hawksbill, Leatherback, Kemp’s Ridley, and Loggerhead Turtle Recovery Plans**

6 The USFWS and the National Marine Fisheries Service recovery plans for the U.S. population of Atlantic
7 green, hawksbill, leatherback, Kemp’s ridley, and loggerhead sea turtles were considered when
8 developing this plan/EIS. Each of these species is federally listed and the Seashore considered the
9 individual recovery plans (NMFS 1991a, 1991b, 1992; USFWS 1991a, 1991b, 1992a, 1992b, 1993).

10 **Marine Mammal Recovery Efforts by the National Marine Fisheries Service**

11 This plan/EIS considered the *Marine Mammal Recovery Efforts of the National Marine Fisheries Service*.
12 The National Marine Fisheries Service Office of Protected Resources is charged with implementing the
13 *Marine Mammal Protection Act* and the *Endangered Species Act* with respect to marine mammal species
14 under the National Oceanic and Atmospheric Administration Fisheries jurisdiction: whales, dolphins,
15 porpoises, seals, and sea lions. As part of the *Marine Mammal Protection Act* mandate, the Office of
16 Protected Resources works in collaboration with the National Oceanic and Atmospheric Administration
17 Fisheries Regions and Fisheries Science Centers to develop and implement a variety of programs for the
18 protection, conservation, and recovery of marine mammals. The Office of Protected Resources also
19 establishes cooperative agreements with states regarding marine mammal resources, identifies important
20 research needs to collect appropriate information for management decisions, and administers the activities
21 of the Marine Mammal Health and Stranding Response Program (NOAA nd, 1). The efforts are relevant
22 to this plan because ORVs are used to assist marine mammals that have become stranded on the beach.

23 **RELATIONSHIP TO OTHER STATE AND LOCAL PLANNING DOCUMENTS, POLICIES, ACTIONS,** 24 **LAWS, AND REGULATIONS**

25 The following state and local documents, policies, actions, laws, and regulations are directly or indirectly
26 related to ORV use and were therefore considered during the development of this plan/EIS:

27 **North Carolina Division of Marine Fisheries Regulations**

28 Recreational fishing at the Seashore is guided by the North Carolina Division of Marine Fisheries
29 regulations. The North Carolina Division of Marine Fisheries manages all marine and estuarine resources

1 in the state. As part of this function, a yearly the division publishes a recreational fishing guide that sets
2 minimum lengths and bag limits for various species. As of January 1, 2007, the State of North Carolina
3 required recreational anglers to have a license for saltwater fishing.

4 **North Carolina Wildlife Resources Commission Nongame and Endangered Wildlife Program**

5 The Nongame and Endangered Wildlife Program, established in North Carolina in 1983, aims to prevent
6 species from becoming endangered through maintaining viable, self-sustaining populations of all native
7 wildlife, with an emphasis on species in decline. The North Carolina Wildlife Resources Commission has
8 a Comprehensive Wildlife Strategy to protect state listed species. This strategy includes securing funding
9 for state fish and wildlife agencies to take preventative actions that help keep rare species from becoming
10 endangered and keep common species common (NCWRC nd, 4). Species listed through this program as
11 state threatened, endangered, or of special concern were taken into consideration during the development
12 of this plan/EIS. Endangered and threatened wildlife and wildlife species of special concern are protected
13 under Article 25 of Chapter 113 of the *North Carolina General Statutes*.

14 **North Carolina Wildlife Resource Commission Handbook for Sea Turtle Volunteers in North** 15 **Carolina**

16 The North Carolina Wildlife Resources Commission published *Handbook for Sea Turtle Volunteers in*
17 *North Carolina* (NCWRC 2006). The handbook provides guidance to volunteers in conducting
18 biologically sound management projects to benefit sea turtles and to help ensure compliance with laws
19 pertaining to rare and endangered species at all levels of government. An annual permit is issued to the
20 Seashore by the North Carolina Wildlife Resources Commission under the authority of the USFWS.

21 **North Carolina Department of Transportation**

22 The North Carolina Department of Transportation (NCDOT) has various projects related to NC-12 and
23 other Outer Banks access issues. The NCDOT is considering some long-term projects in response to the
24 changing physical landscape of the area such as a bridge from Avon to Buxton, which is a possible area
25 for a future inlet. The Outer Banks Task Force has developed a long-term management plan for NC-12
26 that was considered during the development of this plan/EIS. NC-12 connects the communities located
27 within Cape Hatteras National Seashore to the mainland of North Carolina. Island residents depend on the
28 roadway for off-island community services, such as hospitals, emergency response, and waste collection.
29 NC-12 is also the primary evacuation route for all permanent and temporary residents on the island when
30 severe weather is approaching. Storms frequently cause the ocean to overwash NC-12 and deposit large
31 quantities of sand over portions of the roadway. The storms sometimes damage NC-12, which interrupts

1 access and services to the island and causes hardships for island residents. NCDOT requires longer to
2 repair the roadway when the damage to NC-12 is worse. NC-12 must be continually repaired and
3 maintained to prevent permanent loss of access on Hatteras Island. To address these issues a task force
4 was formed comprising the NCDOT, NPS, Corps, USFWS, National Marine Fisheries Service, Federal
5 Highway Administration, Dare and Hyde counties, and the North Carolina Department of Environment
6 and Natural Resources. The mission of this task force is to develop a long-range protection and
7 maintenance plan for the transportation system on the Outer Banks. As part of this task force, hot spots
8 for erosion have been identified and include Northern Pea Island, Sandbag area, Rodanthe 'S' curves,
9 Buxton/Canadian Hole, Hatteras Village, and Ocracoke (OBTF 2003, 1).

10
11 The NCDOT is proposing to build a new bridge to replace the existing Herbert C. Bonner Bridge,
12 originally built in the 1960s, over Oregon Inlet before the end of its reasonable service life. Four corridors
13 were evaluated for the replacement bridge. The NCDOT and a multi-agency merger team studied the four
14 bridge corridors before two of the corridors were selected for more detailed evaluation. The four corridors
15 were evaluated for their potential impacts to natural resources, including federally protected species,
16 wetlands and submerged aquatic vegetation, in addition to being evaluated for costs, construction method,
17 and compatibility with Pea Island National Wildlife Refuge and NPS plans and policies. All of the
18 corridors begin on Bodie Island at the northern endpoint of the existing bridge near the Oregon Inlet
19 Marina and the U.S. Coast Guard Station. NC-12 on Hatteras Island is regularly threatened by shoreline
20 erosion and overwash. Three areas, known as "hot spots" are especially vulnerable. A new bridge located
21 in Corridor Alternative 1 would connect existing NC-12 from the tip of Bodie Island to south of the first
22 hot spot, known as the Canal Zone. A 14-mile bridge in the second Alternative Corridor would run from
23 the tip of Bodie Island south to Rodanthe and would bypass all three "hot spots." The NCDOT and the
24 Federal Highway Administration released a supplemental draft EIS regarding the replacement of the
25 Herbert C. Bonner Bridge across Oregon Inlet in September 2005. A supplement to the EIS was released
26 in 2007 (OBTF 2007, 1, FHWA 2007, 1). The 2005 supplemental EIS considers two replacement bridge
27 corridors and their five associated alternatives, with the 2007 supplement evaluating two additional
28 corridors and their seven associated alternatives. The bridge is planned in the NCDOT 2007–2013
29 Transportation Improvement Program (FHWA 2007, 1).

30 **The North Carolina Coastal Area Management Act (CAMA)**

31 The North Carolina CAMA of 1974 establishes a cooperative program of coastal area management
32 between local and state governments through comprehensive planning for the protection, preservation,

1 orderly development, and management of the coastal area of North Carolina. Additional details regarding
2 CAMA are presented previously in this document under the Coastal Zone Management Act description.

3 **Dare and Hyde County Planning Documents**

4 The development and implementation of this plan/EIS considered the planning efforts of Dare and Hyde
5 counties. In Dare County, the County Planning Board serves as an advisory board to the Dare County
6 Board of Commissioners. In compliance with the North Carolina CAMA, Dare County prepared guidance
7 and policies for land use development, known as the *Land Use Plan* (Dare County 2003, 15), which
8 provides local elected officials with a set of guidelines for development patterns and other land use issues
9 that are important to the community. The *Land Use Plan* includes policies on various topics and
10 implementation activities such as policies on water quality, residential and commercial development
11 patterns, beach access, oceanfront and estuarine development, stormwater management, wastewater, and
12 transportation. The latest version of the Dare County *Land Use Plan* was certified by the North Carolina
13 Coastal Resources Commission in July 2003, and must be updated every five years. The *Land Use Plan*
14 applies to the unincorporated portions of Dare County, while each of the municipalities in Dare County
15 adopts its own plans for its respective planning jurisdiction. The Dare County *Land Use Plan* works in
16 conjunction with the zoning ordinance, as well as the CAMA. Except for the Mainland and Wanchese, the
17 remainder of unincorporated Dare County is zoned. Detailed zoning maps have been adopted for the
18 villages of Duck, Collington, Roanoke Island, Avon, Buxton, and Hatteras. The villages of Rodanthe,
19 Waves, Salvo, and Frisco are zoned S-1, which is a minimal zoning district that allows all uses but does
20 establish some building setbacks and height limitations. In addition, the county adopted a Special
21 Environmental District (SED-1) for the Buxton Woods maritime forest. This zoning district establishes
22 special standards for land clearing and vegetation removal that are intended to protect the vegetative
23 canopy of the Buxton Woods forest (Dare County 2003, 93).

24 The *Hyde County Land Use Plan*, written in 1986, was updated in 1992, 1997, and 2006. *Hyde County*
25 *Land Use Plan* is required as part of the State of North Carolina's Coastal Area Management Act and
26 analyzes land development in the area to plan for future uses. The plan sets forth the following vision for
27 the Island of Ocracoke (Hyde County 2006, 166):

28 The vision of Ocracoke Island in the 21st century is a community that ensures livability and
29 economic viability by offering the discerning vacationer a preferable alternative to the over
30 commercialized beach destinations while providing improved attention to Ocracoke residents. The
31 mission of county government should be to facilitate and support:

- 32 • Efforts to maintain the historic village assets.

- 1 • Efforts to preserve traditional native occupations and crafts including hunting and
2 commercial fishing.
- 3 • Efforts to enhance the Island shopping opportunities with small locally owned shops and
4 businesses.
- 5 • Efforts to provide affordable housing.
- 6 • Cooperative efforts with the community, NPS, and DOT to maintain access to the Island and
7 provide necessary amenities. Ocracoke and Mainland should emphasis access.
- 8 • Support village craftsmen.

9 **Outer Banks Visitor Bureau Conversion Study**

10 In 2003 the Outer Banks Visitor Bureau conducted a study to determine the effectiveness of the Outer
11 Banks marketing material. The study reviewed the relationship between the number of people requesting
12 information about the Outer Banks in Dare County versus the actual number of people that traveled to the
13 area, known as the conversion rate. In 2003, 33% of the respondents to the visitation survey visited the
14 Outer Banks, a drop from 44% that visited the area in 2000. A few plausible reasons for this decline
15 include:

- 16 1. People who have less experience with the destination have to familiarize themselves with the
17 area and they take longer to consider their decision
- 18 2. A major feature that was promoted in the advertising for the Seashore was the First Flight
19 celebration in 2003. Visitors may have waited to visit the Seashore until that time, passing up a
20 trip in 2000.
- 21 3. In 2002 the economic climate and political uncertainty may have made people more cautious
22 about traveling and investing in travel.

23 Overall a general beneficial economic impact from the visitation campaign was seen at the Seashore. .
24 The study also reported a large number of people who received materials and did not visit the Outer
25 Banks in that year but planned to make the trip in future years (SMR 2003, 9).

26 **Off-Road Vehicle Regulations for Duck, Kill Devil Hills, Nags Head, Kitty Hawk, and Southern** 27 **Shores**

28 Each municipality on the Outer Banks has its own individual rules for ORV use. Generally all
29 municipalities that allow beach driving share the following rules:

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