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From: [Sandra Hamilton](#)
To: lfox@louisberger.com
Cc: [Doug Wetmore](#)
Subject: 2nd IRD comments CH 1 and 2
Date: 10/08/2010 05:59 PM
Attachments: [01_Chapter-1_2nd_Draft_FEIS_093010\[1\].mbm sh dw 100810.doc](#)
[02a_Chapter-2_2nd_Draft_FEIS_Text_093010\[1\].mbm sh mbm 100810.doc](#)

Hi Lori,

Here are CH 1 and CH 2 text with my, Doug's, and the park's edits and the SOL advice on the parts where I asked for their help incorporated.



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02a_Chapter-2_2nd_Draft_FEIS_Text_093010[1].mbm sh mbm 100810.doc

The park, Doug and I have reviewed CH 2 maps. Given the shortness of time for revisions after this next one, we're thinking it may be most efficient if Doug comes over to your office next week with our mark-ups and notes and works through the revisions with Josh. Map change communication through the email is challenging.. What do you think?

We have Mike's CH 2 Tables, CH 3 and CH 4 and are entering our comments into them now.

Mike reminded me again to be sure you incorporate Britta's comments on the first internal review draft into the camer ready.

I'll be back after supper to continue with the remainder.

SandySandy Hamilton
Environmental Protection Specialist
National Park Service - Environmental Quality Division
Academy Place
P.O. Box 25287
Denver CO 80225
PH: (303) 969-2068
FAX: (303) 987-6782

CHAPTER 1: PURPOSE OF AND NEED FOR ACTION

This “Purpose of and Need for Action” chapter explains what this ~~draft~~ *Off-Road Vehicle Management Plan / Environmental Impact Statement* (plan/EIS) intends to accomplish and why the National Park Service (NPS) is taking action at this time. This plan/EIS presents four action alternatives for managing off-road vehicle (ORV) use and assesses the impacts that could result from continuing current management (the two no-action alternatives) or implementation of any of the action alternatives. Upon conclusion of this plan/EIS and decision-making process, the alternative selected for implementation will become the ORV management plan, which will guide the management and control of ORVs at Cape Hatteras National Seashore (Seashore) for the next 10 to 15 years. It will also form the basis for a special regulation to manage ORV use at the Seashore. Brief summaries of both the purpose and need are presented here; more information is available in the “Administrative Background” section of this chapter.

PURPOSE OF THE PLAN

The purpose of this plan is to develop regulations and procedures that carefully manage ORV use/access in the Seashore to protect and preserve natural and cultural resources and natural processes, to provide a variety of visitor use experiences while minimizing conflicts among various users, and to promote the safety of all visitors.

NEED FOR ACTION

Cape Hatteras National Seashore provides a variety of visitor experiences. It is a long, essentially linear park, visitation is high, and parking spaces near roads are limited. Some popular beach sites, particularly those near the inlets and Cape Point, are a distance from established or possible parking spaces. Visitors who come for some popular recreational activities such as surf fishing and picnicking are accustomed to using large amounts and types of recreational equipment that cannot practically be hauled over these distances by most visitors without some form of motorized access. For many visitors, the time needed and the physical challenge of hiking to the distant sites, or for some even to close sites, can discourage or preclude access by non-motorized means. As a result, ORVs have long served as a primary form of access for many portions of the beach in the Seashore, and continue to be the most practical available means of access and parking for many visitors.

In addition to these recreation opportunities, the Seashore is home to important habitats created by the Seashore’s dynamic environmental processes, including habitats for several federally listed species including the piping plover and three species of sea turtles. These habitats are also home to numerous other protected species, as well as other wildlife. The NPS is required to conserve and protect all of these species, as well as the other resources and values of the Seashore. In addition, the Seashore was designated a Globally Important Bird Area by the American Bird Conservancy (American Bird Conservancy 2005). This designation recognizes those areas with populations and habitat important at the global level.

The use of ORVs must therefore be regulated in a manner that is consistent with applicable law, and appropriately addresses resource protection (including protected, threatened, ~~and~~ or endangered species), potential conflicts among the various Seashore users, and visitor safety. Section 4.10(b) of the NPS

*Off-road vehicle
(ORV) — Any
motorized vehicle
designed for or
capable of cross-
country travel on or
immediately over land,
water, sand, snow, ice,
marsh, swampland, or
other natural terrain.*

Chapter 1: Purpose of and Need for Action

1 regulations in Title 36 of the Code of Federal Regulations (CFR), which implements Executive Orders
 2 11644 and 11989, prohibits off-road use of motor vehicles except on designated routes or areas. It
 3 requires that “routes and areas designated for ORV use shall be promulgated as special regulations” in
 4 compliance with other applicable laws.

5 Therefore, in order to provide continued visitor access through the use of ORVs, the NPS must
 6 promulgate a special regulation authorizing ORV use at the Seashore. In order to ensure that ORV use is
 7 consistent with applicable laws and policies, the Seashore has determined that an ORV management plan
 8 is necessary as part of this process. Thus, the ORV plan and special regulation will:

- 9 • Bring the Seashore in compliance with Executive Orders 11644 and 11989 respecting ORV use,
 10 and with NPS laws, regulations (36 CFR 4.10), and policies to minimize impacts to Seashore
 11 resources and values.
- 12 • Address the lack of an approved plan, which has led over time to inconsistent management of
 13 ORV use, user conflicts, and safety concerns.
- 14 • Provide for protected species management in relation to ORV use ~~upon expiration of~~ replacing
 15 the *Cape Hatteras National Seashore Interim Protected Species Management Strategy /*
 16 *Environmental Assessment* (Interim Strategy) (NPS 2006a), and associated Biological Opinion
 17 and amendments (USFWS 2006a, 2007a, 2008a) as modified by the consent decree.

18 OBJECTIVES IN TAKING ACTION

19 Objectives are what must be achieved to a large degree for the action to be considered a success
 20 (NPS 2001a). All alternatives selected for detailed analysis must meet project objectives to a large degree
 21 and resolve the purpose of and need for action. Objectives must be grounded in the Seashore’s enabling
 22 legislation, purpose, significance, and mission goals, and must be compatible with direction and guidance
 23 provided by the Seashore’s general management plan, strategic plan, and/or other management guidance.
 24 The following are objectives identified by Seashore staff for developing this plan/EIS.

25 MANAGEMENT METHODOLOGY

- 26 • Identify criteria to designate ORV use areas and routes.
- 27 • Establish ORV management practices and procedures that have the ability to adapt in response to
 28 changes in the Seashore’s dynamic physical and biological environment.
- 29 • Establish a civic engagement component for ORV management.
- 30 • Establish procedures for prompt and efficient public notification of beach access status including
 31 any temporary ORV use restrictions for such things as ramp maintenance, resource and public
 32 safety closures, storm events, etc.
- 33 • Build stewardship through public awareness and understanding of NPS resource management and
 34 visitor use policies and responsibilities as they pertain to the Seashore and ORV management.

35 NATURAL PHYSICAL RESOURCES

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

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

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

6 **VEGETATION**

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

8 **OTHER WILDLIFE AND WILDLIFE HABITAT**

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

10 **CULTURAL RESOURCES**

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

13 **VISITOR USE AND EXPERIENCE**

- 14 • Ensure that ORV operators are informed about the rules and regulations regarding ORV use at the
15 Seashore.
16 • Manage ORV use to allow for a variety of visitor use experiences.
17 • Minimize conflicts between ORV use and other uses.

18 **VISITOR SAFETY**

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

20 **SEASHORE OPERATIONS**

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

24 **PROJECT STUDY AREA**

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

27 **PURPOSE AND SIGNIFICANCE OF CAPE HATTERAS NATIONAL**
28 **SEASHORE**

29 All units of the national park system were formed for a specific purpose (the reason they are significant)
30 and to conserve significant resources or values for the enjoyment of future generations. The purpose and

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1 significance of the park provides the basis for identifying uses and values that individual NPS plans will
2 support. The following provides background on the purpose and significance of the Seashore.

3 | As stated in the Seashore’s enabling legislation (the Act), Congress ~~established~~ authorized the Seashore in
4 1937 as a national seashore for the enjoyment and benefit of the people, and to preserve the area. The Act
5 states:

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

13 The Act also states:

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

21 A 1940 amendment to the enabling legislation authorized hunting and re-designated the area as the Cape
22 Hatteras National Seashore Recreational Area. (Note: The history of the Seashore’s name is described in
23 more detail in the next section of this chapter.)

24 Park significance statements capture the essence of the park’s importance to the nation’s natural and
25 cultural heritage. Understanding park significance helps managers make decisions that preserve the
26 resources and values necessary to the park’s purpose. The following significance statements recognize the
27 important features of the Seashore. As stated in the 2006–2011 Strategic Plan, the Seashore has the
28 following significance (NPS 2007b):

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

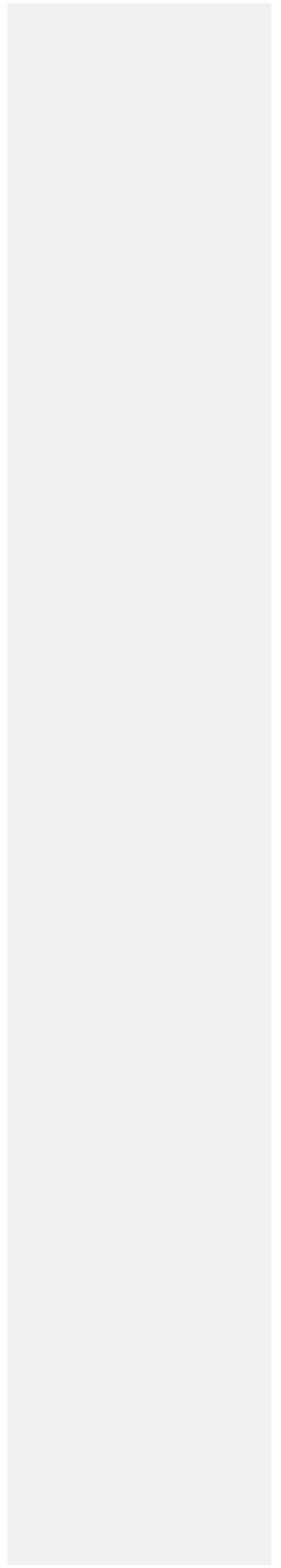
36

Purpose and Significance of Cape Hatteras National Seashore



FIGURE 1. CAPE HATTERAS NATIONAL SEASHORE MAP

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1 **DESIRED FUTURE CONDITIONS FOR THREATENED, ENDANGERED,**
 2 **STATE-LISTED, AND SPECIAL STATUS SPECIES**

3 Desired future conditions (also called management targets) describe what park resources will look like
 4 once management goals have been achieved. They derive first from the overarching requirement of the
 5 *Organic Act* to conserve wildlife without impairment for the enjoyment of present and future generations.
 6 To meet the *Organic Act* mandate, the NPS will manage the Seashore to provide habitat and other
 7 conditions necessary to support sustainable populations of these species at the Seashore. Second, desired
 8 future conditions derive from NPS responsibilities as a federal agency under the ESA and the NPS
 9 *Management Policies 2006* to conserve listed species and to contribute recovery goals for them. Finally,
 10 they originate from the NPS policy to manage the same for state-listed species and species of park
 11 management concern as for federally listed species to the extent possible.

12 Desired future conditions are also a learning tool in the context of periodic review and adaptive
 13 management. They provide the basis for evaluation of progress and for the research hypotheses set in the
 14 adaptive management plan. The process of developing the desired conditions points out what is known
 15 and unknown about the resource and where additional research and adaptive management are appropriate.
 16 A definitive methodology for developing desired future conditions does not exist. Desired conditions are
 17 highly variable and therefore are based on conservative estimates that consider species variability, habitat
 18 availability, and environmental factors that could affect the success of any colony or nesting individual.
 19 The adaptive management initiatives that accompany these desired future conditions address the research
 20 that the Seashore may conduct to determine the conditions under which recreational use may be managed
 21 to enhance visitor experience without adversely affecting the achievement and maintenance of the desired
 22 future conditions. In the context of this plan/EIS, the following definitions are applied to desired future
 23 conditions:

- 24 • **Short-term** means 10 years (or two 5-year periodic review cycles) after implementation of plan.
- 25 • **Long-term** means 20 years (or four 5-year periodic review cycles) after implementation of plan.

26 When desired future conditions for resources are met or exceeded, it may allow for more flexible
 27 management of recreational use, provided adverse impacts of such use are effectively managed and
 28 wildlife populations remain stable. The populations of protected species that meet or exceed the goals set
 29 forth in this section would continue to be protected in accordance with applicable federal and state laws
 30 and regulations. Where progress is not being made toward the attainment of desired future conditions,
 31 periodic review and adaptive management may result in increased restrictions on recreational use. The
 32 management targets below are consistent with and contribute to the goals set forth by existing
 33 conservation plans such as U.S. Fish and Wildlife Service (USFWS) recovery plans (USFWS 1996a,
 34 1996b), the Southeastern Coastal Plains–Caribbean Region Report U.S. Shorebird Conservation Plan
 35 (Hunter et al. 2002), the Waterbird Conservation Plan for the Mid-Atlantic/New England/Maritimes
 36 Region (MANEM 2006), and A Conservation Action Plan for the American Oystercatcher (*Haematopus*
 37 *palliatus*) for the Atlantic and Gulf coasts of the United States, Version 2.0 (Schulte et al. 2007).

38 The NPS considers the desired future conditions to be realistic, sustainable targets for piping plovers
 39 (table 1), nesting sea turtles (table 2), seabeach amaranth (table 3), and sensitive species of shorebirds
 40 (tables 4 and 5) at Cape Hatteras National Seashore.

41

1

TABLE 1. DESIRED FUTURE CONDITIONS FOR PIPING PLOVERS

Variable	Short-Term Target	Long-Term Target	Source
Number of breeding pairs	15	30	Short-term target from highest number of pairs recorded at Cape Hatteras National Seashore (1989) and the Biological Opinion (USFWS 2006a) ^a ; Long-term target from the Piping Plover Recovery Plan (USFWS 1996a, appendix B)
Fledge rate	5-year average of 1.0 chick per pair	5-year average of 1.5 chicks per pair ^b	Short-term target from the Biological Opinion (USFWS 2006a); long-term target from the Piping Plover Recovery Plan (USFWS 1996a)
Depredation rate	5-year average rate of mammalian depredation of eggs is <10%	Same as short-term target	Adapted from the Piping Plover Recovery Plan (USFWS 1996a) ^c

^a The information is in the [2006 Biological Opinion](#) under: Effects of the Action, A. Piping Plovers, Nature of the effect ([USFWS 2006a](#)):

"The biologically appropriate measure of population impacts is not the size of the current remnant population, but rather the potential pairs and productivity foregone. The 15 pairs documented at the Seashore in 1989 and comparison of current habitat with 1989 aerial photos furnish empirical evidence of potential for a population of at least five times the current number [which was 3] (i.e., 15 pairs). However, the demonstrated population growth elsewhere in the range provides evidence that the potential contributions at [CAHA the Seashore](#) are two to four times that number (i.e., 30 to 60 pairs). The USFWS estimated carrying capacity for [CAHA the Seashore](#) to be [sic] 30 pairs. (See USFWS 1996a, appendix B. Actual population growth at many of the sites in other states has exceeded the projections made in this exercise.)"

^b In the future, if the fledge rate target in the Piping Plover Recovery Plan is revised (e.g., revised for Southern Recovery Unit), the Cape Hatteras National Seashore target will be adjusted to conform to the recovery plan.

^c Recovery Plan: Recovery Tasks – Section 1.42 recommends "Deploy predator exclosures to reduce egg predation where appropriate" and states, in part: "Rimmer and Deblinger (1990) found that 24 of 26 nests (92%) protected by exclosures hatched at least one egg, while only six of 24 (25%) unexclosed nests hatched at a Massachusetts site over four years. Melvin et al. (1992) reported 90% (26/29) hatching of exclosed nests versus 17% (4/24) for unexclosed nests at six sites on Outer Cape Cod, Massachusetts."

2

TABLE 2. DESIRED FUTURE CONDITIONS FOR NESTING SEA TURTLES

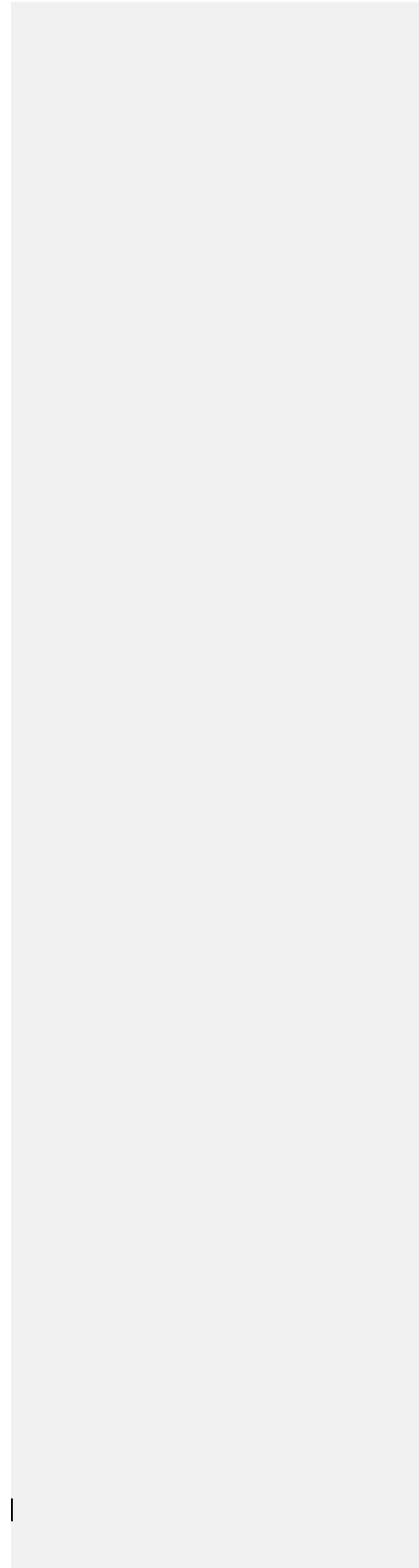
Variable	Short-Term Target	Long-Term Target	Source
Number of loggerhead nests	94 ^a nests with an average annual rate of increase of 2%	115 ^a nests with an average annual rate of increase of 2%	Adapted from 2008 Loggerhead Recovery Plan goal (NMFS and USFWS 2008)
Percent of North Carolina total sea turtle nests	5-year average of 10% of North Carolina total	Same as short-term target	From the Biological Opinion (USFWS 2006a)
Ratio of false crawls to nests	5-year average of 1:1 or less	Same as short-term target	From Dodd 1988
Number of nests relocated	5-year average of <30%; Minimize number of nests relocated for reasons other than "risk of daily overwash or well-documented risk of erosion"	Same as short-term target	From Godfrey pers. comm. 2008

^a Targets are based on 2% annual rate of increase from 2004-2008 average of 77.2 nests. Rate of increase of 2% for the Northern Recovery Unit is identified in the recovery plan. Based on this approach, the 50-year projection is

Desired Future Conditions for Threatened, Endangered, State-Listed, and Special Status Species

201 nests.

1



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1

TABLE 3. DESIRED FUTURE CONDITIONS FOR SEABEACH AMARANTH

Variable	Short-Term Target	Long-Term Target	Source
Number of suitable sites occupied by seabeach amaranth	Develop a seabeach amaranth restoration plan for 4 suitable sites ^a	At least 3 of 4 suitable sites are occupied for 5 consecutive years	From the Seabeach Amaranth Recovery Plan (USFWS 1996b)

^a Suitable sites include Bodie Island Spit, Cape Point, Hatteras Inlet Spits (Hatteras Island Spit and North Ocracoke Spit) and Ocracoke Inlet Spits (Southern Ocracoke Island Spit).

2

TABLE 4. DESIRED FUTURE CONDITIONS FOR AMERICAN OYSTERCATCHERS

Variable	Short-Term Target	Long-Term Target	Source
Number of nesting pairs	5-year average of 30 nesting pairs	5-year average of 45 nesting pairs	Targets based on American oystercatcher conservation action plan (Schulte et al. 2007) and recent Cape Hatteras National Seashore data ^a
Fledge rate (chicks fledged per nesting pair)	5-year average of 0.40 chicks per pair or higher	5-year average of 0.50 chicks per pair or higher	3 % annual increase from current rate of 0.30
Depredation rate	Percentage of nests lost that can be directly attributed to depredation of 30% or less	Percentage of nests lost that can be directly attributed to depredation of 20% or less	Average depredation rates over last 5 years: nests=31.2%, chicks=51.4% (NPS in prep-2009n). The desired future condition is to reduce depredation rates while recognizing some depredation will continue to occur.

^a From page 11 of the conservation action plan (Schulte et al. 2007): "We recommend that the population be stabilized and then gradually increased from its current level to at least 1.5 times its current size."

3

Desired Future Conditions for Threatened, Endangered, State-Listed, and Special Status Species

1

TABLE 5. DESIRED FUTURE CONDITIONS FOR COLONIAL WATERBIRDS

Variable	Short-Term Target ^a	Long-Term Target ^{b3}	Source
Annual peak number of least tern nests ^b	434 <u>5-year average of 462</u> 5 nests	5-year average of 577 nests <u>20% increase over average number of nests</u> b achieved under short-term target	<u>Long-term target equals 2009 peak count. Short-term target is mid-point between recurrent average (2007-2010) and the long-term target.</u> 2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a
Annual peak number of common tern nests ^b	485 <u>5-year average of 292</u> 4 nests	5-year average of 533 <u>20% increase over average number of nests</u> b achieved under short-term target	<u>Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007).</u> 2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a
Annual peak number of gull-billed tern nests ^b	5-year average of 214 <u>9</u> nests <u>7</u> c	5-year average of 404 <u>7</u> nests <u>20% increase over average number of nests</u> b achieved under short-term target	<u>Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007).</u> 2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a
Annual peak number of black skimmer nests ^b	75 <u>5-year average of 132</u> 5 nests	5-year average of 244 <u>20% increase over average number of nests</u> b achieved under short-term target	<u>Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007).</u> 2007 and 2008 Seashore colonial waterbird surveys

Chapter 1: Purpose of and Need for Action

			(Cameron and Allen 2008; NPS 2009k)a
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^aShort-term target is to achieve the midway point between the long-term target and the recent average of the data points from the Seashore's 2007 - 2010~~09~~ counts.

^bExcept for least terns, the long-term target for the respective species is to achieve the average number of nests that occurred at the Seashore in 1977 – 2004~~1983~~ level of nesting at the Seashore. (average of 1977 and 1983 nest counts; there were no nest counts done in the years between 1977 and 1983). These years are consistent with the basis for statewide goals identified by the North Carolina Wildlife Resources Commission (NCWRC 2007). Least terns are currently nesting in greater numbers than the 1977-2004~~1977~~ and 1983 average nest counts; therefore, the long-term target is to maintain a 5-year average count equal to the 2009 peak count.

^aShort term means 10 years (two 5-year periodic review cycles after implementation of plan)

^bLong term means 20 years (four 5-year periodic review cycles after implementation of plan)

^cthree the Seashore^a The targets did not take into account data from any surveys conducted prior to 2007 due to the uncertainty associated with survey methods, survey timing, data management, and data compiled for each survey year. Short- and long-term targets would be based on consistent colonial waterbird surveys using standardized survey methods conducted during the peak nesting period for each individual species. By surveying during the peak nesting period window, survey data can be compared to surveys conducted by the state for similar species.

^bColonies will be surveyed during the peak nesting period for each species, which generally is during the last week of May and the first week of June, but could be later, especially for black skimmers. "Nests" may include birds in incubating posture.

^eThe three year average (2007 – 2009) for each species was used to calculate a baseline percentage of the Seashore's contribution towards the state's goal for each species. The state goals shown below were established by the North Carolina Wildlife Resources Commission. An increase of 5% in the Seashore's contribution towards the state goal was established as the short term target for each species.

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	Least Tern	Common Tern	Gull Billed Tern	Black Skimmer
State Goal	2,000	2,500	300	1,000
Cape Hatteras National Seashore 3-year average (number of nests)	334	60	2	25
% of state goal	16.70%	2.40%	0.66%	2.50%
Increase of 5% toward state goal	21.70%	7.40%	5.66%	7.50%
Short term target (number of nests)	434	185	17	75

1 ADMINISTRATIVE BACKGROUND

2 HISTORY OF CAPE HATTERAS NATIONAL SEASHORE

3 Officially authorized in 1937 along the Outer Banks of North Carolina, Cape Hatteras is the nation's first
 4 national seashore. Consisting of more than 30,000 acres distributed along approximately ~~68~~⁶⁷ miles of
 5 shoreline, the Seashore is part of a dynamic barrier island system. The Outer Banks of North Carolina
 6 formed as a result of changes in sea level, wave and wind action, and ocean currents. These factors
 7 continue to influence the islands today through the processes of erosion and accretion of the shoreline;
 8 overwash across the islands; and the formation, migration, and closure of the inlets (NPS 1979). Since the
 9 1930s, these natural processes have been influenced by human actions such as building sand berms² to
 10 protect roads and homes, dredging inlets, and filling inlets newly created by storms.

11 The story of the creation of Cape Hatteras National Seashore is documented in the Seashore's
 12 administrative history, *The Creation and Establishment of Cape Hatteras National Seashore* (NPS
 13 2007f). No national park is suddenly brought into being except by a chain of milestones that lay the basis
 14 for an act of Congress or a presidential proclamation (NPS 2007f).

Comment [dw1]: Ran out of different colors, so I highlighted my change in green (below).

*The enabling
 legislation provides
 that the
 administration,
 protection, and
 development of the
 national seashore
 shall be exercised
 under the direction of
 the Secretary of the
 Interior by the NPS,
 subject to the
 provisions of the*

¹ Due to the dynamic nature of the barrier island system, the mileage of shoreline in the Seashore is constantly changing. This mileage estimate includes ocean shoreline and interdunal roads managed for public recreation by the NPS. Actual on-the-ground mileage may vary, especially around the inlets and spits, due to the increased potential for erosion and accretion in these areas.

² 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 CCC and the Works Progress Administration. NPS actively maintained this dune ridge until the early 1970s when NPS ended the dune stabilization policy after scientists concluded that the man-made berms constructed since the 1930s had actually served to foreshorten the seashore's beaches and dramatically altered both the ecological and the topographical characteristics of the Outer Banks (NPS 2007f). "Berm" includes the man-made dune or dune ridge constructed to protect state highway NC-12 and interior sections of the island from ocean flooding and overwash during storms.

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1 On June 23, 1936, President Roosevelt signed an “act to authorize a study of
 2 the park, parkway, and recreational area programs in the United States, and for
 3 other purposes” (49 Stat. 1894). The *Park, Parkway, and Recreational Area*
 4 *Study Act of 1936* significantly expanded the range and type of lands that could
 5 be preserved and managed by the NPS. The Act recommended specific
 6 additions to the national park system to provide recreational opportunities. The
 7 national recreation study led the NPS to establish four new types of parks in
 8 the park system: Recreational Demonstration Areas, national parkways,
 9 national recreation areas, and national seashores. Supporters of the park, parkway and recreation study,
 10 which included much focus upon the protection and use of coastal areas for recreational purposes, saw
 11 Cape Hatteras as the foremost example of a possible seashore recreational park. Concurrent congressional
 12 interest in erosion control, as demonstrated by the passage of the *Beach Improvement Act* in June 1936,
 13 also motivated interest in a national park in the Outer Banks. Undoubtedly, the recreational study and
 14 erosion control acts of 1936 spurred Congressman Lindsay C. Warren, who represented Dare County
 15 from 1925 to 1940, to begin work on “an act to provide for the establishment of the Cape Hatteras
 16 National Seashore” (NPS 2007f). Representative Warren introduced the legislation in May 1937. It was
 17 subsequently approved by the House on August 2 and the Senate on August 14, then signed (50 Stat. 669)
 18 by President Roosevelt on August 17, 1937 (NPS 2007f).

Organic Act.

19 In addition to articulating the recreation and preservation mission of the Seashore as stated in the
 20 “Purpose and Significance of Cape Hatteras National Seashore” section of this chapter, the enabling
 21 legislation provided that the administration, protection, and development of the national seashore shall be
 22 exercised under the direction of the Secretary of the Interior by the NPS, subject to the provisions of the
 23 *Organic Act*. It also provided that the legal residents of the villages shall have the right to earn a
 24 livelihood by fishing within the boundaries of the Seashore. The Act provided that the United States shall
 25 not use appropriated funds to purchase lands within the area, but such lands shall be secured by the
 26 United States only by public or private donation³. The Act authorized the Secretary to accept donations of
 27 land and funds to purchase lands, and to establish the national seashore contingent upon the acquisition of
 28 a minimum of ten thousand acres within the designated seashore area and provided that if such lands were
 29 not conveyed to the United States within ten years of the passage of the Act, the establishment of the
 30 national seashore may, at the discretion of the Secretary, be abandoned (NPS 2007f).

31 In March 1938, the NPS published the Prospectus of Cape Hatteras National Seashore in response to
 32 numerous requests for information concerning the area, which included the following recommendations
 33 for selection, use and development of the area (NPS 1938):

34 Inasmuch as the proposed Cape Hatteras National Seashore is the first area of its kind to
 35 be authorized by Congress, the National Park Service has adopted the following policy to
 36 be used in the selection, development and operation of this and other similar areas which
 37 may be acquired later.

38 Primarily a seashore is a recreation area. Therefore in its selection, the boundaries should
 39 be placed in such a manner that the maximum variety of recreation is provided. Thus
 40 while provision for bathing may be the first consideration of these areas, it must be kept in
 41 mind that a far greater number of people will be more interested in using a seashore area
 42 for other recreational purposes. It is desirable therefore to provide ample shoreline for all
 43 types of beach recreation. The Cape Hatteras National Seashore provides such an area in

³ In March 1939, the North Carolina General Assembly created the North Carolina Cape Hatteras Seashore Commission to acquire seashore lands for eventual transfer to the federal government (NPS 2007f).

1 that there is extensive shoreline for all forms of recreation both for immediate use and for
2 future development.

3 Secondly, the area should include adjacent lands which by reason of historical,
4 geological, forestry, wildlife, or other interests, have sufficient justification to be
5 preserved by the Federal Government. It is important therefore to reach back into the
6 hinterlands and acquire areas which will provide a variety of interests, scenic, scientific
7 and historic. This principle has been followed in determining the boundaries of Cape
8 Hatteras National Seashore.

9 Thirdly, it is important to include in the area, lands necessary for proper administration
10 and lands which serve principally as a protection for the recreational and other
11 developments which are the primary purpose of this area. Inasmuch as the Cape Hatteras
12 National Seashore area is composed of islands and peninsulas, the land area in most cases
13 is circumscribed by water, which fact in itself offers considerable protection. Inasmuch as
14 control of much of the water in the Sounds may be desirable for fish and bird life, the
15 boundaries of Cape Hatteras National Seashore area will embrace a substantial portion of
16 these waters.

17 The development and operation of the Seashore area shall follow the normal national park
18 standards with the understanding that recreational pursuits shall be emphasized to provide
19 activities in as broad a field as is consistent with the preservation of the area. It shall be
20 the policy of the Service to permit fishing, boating and other types of recreation under
21 proper regulations and in designated areas where such activities may not conflict with
22 other factors of greater importance. Where natural landing fields occur, the use of land
23 and sea planes may be permitted where not in conflict with the interests of wildlife or
24 inconsistent with proper development and use of the area.

25 At the time, the NPS had envisioned the Seashore to incorporate lands and waters including portions of
26 Currituck Sound, Nags Head, Roanoke Island, Bodie Island, Hatteras Island and Ocracoke Island. While
27 certain sites were targeted for development of recreational facilities, certain sections were identified to
28 remain undeveloped and preserved as the "primitive wilderness" that existed at that time. Such plans for
29 general development were as described in the prospectus (NPS 1938):

30 While further study and planning is required, it is expected that intensive development for
31 recreational purposes shall be undertaken on the Bodie section which is the portion of the
32 area between Oregon Inlet and the Whalebone Inn. In this connection, arterial and
33 subsidiary roads and facilities for bathing, fishing, boating, camping, and hiking probably
34 will be provided in this section.

35 Other development which will be of secondary priority will be in the Nags Head section
36 where provision may be made for a more appropriate and interesting entrance road and
37 where facilities for bathing on Roanoke Island and for hiking, picnicking, fishing and
38 boating may be made available. The Nags Head and Bodie sections are the most
39 accessible and offer opportunities for all varieties of recreation which should be adequate
40 to the needs of the public for many years.

41 The Currituck, Hatteras and Ocracoke sections will remain in their natural conditions with
42 no development other than for administrative purposes. It is possible some additional
43 accommodations will need to be provided for visitors to the Cape Hatteras Lighthouse and
44 that some alterations will be required in the plans for the area which is now a State park

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1 (*Cape Hatteras State Park*). It is definitely the desire of the National Park Service that the
 2 section between Oregon Inlet and Hatteras Inlet remain in its natural condition without
 3 any roads so that future generations may see this and other undeveloped sections as they
 4 are in our day.

5 In the years after the enabling legislation was passed, a number of issues and local concerns arose that
 6 ultimately changed the early NPS vision for the Seashore and which complicated and delayed land
 7 acquisition and formal establishment. One such concern included whether or not hunting would be
 8 allowed to continue once the national seashore was established. On June 29, 1940, Congress amended the
 9 1937 authorizing legislation for Cape Hatteras National Seashore to permit hunting. The amendment
 10 specifically referred to compliance with the MBTA. This provision would later be key in determining
 11 how the NPS actually interpreted “hunting” within the Seashore, but perhaps for the first time in the
 12 history of the NPS, legal hunting was now authorized within a national park. The same amendment also
 13 changed the formal title of the park to “Cape Hatteras National Seashore Recreational Area.” The term
 14 “recreational area” in the 1940 amendment was derived clearly from the Secretary’s justification to allow
 15 hunting and by the Service’s desire to limit the setting of any precedent for more traditional types of
 16 parks. However, the NPS had already defined a “national seashore” as a recreational area in its 1937
 17 brochure explaining the *Park, Parkway, and Recreational Study Act* and the anticipated recreational
 18 purposes of the park were established by Congress through Acting Secretary Chapman’s letter to the
 19 House Committee on Public Lands. Thus, including the term “recreational area” in the title was
 20 redundant. In 1954 the NPS authorized the original park name (“national seashore”) to be used for all
 21 administrative purposes except for formal memoranda and documents requiring the full legal name.
 22 Subsequently, the term “recreational area” fell from use in most official references to the park (NPS
 23 2007f). In 1961, Congress authorized Cape Cod in Massachusetts as the second “national seashore” and
 24 subsequently created eight more “national seashores” between 1962 and 1975 for a total of ten. All such
 25 park units that followed Cape Hatteras were officially named “national seashores.” Since 1962, Cape
 26 Hatteras has been referred to as “national seashore” in Congressional legislation and “national seashore”
 27 has been the standard nomenclature for this type of park.

28 As envisioned in the 1930s, the NPS had hoped to preserve a far more natural environment than it was
 29 forced by compromise to accept in the 1950s (NPS 2007f). In 1952, fifteen years after he submitted the
 30 act to create Cape Hatteras National Seashore, former Congressman Lindsay C. Warren offered what may
 31 be the purest surviving expression of his intent in doing so: “When I introduced the bill for the Cape
 32 Hatteras National Seashore in 1937, I would have nothing to do with it unless the people were fully
 33 protected forever in their hunting and fishing rights, and unless there was a guarantee of a hard-surface
 34 road if the Government came into the picture, and unless all of the villages were exempt. At that time
 35 there was very little prospect for a paved road, but I extracted a promise from the NPS that they would
 36 favor such a road to be built, whenever possible, either through State or Federal Aid funds. Frankly, I
 37 think that this Park will mean more to the people of Dare County than anything that could ever happen to
 38 them. I do not say that because I was the author of the bill, but I say it because I had studied the history of
 39 all Parks, before I came into the picture back in 1937” (NPS 2007f).

40 In September 1952, Director Wirth acted to address serious criticism of the NPS and its failure to provide
 41 adequate information about the seashore project to inhabitants of the Outer Banks. At a meeting of the
 42 North Carolina Cape Hatteras Seashore Commission, he announced plans to visit the area in early
 43 October specifically to talk personally with anyone who was willing to do so, which included meeting
 44 with the villagers of Hatteras and Ocracoke Islands (NPS 2007f). The concerns that were expressed at
 45 those meetings included: (1) uncertainty about where the Seashore boundary would be drawn around the
 46 villages and whether there would be enough room left for community expansion; (2) concern about the
 47 rights of individuals to continue commercial and sport fishing; (3) concern as to whether present hunting

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1 rights would be affected; and (4) concern that once the Seashore is established, the local people would be
2 denied access to the ocean beach (NPS 2007f).

3 On October 31, 1952, at the request of Director Wirth, D. Victor Meekins, who had headed the Cape
4 Hatteras National Seashore Commission until 1945 and later became editor of *The Coastland Times*,
5 published a special edition of the newspaper showing NPS maps and statements and assured Wirth that
6 “every family within the project, whether a subscriber of the newspaper or not, got a copy.” In an open
7 letter from the Director addressing all those affected by the proposal to create Cape Hatteras National
8 Seashore, Wirth laid out the plans and intent of the NPS and made certain key promises (NPS 2007f).

9 Wirth outlined park boundaries that had been adjusted to address some of the concerns of residents that he
10 had heard during his three-day tour. Once again, the total size of the park was reduced, this time to 28,500
11 acres. The new boundary left more room for expansion of the villages toward the ocean, which had been a
12 major complaint, but left the beaches under NPS control. Wirth said the NPS would need “on the ocean
13 side of the towns, only those lands along the ocean which are necessary to protect and control the sand
14 dunes, to reestablish them where necessary, and hold them to protect the communities from the intrusion
15 of the ocean.” The boundaries were also closer to the Pamlico Sound shoreline. The new tighter
16 boundaries recognized that, under the basic legislation authorizing the Seashore, fishing and hunting
17 rights were reserved to the people. That being the case, there was no real need to include Pamlico Sound
18 waters in the Seashore since state and federal fishing and hunting laws and regulations would still apply
19 to waters both inside and outside the Seashore boundaries. Wirth simply set an arbitrary distance of 150
20 feet that would allow hunters and fishermen to clearly know when they were in or out of the park (NPS
21 2007f).

22 Residents had been concerned
23 with beach access, as well. On
24 this account, in the letter Wirth
25 plainly stated that the Seashore
26 would be a public park open to
27 all, including those of the
28 Banks and visitors. “However,”
29 he stated, “it will be necessary
30 to establish certain regulations,
31 such as to designate places for
32 vehicles to get to the beach, in
33 order to reduce sand dune
34 erosion to a minimum; to
35 manage ocean fishing where
36 large numbers of bathers are
37 using the beach; and to confine
38 bathing to certain areas. These



Surf Fishing, 1935

Credit: NPS

39 latter are safety measures, as it would be dangerous to permit surf fishing where there are large numbers
40 of people in bathing and, likewise, fishermen would not want bathers to interfere with their fishing.” For
41 the future, Wirth noted “the National Park Service proposes to resume the sand fixation work; to re-
42 establish the natural plant and wildlife within the area; and to provide access to the beach for everybody.”
43 Wirth’s “Letter to the People of the Outer Banks” effectively countered the disinformation campaign
44 waged by park opponents, laid out a clear vision of NPS management of the national seashore, and
45 created a key document that was later often solemnly referenced by local residents in discussion with NPS
46 officials on park matters (NPS 2007f).

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1 Late in 1952 agreement was reached on the final
 2 boundaries of the Seashore area and in December
 3 1952 the state-owned lands in the Seashore were
 4 transferred to the United States. In January 1953,
 5 Wirth recommended that Secretary of the Interior
 6 Oscar L. Chapman approve an order, consistent with
 7 Section 4 of the Act of August 17, 1937, directing
 8 that certain lands on the Outer Banks of North
 9 Carolina be “administered, protected, and developed
 10 by the National Park Service for national seashore
 11 recreational purposes for the benefit and enjoyment of
 12 the people.” This order, dated January 12, 1953,
 13 marked the formal establishment of the Seashore
 14 (NPS 2007f).



High Tide on Ocracoke, 1936

Credit: NPS

15 Federal land ownership extends from ocean to sound
 16 across three barrier islands—Ocracoke, Hatteras, and
 17 Bodie (figure 1). The eight villages are excluded from
 18 the Seashore boundaries. On the oceanside of the
 19 villages, federal ownership was established as a 500-foot strip measured landward from the mean low
 20 water at the time of acquisition. A larger area seaward of Buxton and Frisco includes portions of Buxton
 21 Woods. The 5,880-acre Pea Island National Wildlife Refuge, approximately 12 miles long and located at
 22 the northern end of Hatteras Island, lies within the Seashore boundary and is administered for refuge
 23 purposes by the USFWS in accordance with the *National Wildlife Refuge System Improvement Act of*
 24 *1997* (USFWS 2006b). ORV use is not allowed in the refuge, but the 12 miles of ocean shoreline are
 25 generally open to pedestrian use, except when localized closures are in effect to protect shorebird and sea
 26 turtle nesting areas. This plan/EIS does not include the area within the refuge.

27 Today the Seashore serves as a popular recreation destination with more than 2.1 million visitors in 2008
 28 (NPS 2008e), showing an 8-fold increase in visitation since 1955 (NPS 2007f). Seashore visitors
 29 participate in a variety of recreational activities, including beach recreation (sunbathing, swimming, shell
 30 collecting, etc.), fishing (surf and boat), hiking, hunting, motorized boating, non-motorized boating
 31 (sailing, kayaking, canoeing), nature study, photography, ORV use (beach driving), shellfishing,
 32 sightseeing, watersports (surfing, windsurfing, kiteboarding, etc.), and wildlife viewing. Seashore visitors
 33 use ORVs for traveling to and from swimming, fishing, and surfing areas, and for pleasure driving. Over
 34 the past five years (2004–2008), visitation to the Seashore has averaged approximately 2.2 million
 35 visitors per year (NPS 2008e).

36 Current management practices at the Seashore allow ORV users to drive on the beach seaward of the
 37 primary dune line. Drivers must use designated ramps to cross between paved roads (such as North
 38 Carolina Highway 12 [NC-12]) that run behind the primary dune line and the beach. In some areas,
 39 NC-12 provides a way around full beach closures or areas where the high tide line limits beachfront
 40 access. In addition to a multitude of visitor opportunities, the Seashore provides a variety of important
 41 habitats created by its dynamic environmental processes, including habitats for the federally listed piping
 42 plover; sea turtles; and one listed plant species, the seabeach amaranth. The Seashore contains
 43 ecologically important habitats such as marshes, tidal flats, and riparian areas, and hosts various species
 44 of concern such as American oystercatcher, Wilson’s plover, red knot, and colonial waterbirds, including
 45 the state-listed (as threatened) gull-billed tern.



Bodie Island Spit, Memorial Day Weekend 2007

Credit: NPS

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

3 The legislation creating Cape Hatteras National Seashore did not specifically mention motor vehicle use
 4 or beach driving; however, the administrative history (NPS 2007f) contains numerous references to ORV
 5 use and related issues and concerns. The Act did, however, clearly establish the mandate for NPS to
 6 administer and protect the Seashore consistent with the *Organic Act* and the purposes for which the
 7 Seashore was established.

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

20 In 1937, then NPS Assistant Director for Land Planning, Conrad L. Wirth, published an eloquent
 21 description of the primitive qualities of the Outer Banks at a time when much of the area could still not be
 22 reached by road. In fact, at the automobile service station at Whalebone, which was a small shack
 23 distinguished by the huge skeleton of a whale propped up nearby, the road south to Cape Hatteras simply
 24 ended. "Here," Wirth wrote, "the pavement swings to the right and leads into the village of Manteo about
 25 six miles to the west. Now you are at the point where the primitive begins. You drive off the road onto the
 26 sand, stop, and let about half of the air out of your tires, because the rest of the driving will be over the
 27 almost trackless beach" (NPS 2007f).

28 A similar description was written by Thomas W. Morse, Assistant in Charge of North Carolina State
 29 Parks. In the 1937 Master Plan Report for Cape Hatteras State Park, Morse stated, "...no major roads
 30 enter this area and it is reached by driving almost fifty miles over the sands from the Whale Bone Filling

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1 Station, south of Nags Head to the park. This trip involves crossing Oregon Inlet by ferry. While it is
 2 agreed that this method of entry is of great aesthetic value, it should be pointed out that it also involves
 3 considerable destruction of wildlife because of promiscuous driving” (NCDCCD 1937).

4 This was how things remained until the late 1940s, when paved roads were first built to connect some of
 5 the villages on Hatteras Island. Later, NC-12 was completed south from Whalebone to the ferry at Oregon
 6 Inlet, and in late 1952 a road was completed from there through Pea Island to the village of Hatteras. The
 7 romantic trail Wirth had followed in 1937 was nothing but a memory, and “Whalebone Station,” sans the
 8 bones and station, had become “Whalebone Junction.” If Wirth regretted this loss—as did at least a few
 9 residents of the Outer Banks—he was willing, if not eager, to push the key improvements in public access
 10 that facilitated the Seashore’s establishment, seeing that improved access reinforced the Seashore’s
 11 success (NPS 2007f).

12 When Conrad L. Wirth became Director of the NPS in December 1951, he faced a park system severely
 13 taxed by the postwar travel boom, fueled by increasing personal incomes, leisure time, and automobile
 14 ownership. Visits to the national parklands mushroomed from 6 million in 1942 to 33 million in 1950 and
 15 72 million in 1960. With few improvements since the Civilian Conservation Corps (CCC) era, the
 16 deteriorating park roads, campgrounds, employee housing, sanitary systems, and other facilities were
 17 overwhelmed. Director Wirth’s response to the increasing park problems was to initiate “Mission 66,” a
 18 ten-year program to upgrade facilities, staffing, and resource management throughout the system by the
 19 50th anniversary of the NPS in 1966 (NPS 1990).

20 In September 1953, Chief Park Ranger G. P. Hultman, in reviewing a field-operations manual, made
 21 several cogent observations about security and conservation at the Seashore and how to further these
 22 through interpretation. Many factors limited his recommendations, including that the land acquisition
 23 program was far from complete and that wildlife and waterfowl protection, including hunting, was an
 24 unsettled issue, and, therefore, “ultimate problems cannot be visualized.” Hultman was nevertheless
 25 insightful in observing that commercial development over the previous decade had greatly reduced the
 26 area available for public seashore recreation, that plant growth was far more extensive than during the era
 27 of grazing, and that “the power and changing characteristics of sea and wind seem to be greatly under-
 28 estimated.” Moreover, Hultman recognized that “driving conditions, including sand and water on the very
 29 pavement serving as access to the area, are aggravated by unlimited access to the beach” and the ability of
 30 park visitors to drive off-road at will were likely to become an increasing problem (NPS 2007f).

31 On March 8, 1954, Allyn F. Hanks arrived at Cape Hatteras to assume his duties as the first operational
 32 superintendent of the Seashore (NPS 2007f). In April 1955, Superintendent Hanks submitted to Director
 33 Wirth and his “Mission 66 Committee” a draft of the policies and practices that should guide the Mission-
 34 66 program at Cape Hatteras National Seashore. Hanks thought increased visitation would eventually link
 35 most, if not all, of the islands of the Seashore. North Carolina was making important transportation
 36 improvements during the period of Mission 66 both around Pamlico Sound and along the Outer Banks,
 37 including the construction of major roads and bridges. Hanks therefore predicted visitation at the
 38 Seashore would reach two million by 1966, and as a result, he said, “it will become increasingly difficult
 39 to preserve unimpaired primitive wilderness conditions.” While roads would fulfill the NPS promise to
 40 provide public access and economic opportunities for local residents, roads would also put millions of
 41 visitors within a day’s drive of the Seashore and give them easy access to its natural areas. Hanks worried
 42 that motor vehicle use would conflict with recreational pursuits and preservation (NPS 2007f).



Beach fishing 1956

Credit: NPS

In the prospectus, Hanks laid out the Seashore's significance, as well as its needs in protection, interpretation, development, and operations. His plans encouraged park development near the villages for the convenience of the public, to promote village growth, and to concentrate development thus leaving miles of beach front undisturbed. In the end, Hanks' prospectus determined the location and layout of most major developments at the Seashore, including the fishing piers and camping sites. The Mission 66 prospectus also encouraged the development of a roadway along the entire length of the Seashore. Although the agency now acknowledged the popularity of roads, it sought to use them to channel traffic from

19 more sensitive areas in the Seashore. Wirth approved the Mission 66 prospectus for Cape Hatteras
20 National Seashore on November 15, 1956 (NPS 2007f).

21 During Mission 66, the impact of driving on the beaches was a major concern. The Mission 66 prospectus
22 stated, "The beach, as the area's most significant resource, and the narrow margin which is the locale for
23 man's numerous activities, requires development planning that will promote use only by people on foot.
24 Vehicular use must be rigidly controlled and permitted only under specified conditions" (NPS 1956).
25 Superintendent Hanks declared, "driving along the ocean shore by the public must be controlled." To
26 reduce its impact on the recreational purposes, the park was established to meet, specifically picnicking,
27 swimming, and surf-casting, all of which "require assurance of non-intervention by shore driving." Hanks
28 further noted, "such protection has long been recognized by the more developed areas north to Kitty
29 Hawk." There, local property owners had restricted beach driving because of the damage it caused. Hanks
30 thus planned to limit driving, even by NPS personnel, except for emergencies. In addition, during Mission
31 66, the NPS was dedicated to maintaining its barrier dune system in the Outer Banks, and Hanks sought
32 to limit "indiscriminate access over the dunes to the ocean where in the past has been a large contributing
33 factor in deterioration of the original barrier dune. Such practice must be curtailed to obtain overall
34 greater protection benefits." At the same time, Hanks acknowledged that minimum shoreline driving and
35 limited access over the dunes "must be flexible to allow commercial fishing in general as provided for in
36 the original Act." Because shoreline driving negatively affected recreational activities, the Superintendent
37 told Director Wirth, "it may be necessary, however, to exclude commercial fishing from certain portions
38 of the Seashore by Secretarial Order to protect those portions for recreational use." NPS policy was to
39 protect the dunes from damage and to provide for recreational needs, which meant that vehicle use along
40 some portions of the beach had to be entirely excluded. In other areas, access would have to be allowed
41 for commercial fishing by local residents using, for example, "haul nets" that required motorized power
42 (NPS 2007f).

43 Mission 66 brought much development to Cape Hatteras National Seashore, even if some stretches of
44 beach were left undeveloped. As envisioned in the 1930s, the NPS had hoped to preserve a far more
45 natural environment than it was forced by compromise to accept in the 1950s. By then, the practical
46 necessity for fairly robust park development to meet the needs of large beach crowds and other visitors
47 brought in on modern roads and bridges was greatly increased. The need to accommodate large crowds
48 demanded infrastructure, a reality that few contested (NPS 2007f). In March 1957, Superintendent Hanks
49 issued a summary of the Mission 66 prospectus that re-emphasized that most other facets of the park's

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1 development were “dependent upon success in the field of erosion control” (NPS 2007f). In September
2 1958, a major management review was conducted at the Seashore. The review was generally positive but
3 it recommended that a revised Mission 66 prospectus be completed after the final master plan and
4 interpretive development plan, both undergoing review, were completed. Among a number of findings,
5 the review also determined that the park urgently needed to place vehicular access ramps that would allow
6 commercial fishermen access to the beach and stop them from building their own makeshift access points
7 (NPS 2007f).

8 Between 1955 and 1958, the NPS completed major developments that established the Seashore’s basic
9 recreational infrastructure (NPS 2007f). The new facilities, along with the completion of NC-12 on
10 Hatteras Island in 1954 and on Ocracoke Island in 1957, contributed to more than doubling park visitation
11 between 1955 and 1961 (NPS 2007f). After the highway was completed, a major problem was the
12 bottleneck at Oregon Inlet where a fast-growing volume of visitors quickly overran the existing state ferry
13 operation. Eventually, congestion at the bottleneck of Oregon Inlet became so bad that a bridge was the
14 only solution. Because the traffic jams caused such a problem for the NPS, and because a bridge would
15 benefit other federal agencies working on the Outer Banks, Congress authorized the NPS to help fund the
16 needed bridge (NPS 2007f). On August 30, 1961, the NPS issued a press release discussing its support for
17 congressional legislation that would allow the agency to help the State of North Carolina build a bridge
18 across Oregon Inlet. The bill was submitted by Bonner on May 1, 1961, and sent to the whole House on
19 August 28, 1961 (HR 6729). Bonner’s motivation was simple—the congestion at Oregon Inlet could not
20 be alleviated by additional ferries. The NPS was interested in helping to pay for the bridge, which
21 reversed its early position, if for no other reason than the congestion generated frequent criticism both by
22 the public and in the press. Traffic congestion also put pressure on NPS facilities north of the inlet. Cape
23 Hatteras National Seashore was thought the only example of a park where the state maintained a road
24 within the NPS system. The NPS acknowledged that such a bridge was a long-sought goal of the state and
25 those living in the Outer Banks but was a cost beyond their means. NPS staff also realized the park and its
26 visitors would benefit from the elimination of the bottleneck at Oregon Inlet. There were some minor
27 complications, however, that may have been reminiscent of NPS sensitivity over the issue of wilderness
28 preservation in the 1930s, when the NPS had hoped to preserve a vast expanse of wild seashore on the
29 Outer Banks. Compromise was unavoidable, namely as a result of an NPS agreement to allow road
30 construction, which was necessary to secure local support for the Seashore (NPS 2007f).

31 On October 11, 1962, Congress authorized funds for construction of a bridge to cross Oregon Inlet within
32 Cape Hatteras National Seashore. The law (Public Law 87-79; 76 Stat. 909) allowed the Secretary of the
33 Interior to pay \$500,000 toward the cost of the bridge as long as this amount came only from funds
34 specifically designated for that purpose and the state agreed to pay for upkeep. The remainder of the costs
35 would be borne by the federal government. Construction of the bridge over Oregon Inlet took
36 approximately two years and made a huge impact on the village life of Hatteras Island and on the island’s
37 wild flora and fauna. Upon completion, the bridge brought in waves of tourists whose numbers increased
38 with each passing year, an indisputable and considerable economic benefit to all the villages on Hatteras
39 and Ocracoke islands. It was a windy day in early May 1964 when the new causeway linking Bodie and
40 Hatteras islands was duly dedicated as the Herbert C. Bonner Bridge (NPS 2007f).

41 In some ways, the Bonner Bridge had taken as long to create as the park itself. It might even be said that
42 neither would have been possible without the other, since to some extent, the existence of the park was
43 predicated upon the faith of Outer Banks residents in the NPS to protect and promote their interests,
44 which included both the preservation of an idyllic coastal recreation environment that attracted increased
45 tourism and the development of transportation links between the remote islands and the outside world.
46 Access was a key issue if the growing potential of a tourist-based economy was actually to be realized. In
47 the years ahead, this fundamental dilemma, common to many national park areas, would pose great
48 challenges to managers of Cape Hatteras National Seashore (NPS 2007f).

1 Well before the end of Mission 66, NPS officials understood that the beach management (i.e., dune
2 stabilization) situation was dire. The NPS was waging a fight against a fundamental force of nature, but
3 what was not crisply understood was the futile nature of that struggle and how a commitment to preserve
4 a “primitive wilderness” had been transformed into a commitment to protect human-made structures
5 using techniques that actually undermined the preservation of natural beaches. As the work continued to
6 stabilize dunes, vehicular access to the beaches became a more pressing issue. In March 1963, Director
7 Conrad Wirth and Rep. Herbert Bonner discussed the use of automobiles on beaches, specifically
8 regarding vehicle ramps. Bonner had received complaints from local residents who wanted ramps set near
9 their own property. By then, according to Wirth, eighteen ramps had been set up to allow commercial
10 fishermen beach access, which Wirth said was prescribed by the law creating the Seashore. While these
11 ramps had been set up to allow commercial fishermen to access the beach, Wirth said that the public
12 could use the ramps also to gain access to the shore. According to Wirth, “past history has shown that
13 each vehicular access is a vulnerable spot for the ocean to break through and cause extensive damage to
14 the barrier dune and natural features of the area.” “To provide more access would jeopardize NPS
15 stabilization efforts,” Wirth said, “while providing ramps near one private property owner would only
16 inspire others to ask for similar access” (NPS 2007f).

17 Automobile driving on the beach was an infrequent topic in NPS and congressional correspondence from
18 this period, but clearly the NPS viewed vehicular access to the beach as necessary to fulfill an obligation
19 to allow continued commercial fishing by legal residents of the villages. This position, however, was an
20 interpretation of the law authorizing the Seashore and its amendments, since neither made specific
21 reference to automobiles or how beach access would be provided. It only specified that commercial
22 fishing by legal residents was to be allowed. One practice in use by local residents was “haul fishing,” a
23 technique whereby fisherman used a jeep or similar vehicle to drag a net from the sea to the beach.
24 Vehicle use was integral to this practice and not merely a means for transportation. The NPS established
25 beach access ramps to enable commercial fishermen to continue to use vehicles to fish from shore while
26 mitigating damage to the barrier dunes by controlling the points of entry, but these ramps also allowed
27 general visitors motorized access to the beach (NPS 2007f).

28 Within a decade of completion of the Bonner Bridge, the NPS was facing serious public complaints on
29 two related fronts. The first concerned the presence of ORVs or “beach buggies,” especially at Cape Point
30 near the famous Cape Hatteras Lighthouse. Such vehicles, then mainly used by fishermen, concentrated
31 near the best fishing sites in groups of up to fifty or so, leaving piles of beach trash and making it difficult
32 for other visitors to enjoy the scenic vista. The problem may have existed for a while, but by 1972, as one
33 writer informed Director George B. Hartzog, Jr., a person “literally could not take a photograph of the
34 waves by themselves without two or three hip-booted intruders in the viewfinder.” This visitor did not
35 want a total ban on the buggies but did want some restrictions. He protested that the NPS mission was to
36 leave the land “unimpaired” and noted that if there were fifty buggies this year, when would it stop? “You
37 might as well call it the Hatteras Parking Lot,” he concluded (NPS 2007f).

38 The stock NPS response was that “in contrast to natural areas, the recreation area is supposed to serve
39 many needs.” Indeed, according to Deputy Assistant Director Joseph C. Rumberg, Jr., “a closure of the
40 cape to allow full aesthetic appreciation of the power and wonder of the ocean, at the expense of fishing
41 and beach buggy use, would be a matter fraught with controversy.” Nevertheless, Director Hartzog
42 directed the Southeast Regional Office in Atlanta to arrange with the Superintendent to study the
43 possibility of changes, limitations, or even the elimination of beach buggies. Hartzog hoped the study
44 would develop recommendations that might provide the park with a better means of controlling vehicle
45 use on the beach (NPS 2007f).

46 The problem was actually more serious than suggested by visitors annoyed over compromised scenic
47 views. The Bonner Bridge had also brought increasing numbers of fishermen who were not residents of

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1 the Outer Banks but were bent on using more sophisticated means to exploit commercial opportunities.
 2 The basic issue involved fishermen using dories loaded with nets that were pulled along the beach by
 3 truck until a school of fish was located. Then, a boat was launched and part or all of the school was
 4 surrounded by the net tied to the truck onshore, which hauled in the line. According to the account of a
 5 sport-fishing newsletter, an existing practice became an acute problem by 1972. During the 1930s, only a
 6 half-dozen local residents practiced this technique, some using nets that were up to 200 yards long.
 7 Between 1936 and the early 1960s, the number of fishermen had remained fairly constant, and with up to
 8 ten such fishermen working, their nets were still no longer than 400 yards (NPS 2007f).

9 After the Bonner Bridge opened in 1964, however, commercial fishermen from elsewhere began
 10 participating in the fish harvest, some from as far away as New York. Now as many as twenty
 11 commercial fishermen were using nets up to sixteen hundred yards in length. This activity was wiping out
 12 striped bass because such huge nets took in 20- to 50-pound fish in catches weighing up to 10,000
 13 pounds. Worse, non-commercial fish were merely left to die and rot on the beach. By 1972, the problem
 14 was acute, and local fishermen began to complain, noting that they brought in cash much needed by the
 15 villagers whereas outside commercial fishermen merely depleted the fishing stock. After several years of
 16 competition between these various groups of fishermen, the situation began to threaten violence, and calls
 17 for new legislation were voiced (NPS 2007f).

18 In the coming years, many heated
 19 debates were to erupt between
 20 commercial, sports, environmental, and
 21 park-access groups. It should be noted,
 22 however, that between the 1930s until
 23 well into the 1960s, the public lodged
 24 few complaints about fishing, beach
 25 driving, or conflicts between vehicle-
 26 users and other beach-goers. At first, the
 27 few Outer Banks residents with vehicles,
 28 and occasional visitors, did not relish the
 29 notion of beach driving and did so simply
 30 because there were almost no roads on
 31 which to drive. After World War II,
 32 improved automotive technologies
 33 allowed more villagers and visitors to
 34 drive along the seashore, but without
 35 roads this activity still entailed the
 36 onerous rituals of deflating and re-
 37 inflating tires, digging out from occasional sandpits, and risking getting stuck. Such experiences were
 38 unpleasant but whether they bothered the typical “Hatterasman” as writer Ben Dixon MacNeill phrased it,
 39 was another question (NPS 2007f).



Beach driving 1933

Credit: NPS

40 Outer Banks residents were by tradition and necessity a people of the sea and were adept at using it for
 41 transportation. They did not need roadways for their own transportation or lifestyle needs, rather an
 42 absence of roads limited economic growth. As their traditional life ways declined, Outer Banks residents
 43 increasingly sought the roads and bridges needed to sustain a tourist-based economy. A major reason the
 44 NPS began to reappraise its opposition to an island parkway was that random beach driving led to
 45 destruction of the artificial dunes and harmed native flora and fauna. Ironically, the very road that boosted
 46 tourism and was supposed to better protect the environment by eliminating the chore of beach driving was
 47 also what made commercial and recreational access to the beach ever more possible and brought those
 48 separate interests into conflict. However, some commercial fishermen used jeeps early on to operate

1 shore-based fishing nets while the NPS set up ramps to help channel sport fishermen away from the more
2 sensitive dune areas. These early ramps also gave access to increasing numbers of tourists. Still, such uses
3 did not begin to elicit great controversy until after the Bonner Bridge opened in 1964. With the bottleneck
4 at Oregon Inlet removed, there was no limit to the number of park visitors who in a day's span could
5 drive down the banks and out onto the beach. Completion of the Bonner Bridge, therefore, marks a key
6 demarcation point in the history of the first national seashore (NPS 2007f).

7 In brief, residents adopted the use of ORVs for commercial netting of fish, while sport fishermen used
8 ORVs to pursue migrating schools of game fish and reach more productive areas, such as Cape Point or
9 the inlets, often a mile or more from the nearest paved surface. Presently, ORVs are used to access the
10 beach for activities such as commercial and recreational fishing, sightseeing, travel to and from
11 swimming and surfing areas, and pleasure driving (NPS 2004b).

12 Today ORVs access the ocean beaches and sound shoreline via a system of "ramps" located off NC-12
13 and other paved roadways. The ramps began as an informal system of unimproved access points
14 connecting the roadway to the sounds and beaches. Over time, this system was formalized and the
15 oceanside ramps are now numbered, maintained, and identified on the Seashore's ORV route maps as
16 official vehicle access routes for beach access. In 1978 there were 28 identified ramps, 22 of which were
17 located on NPS lands. Although the NPS opened a new ramp to the public in 1998, the number of ramps
18 has decreased since 1978 as some were lost to erosion and others were closed to the public and are now
19 used for administrative vehicle access only (NPS 2004a). The NPS currently has 17 oceanside access
20 ramps available for public ORV use (NPS 2008g).

21 ORV use at the Seashore has historically been managed since the 1970s through various draft or proposed
22 plans, though none were ever finalized or published as a special regulation as required by Executive
23 Orders 11644 and 11989 and 36 CFR 4.10. In 1973, in response to Executive Order 11644, Use of Off-
24 Road Vehicles on the Public Lands (February 8, 1972), the Seashore developed a draft ORV management
25 plan (NPS 2004b) that included the following:

- 26 • Designation of 27 beach access routes or ramps.
- 27 • Identification of a permitted area for travel from the toe of the dune to the ocean.
- 28 • License requirements for vehicles and operators.
- 29 • Closure of one heavily eroded section of the beach near the Cape Hatteras Lighthouse year-round.
- 30 • Designation of seasonal closures in five areas heavily used by pedestrians between May 26 and
31 September 10.

32 This management plan was not finalized or published as a special regulation, as required by Executive
33 Order 11644 and 36 CFR 4.10.

34 A few years later, in response to Executive Order 11989, Off-Road Vehicles on Public Lands (May 24,
35 1977), the NPS began developing a draft ORV management plan for the Seashore. In response to the plan,
36 which was released in January 1978, the North Carolina Beach Buggy Association and the Outer Banks
37 Preservation Association each issued proposed alternative plans for ORV management at the Seashore.
38 These proposed plans were considered by the Seashore, along with public comment, and in November
39 1978 the Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore was
40 issued (NPS 1978a). It proposed guidelines for the management of ORV use at the Seashore while the
41 general management plan was under development. The draft interim ORV management plan identified
42 zones of use for ORVs, as well as described conditions under which vehicles would be allowed or
43 prohibited. The proposed zones of use were as follows:

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- 1 • Zone 1 – Ocean Beach: In this zone ORVs will be permitted landward from 150 feet of the
 2 existing tide line, but no closer than 20 feet to the toe of the dune or vegetation line. Portions of
 3 Zone 1 may be closed seasonally (May 15 through September 15), or closed temporarily to
 4 protect nesting birds or sea turtles, or when the distance between the existing tide and the toe of
 5 the dune or the vegetation line is reduced to less than 100 feet. Permits must be issued for
 6 vehicles that have less than four weight-bearing wheels and do not meet all vehicular licensing
 7 and inspection requirements of their state of origin.
- 8 • Zone 1(a) – Seasonally closed areas include those Zone 1 areas which, due to seasonal heavy
 9 pedestrian, swimming, wildlife or other uses, are deemed seasonally unsuitable for ORV use.
 10 Seasonally closed areas shall be identified by signs at both ends of the area, and shall be indicated
 11 on maps available for viewing at the offices of the Superintendent and of each District Ranger.
 12 Dates of seasonal closures shall be May 15 through September 15 of each year, except on Pea
 13 Island National Wildlife Refuge, where the Refuge Manager shall post such closures as he may
 14 find necessary to implement the regulations of the USFWS.
 15 Seasonally closed areas shall consist of, but not be limited to, the following areas: Bodie Island,
 16 milepost 0 to milepost 3; beach areas fronting the villages of Rodanthe, Waves, Salvo, and Avon;
 17 northern boundary of Buxton to one mile south of the Cape Hatteras Lighthouse; beach fronting
 18 the villages of Frisco and Hatteras; milepost 49 to milepost 54; and Ocracoke Island milepost 65
 19 to 70.
- 20 • Zone 1(b) – Temporarily closed sections include:
 21 Those narrow beach sections of Zone 1 that have decreased in width to the point where the
 22 average distance from the existing tide to the toe of the dune or vegetation line is less than 100
 23 feet (30 meters). These sections shall be marked at each end by signs reading “Beach Temporarily
 24 Closed to Vehicle Traffic” and shall be indicated on maps available for viewing at the offices of
 25 the Superintendent and each District Ranger.
 26 Bird Nesting Areas – Portions of high beach and inlet flats where significant bird nesting is
 27 occurring. These areas shall be temporarily closed to all visitor use and shall be marked by posts
 28 and “Bird Nesting Area” signs.
 29 Sea Turtle Nests – Locations on the beach where a sea turtle nest is discovered. A rectangular
 30 section of beach that includes the nest with 300 feet (92 meters) of tide line seaward of the nest
 31 shall be temporarily closed to ORV use from dune to existing tide line. Closures shall be marked
 32 at both ends by posting with signs indicating “no ORVs – temporary turtle nest.” The period of
 33 closure shall begin on posting, 50 days after the turtle lays, and shall end 25 days later on official
 34 removal of the signs. The purpose of the closure is to protect hatchling loggerhead turtles, listed
 35 as “threatened” under the ESA.
- 36 • Zone 2 – Soundside: Marsh and flat land west and northwest of NC-12. Vehicular traffic shall be
 37 confined to marked trails, posted as open. No permit shall be required.
- 38 • Zone 3 – Buxton Woods, Open Ponds: The area of grassed dunes and forest lands lying between
 39 Headquarters, Cape Hatteras Group Coast Guard, and Frisco Campground. The area is roughly
 40 bounded on the south by the ocean dunes; on the east by a northeast-southwest trending line lying
 41 west of the Cape Point Campground, Coast Guard Group Headquarters, and NPS residence-
 42 maintenance area complex; on the north by the NPS boundary through Buxton Woods; and on the
 43 west by a south-north trending line lying east of the Frisco campground. In this zone, limited
 44 vehicular access on ORV routes posted as open shall be permitted only upon application in
 45 person to the Hatteras District Ranger (or designee) and there shall be no more than 30 total

1 ORVs in this zone at any one time. Limited access permits for vehicular entry shall not exceed 24
2 hours in duration and shall not be issued more than 7 days in advance. Permits are renewable
3 upon request except when vehicular capacity has been reached.

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

8 The 1978 draft interim ORV management plan also called for a posted speed limit of 25 miles per hour
9 and for ORV operators to possess a current driver's license from their state of origin. The permitting
10 portion of the 1978 draft plan was controversial and was removed before release of the 1978 Draft Interim
11 Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore (NPS 1978a). Except for
12 Zone 1, the 1978 draft plan stated that no vehicle would enter any unpaved dirt or sand trail or path, or
13 follow any vehicular tracks not posted as an ORV trail. Though the draft plan was not finalized or
14 published as a special regulation as required by Executive Orders 11644 and 11989 and 36 CFR 4.10, the
15 Seashore implemented the following plan components:

- 16 • Consolidating and clearly marking entrance and exit points to soundside areas;
- 17 • Establishing sea turtle and bird nesting protection zones;
- 18 • Increasing efforts to provide signage and other information concerning beach conditions and open
19 and closed areas; and
- 20 • Providing better maintenance of access routes and ramps.

21 In 1980, the North District Ranger prepared the ORV Plan North District Cape Hatteras National
22 Seashore (NPS 1980). During development of this draft plan, the North District Ranger asked concerned
23 individuals for comments and suggestions regarding ORV use at the Seashore. Based on these comments
24 and suggestions, the plan included recommendations for improvements and a general description and
25 project status of each soundside and oceanside access point from Bodie Island to Hatteras Inlet. The plan
26 recommended that the general management plan consider additional parking needs on the soundside and
27 oceanside and at comfort station locations. It also recommended that the general management plan
28 consider impacts of traffic flow changes as a result of corridor and road closures (NPS 1980). The 1984
29 general management plan would address these concerns by incorporating additional parking lots and
30 parking turnouts along NC-12 (NPS 1984); however, the 1980 draft ORV plan was not finalized or
31 published as a special regulation, as required by Executive Orders 11644 and 11989 and 36 CFR 4.10.

32 The 1984 General Management Plan / Development Concept Plan / Environmental Assessment: Cape
33 Hatteras National Seashore (NPS 1984) addressed direct and indirect threats to the Seashore, with ORV
34 use cited as one such threat. The General Management Plan specified five visitor experience zones. ORV
35 use was listed as an appropriate activity in three of these five zones: ocean/beach, interior dunes/maritime
36 forests, and marsh/sound. The General Management Plan called for ORV use to be regulated by the 1978
37 draft interim ORV management plan (NPS 1978a) ~~and which~~ was drafted after consideration of public
38 comment to the 1978 draft plan (NPS 1978b). The General Management Plan called for additional
39 planning and research on ORV use and for monitoring impacts of ORVs, but did not set forth an ORV
40 management plan or special regulation, as required by Executive Orders 11644 and 11989 and 36 CFR
41 4.10.

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1 ORV use was managed by the above planning documents during the 1980s and 1990s. On December 9,
2 1999, a petition for rulemaking was submitted to the NPS that requested a ban on the use of all-terrain
3 vehicles (ATVs), dune buggies, sand buggies, and other four-wheel drive vehicles on all off-road areas in
4 the national park system, which included the Seashore. This petition was followed-up by a second petition
5 in 2004. The second petition, specific to the Seashore, was submitted on June 7, 2004, and requested
6 Rulemaking Governing Off-Road Vehicle Use in the Cape Hatteras National Seashore. Petitioners
7 claimed the Seashore's informal authorization of ORV use violated the ESA, executive orders and federal
8 regulations regarding ORV use in the national parks, the *Organic Act*, the *General Authorities Act of*
9 *1970*, the Cape Hatteras National Seashore enabling legislation, and various NPS management policies.
10 Both of these petitions are part of the reason for developing this ORV plan/EIS.

11 Following the submission of the two petitions, in 2004 the Seashore issued Superintendent's Order 7,
12 ORV Management, to resolve ORV issues created by Hurricane Isabel, which flattened sand berms and
13 exposed areas of the Seashore to ORV use that the berms once protected from such use (NPS 2004c).
14 After reviewing the 1984 General Management Plan, the Superintendent decided that parts of the 1978
15 draft interim ORV management plan (permitting sections excluded) would be used as Seashore guidance
16 pending development of a long-term ORV management plan and special regulation.

17 To provide guidance for the proper management of protected species and to comply with the ESA, while
18 providing for use of the Seashore's recreational resources until an ORV plan/EIS and special regulation
19 could be completed, the Seashore began development of the Interim Strategy in late 2004. The species
20 addressed in the Interim Strategy are those specifically affected by recreational and ORV use within the
21 Seashore that are listed either federally or by the state as threatened, endangered, or species of special
22 concern, or are of special concern to the Seashore.

23 While the Interim Strategy was being prepared, Defenders of Wildlife issued a notice of intent (NOI) to
24 sue the NPS for alleged violations of the ESA at the Seashore in May 2005. After this NOI was issued,
25 the Seashore continued to develop the Interim Strategy, which was published for public comment in
26 January 2006.

27 In December 2006, after the first season that NPS had operated under the Interim Strategy and after the
28 USFWS had issued the Biological Opinion, Defenders of Wildlife issued another NOI to sue NPS and
29 USFWS (collectively referred to as Federal Defendants), alleging that the Biological Opinion did not
30 meet the requirements of the ESA and re-asserting the previously stated claims against NPS from the
31 earlier NOI to sue. NPS issued a Finding of No Significant Impact (FONSI) on the Interim Strategy in
32 July 2007 (NPS 2007a).

33 Alternative D, as modified in the Interim Strategy FONSI, was identified as the selected alternative.
34 Alternative D outlines a multifaceted strategy (including a program of increased monitoring, recreational
35 and ORV closures, education and enforcement) for minimizing impacts to wildlife, including threatened
36 and endangered species and other protected species, from visitor uses including ORV use. The USFWS
37 Raleigh Field Office prepared a Biological Opinion associated with the Interim Strategy in response to
38 their review of the Cape Hatteras National Seashore's biological assessment (NPS 2006b, January 6,
39 2006), the Interim Strategy (NPS 2006a, January 18, 2006), and other sources of published and
40 unpublished biological information. The Biological Opinion evaluated the proposed action of the Interim
41 Strategy and its potential impact to protected species at the Seashore. The USFWS concluded that
42 incidental take of protected species would occur from management actions under the Interim Strategy, but
43 the level of anticipated take during the limited period the Interim Strategy would be in effect is not likely
44 to result in jeopardy to the species or destruction or adverse modification of designated or proposed
45 critical habitat (USFWS 2006a). In March 2007 and December 2007, the NPS requested reinitiation of
46 consultation with the USFWS. These consultations concluded with the USFWS issuing amendments to its

Summary of Scientific Literature on Off-Road Vehicle Use

1 original Biological Opinion in April 2007 and March 2008, respectively. Both amendments addressed
2 performance measures for piping plover and loggerhead, green, and leatherback sea turtles.

3 In October 2007, Defenders of Wildlife and the National Audubon Society, represented by the Southern
4 Environmental Law Center (collectively referred to as Plaintiffs), filed a lawsuit claiming the Interim
5 Strategy violated the ESA and other laws, failed to protect species at Cape Hatteras National Seashore,
6 and failed to comply with the requirements of the ORV executive orders and NPS regulations on ORV
7 use. In December 2007, Dare County, Hyde County, and the Cape Hatteras Access Preservation Alliance,
8 a coalition of ORV/access and fishing groups, were granted Intervenor-Defendant status in the lawsuit.

9 In April 2008, the Plaintiffs, Federal Defendants, and Intervenor-Defendants jointly submitted to the court
10 a consent decree that would be signed by a U.S. District Court Judge on April 30, 2008, to settle the
11 lawsuit. The consent decree, which is enforceable by the court, provides for specific species protection
12 measures and requires the NPS to complete the ORV management plan/EIS and required special
13 regulation by December 31, 2010, and April 14, 2011, respectively. Consent decree modifications of the
14 Interim Strategy included changes in the size of buffers provided for various species at the Seashore, as
15 well as added restrictions related to night driving.

16 SUMMARY OF SCIENTIFIC LITERATURE ON OFF-ROAD VEHICLE 17 USE

18 A literature review was prepared to support the development of an ORV management plan at Cape
19 Hatteras National Seashore. The literature review (appendix A) provides a summary of available scientific
20 information related to the potential effects of ORV use on natural and cultural resources similar to those
21 found at the Seashore or in geographic locations with similar environmental conditions.

22 SCOPING PROCESS AND PUBLIC PARTICIPATION

23 An NOI to prepare an Environmental Impact Statement was published in the Federal Register on
24 December 11, 2006, to announce the beginning of the ORV planning process. To determine the scope of
25 issues to be analyzed in depth in this plan/EIS, meetings were conducted in February and March of 2007
26 with Seashore staff, other parties associated with preparing this document, and members of the public.
27 Additional public meetings were held in January 2008 and a public comment period was held in January –
28 February 2008 to examine the range of alternatives and provide input on alternative elements. In response
29 to public input and issues raised during the scoping process, the interdisciplinary planning team reworked
30 the preliminary alternatives to those analyzed in this plan/EIS except for alternative F, which was
31 developed after the negotiated rulemaking process concluded. [A notice of availability for the draft
32 plan/EIS was published in the Federal Register on March 12, 2010. Following the release of the draft
33 plan/EIS, a 60-day public comment period was open between March 12, 2010, and May 11, 2010.](#)
34 Chapter 5 of this plan/EIS provides more details about agency and public scoping activities that were an
35 integral part of the planning process for this plan/EIS.

36 NEGOTIATED RULEMAKING PROCESS

*The NPS used a
negotiated
rulemaking process
in an effort to*

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1 The *Negotiated Rulemaking Act of 1990* (5 United States Code [USC] 561-570)
 2 establishes a statutory framework for agency use of negotiated rulemaking to
 3 reach a consensus with stakeholders on a proposed regulation. Concurrent with
 4 the *National Environmental Policy Act* (NEPA) process, the NPS used a
 5 negotiated rulemaking process in an effort to develop a proposed rule for long-
 6 term ORV management at the Seashore. Because negotiated rulemaking allows
 7 interested, affected parties more direct input into the development of the proposed
 8 regulation, the NPS had hoped that the negotiated rulemaking process would result in a rule that is
 9 sensitive to the needs and limitations of both the parties and the agency.

*develop a proposed
 rule for long-term
 ORV management
 at the Seashore.*

10 In December 2007, the Department of the Interior established a negotiated rulemaking advisory
 11 committee (Committee) to assist the NPS in the development of an ORV regulation for the Seashore. The
 12 Committee met 11 times from January 2007 through February 2009, and conducted numerous
 13 subcommittee and work group meetings and conference calls. The Committee discussed and explored
 14 options for the full spectrum of ORV management issues covered in this plan/EIS. As a result of these
 15 discussions, the NPS considered a variety of concepts and measures that either originated from
 16 Committee members or were discussed during Committee, subcommittee, or work group sessions.
 17 Although the Committee as a whole did not reach a consensus on a recommended alternative, in creating
 18 the alternatives in this plan/EIS, the NPS has made a management judgment as to which combination of
 19 concepts and measures would make an effective overall ORV management strategy.

20 ~~In December 2007, the Negotiated Rulemaking Advisory Committee (Committee) was formally~~
 21 ~~established and its first meeting was held in January 2008, when Committee members began to work~~
 22 ~~toward a consensus recommendation. Although the Committee did not reach a consensus on a complete~~
 23 ~~alternative, management elements suggested by the Committee members were reviewed and incorporated~~
 24 ~~into the range of alternatives in this plan/EIS, primarily in alternative F.~~

25 ISSUES AND IMPACT TOPICS

26 Issues associated with implementing an ORV management plan at Cape Hatteras National Seashore were
 27 initially identified by Seashore staff during internal scoping and were further refined through the public
 28 scoping and negotiated rulemaking processes. The following text discusses the issues that formed the
 29 basis for the impact topics discussed in chapters 3 and 4 of this plan/EIS.

30 FLOODPLAINS AND WETLANDS

31 Although the entire ocean shoreline of the Seashore is classified as a marine or intertidal wetland
 32 (Cowardin et al. 1979), these areas are not measurably impacted by vehicle use due to the dynamic nature
 33 of the beach environment and the ability of the intertidal areas to “restore” themselves, since ruts from
 34 vehicle tires are filled in by wave action and moving sands. A study by Leatherman and Godfrey (1979)
 35 indicated that the intertidal ocean beach (sand beach area) is the most resistant to long-term vehicle
 36 impacts. While no definite conclusions were drawn from the study, they did indicate that natural changes
 37 to the beach appeared to overwhelm vehicle effects in this particular study. Given these studies, these
 38 types of wetlands were not analyzed in detail in this plan/EIS. However, vegetated wetlands along the
 39 soundside and interior of the islands are susceptible to direct damage from ORV use, and are discussed
 40 further under the “Wetlands” impact topic.

41 Estuarine wetlands are often denuded of vegetation when ORVs are driven and parked along the
 42 soundside shoreline. Also, many of the interior or interdunal roads are located near wetland areas that are
 43 often not noticeable to visitors. When standing water is present along these ORV routes, visitors often
 44 drive over adjacent vegetated areas in an attempt to avoid the standing water. This results in wider roads,

1 new vehicle routes, and crushed or dead vegetation. Construction of new parking areas is also of concern
2 for wetlands that may be located nearby.

3 Nearly all of the Seashore is located within the 100-year floodplain, with the exception of a small area at
4 the Navy tower site on Bodie Island and larger areas around Buxton. In this plan/EIS, the issue of
5 floodplains is considered under any alternative that includes development, such as constructing new
6 parking lots or expanding existing parking lots, because these actions have the potential to impact the
7 function and value of the floodplain. However, it is recognized that the barrier island floodplain systems
8 function quite differently than inland floodplains, which primarily function by providing lowland areas
9 for floodwater storage and conveyance. In contrast, floodplains at the Seashore are subject to coastal
10 flooding caused by storm systems that can raise water levels substantially via storm surge.

11 **WILDLIFE AND WILDLIFE HABITAT**

12 Cape Hatteras National Seashore provides important habitats and plays a vital role in the survival of many
13 wildlife species. Whether for nesting, resting, foraging, or feeding, the Seashore provides for a diverse
14 assemblage of birds. Rich, varied habitats and the Seashore’s location along the Atlantic Flyway attract
15 birds. In 1999, the American Bird Conservancy designated Cape Hatteras National Seashore as a Globally
16 Important Bird Area in recognition of the Seashore’s value in bird migration, breeding, and wintering
17 (American Bird Conservancy 2005). This diverse ecosystem includes both prey species that sensitive
18 species rely on for survival, and predators of sensitive species. ORV use along the Seashore can disrupt
19 habitat or cause a loss of habitat in high use areas. Habitat loss due to ORV use could also occur
20 indirectly as a result of the noise and disturbance from this activity.

21 Invertebrates are impacted by ORV use. A recent study at the Seashore researched the ghost crab
22 (*Ocyopode quadrata*) as an indicator of ecosystem health, since it may show the impacts of ORVs and
23 other recreational uses (Hobbs et al. 2008). The study considered the impacts of ORVs on ghost crab
24 population densities and recovery rates in relation to ORV use and usage regulations. Data to determine
25 the impacts of ORVs on crab populations were collected in several areas in the Seashore. Closures of the
26 beaches to vehicles were initiated to study short-term effects and recovery rates. It was found that ORVs
27 had a detrimental impact on ghost crab populations at the Seashore and that areas subject to vehicle use
28 had significantly fewer ghost crab burrows than those areas without vehicles. As shown by Steiner and
29 Leatherman (1981), ghost crabs can be killed or mortally injured by ORVs driving over them, or by
30 altering their environment. This study concluded that high-energy weather events change the dynamics of
31 the population, allowing more ghost crabs to inhabit the area, but ORVs reduce the ability for ghost crabs
32 to inhabit the area (Hobbs et al. 2008).

33 ~~RARE, UNIQUE, FEDERALLY LISTED THREATENED, AND OR~~ **ENDANGERED SPECIES**

34 **Federally Listed Threatened ~~and or~~ Endangered Species**

35 ORV use at the Seashore could impact federally threatened or endangered
36 species and their habitats on the Seashore’s soundside and ocean beaches.
37 Conflicts between listed species and recreational use (including ORV use) could
38 create direct or indirect losses to a listed species. The Seashore is home to
39 federally threatened ~~and or~~ endangered species year-round. Increased year-round
40 visitation results in a greater potential for conflicts between visitor use and listed
41 species. The Seashore is used by both the endangered Great Lakes population of
42 piping plover (considered threatened on wintering grounds, which include the
43 Seashore) and the threatened Atlantic Coast population (for breeding and
44 wintering, with breeding occurring at the Seashore). Seabeach amaranth, a federally listed threatened

*The Seashore is
home to federally
threatened ~~and or~~
endangered species
year-round.*

Comment [seh2]: This change is consistent with the change to the heading in CH 4

Comment [seh3]: Don’t think we need this subheading if the above heading is changed

Comment [seh4]: Consistent with the change made in heading

Comment [seh5]: Consistent with change made in heading

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1 plant species, has been found in limited numbers at the Seashore in the recent past. However, no plants
 2 have been documented since 2005. According to the USFWS, seabeach amaranth has been eliminated
 3 from two-thirds of its historic range and ORVs are considered one of the more serious threats to its
 4 continued existence.

5 Nesting sea turtles at the Seashore include the loggerhead, green, and leatherback turtles. Kemp's ridley
 6 and hawksbill turtles are known to occur only on the beaches of the Seashore through strandings. Threats
 7 to listed sea turtles, their nesting sites, and young include storm events, predation, artificial lighting,
 8 campfires, and recreational beach equipment; disturbance by pedestrians and pets; and direct and indirect
 9 impacts of ORVs. In May 2008, the red knot was identified by the USFWS as a candidate for the
 10 endangered or threatened species list. This species is a migrant and occasional winter resident at the
 11 Seashore.

12 Current and possible future management alternatives for ORV and other recreational uses would take into
 13 consideration the needs of federally listed threatened and endangered species in determining management
 14 measures.

15 STATE-LISTED AND SPECIAL STATUS SPECIES

16 Habitat for state-listed and special status species, such as the American oystercatcher and several species
 17 of colonial waterbirds, may be vulnerable to disturbances caused by recreational uses, including ORV
 18 use. As of May 2008, the American oystercatcher, Wilson's plover, least tern, common tern, and black
 19 skimmer were listed by the North Carolina Wildlife Resources Commission (NCWRC) as species of
 20 special concern ([15A NCAC 101.0105-Subchapter 101-15A](#)). The NCWRC also lists the gull-billed tern
 21 as a state-threatened species. The American oystercatcher is listed as a species of concern by the
 22 Southeastern Shorebird Conservation Plan, and both the American oystercatcher and the Wilson's plover
 23 are identified in the U.S. Shorebird Conservation Plan as "Species of High Concern" ([Schulte et al 2007](#);
 24 [Brown et al. 2001](#)). All these state-listed or special status species have had historically low reproductive
 25 rates. The lack of large undisturbed areas for successful breeding contributes to these low rates at the
 26 Seashore. Frequent human disturbance can cause the abandonment of nest sites as well as direct loss of
 27 eggs and chicks. [In addition to these breeding species, the Seashore is also home to migratory species](#)
 28 [such as the red knot, that use habitat at the Seashore during the winter or during migration. The red knot is](#)
 29 [currently a candidate for ESA protection \(74 FR 57804\).](#)

30 [All of the bird species that are described under the "State-Listed and Species Status Species" sections of](#)
 31 [the plan/EIS are listed in 50 CFR § 10.13, which indicates species that are subject to the protections of the](#)
 32 [MBTA. These species are also designated as Birds of Conservation Concern \(USFWS 2008b\) and/or](#)
 33 [Migratory Nongame Birds of Management Concern in the United States \(USFWS 1995\) which qualifies](#)
 34 [them as species of concern according to Executive Order 13186, Responsibilities of Federal Agencies to](#)
 35 [Protect Migratory Birds. The Birds of Conservation Concern designation includes migratory and non-](#)
 36 [migratory species that are of concern due to population declines, naturally or human-caused small ranges](#)
 37 [or population sizes, threats to habitat, or other factors. The USFWS 1995 list of Migratory Nongame](#)
 38 [Birds of Management Concern in the United States lists species that are of concern because of](#)
 39 [\(1\) documented or apparent population declines, \(2\) small or restricted populations, or \(3\) dependence on](#)
 40 [restricted or vulnerable habitats. Therefore, the NPS is required to protect these species according to the](#)
 41 [provisions of both the executive order and the MBTA.](#)

42 [In April 2010, the NPS signed a Memorandum of Understanding \(MOU\) with the USFWS to strengthen](#)
 43 [coordination for migratory bird conservation. The MOU helps identify and implement strategies to](#)
 44 [complement and support existing efforts, and facilitate new collaborative migratory bird conservation](#)

1 [partnerships and comprehensive planning strategies for migratory birds under the MBTA. The Seashore](#)
2 [has consulted with the USFWS on this plan/EIS, as provided for under the MOU.](#)

3 **SOUNDSCAPES**

4 Impacts related to soundscapes could occur wherever ORVs are allowed on the oceanside or the
5 soundside. Vehicular noise has the potential to impact other recreational uses, such as bird watching or
6 enjoying the solitude and natural soundscape of the Seashore. In addition to impacting soundscapes in
7 relation to visitor enjoyment, vehicular noise could create unsuitable habitat for Seashore wildlife.

8 **VISITOR USE AND EXPERIENCE**

9 ORV use at the Seashore is an integral component of the experience for some visitors and may be
10 impacted by ORV management activities. Other Seashore visitors who are not using ORVs may be
11 impacted by ORV use. Currently, the mix of recreational users at the Seashore includes a variety of users
12 such as ORV users, day-users without ORVs, swimmers, anglers, bird watchers, water sports enthusiasts,
13 and other users. Although some visitors want to use an ORV to access the Seashore, other visitors wish to
14 engage in recreational activities on foot and away from the presence of motorized vehicles. Restricting
15 ORVs from areas of the Seashore could enhance the recreational experience for some and diminish the
16 experience for others. Visitor experience could be affected by conflicts between motorized and non-
17 motorized recreation users. A further component of visitor experience is providing for the safety of all
18 visitors at the Seashore.

19 Other issues related to visitor use and experience include viewsheds, aesthetics, and night skies. While the
20 sight of ORVs can destroy the viewshed and aesthetics for some visitors, they also change the viewshed
21 by altering the natural landscape. Some visual signs of ORVs include tire ruts and markings and trash left
22 behind. ORV use impedes or destroys coastal features like wave or wind ripples in the sand, tide wrack
23 lines, overwash deposits, wind sorted sediments, dune formation, etc. As an example, the burrows of
24 ghost crabs, the most common beach inhabitants, are nearly absent from beaches where ORVs are
25 allowed. Installing posts around closure areas for protected species from ORVs could also impact the
26 views and aesthetics of the area for those who want a natural view without evidence of man-made
27 materials.

28 Headlights and other artificial lights associated with nighttime ORV use may affect visitors' opportunities
29 to enjoy night skies at the Seashore. Conversely, lack of artificial lights may make it more difficult to see,
30 posing hazards to ORV users and pedestrians. Issues related to night skies include night driving,
31 headlights, campfires, and all other light uses associated with human activity after dusk. The Seashore is
32 one of the few places on the Atlantic Coast where visitors can experience the magnificence of a dark night
33 sky. The Seashore has been ranked, along with Cape Lookout National Seashore, as the 9th best place to
34 view the night sky by the NPS Night Sky Program. ORV use at night has the potential to affect visitor
35 experience of the "brilliance" of the night sky. In addition to visitors, animals are also impacted by lights
36 at night. The stars, planets, and moon are visible during clear nights and influence many species of
37 animals, such as birds that navigate by the stars or prey animals that reduce their activities during moonlit
38 nights. Additionally, the phosphorescence of waves on dark nights helps sea turtle hatchlings orient to the
39 ocean. Excessive artificial light has the potential to disorient turtle hatchlings and disrupt their crawl to
40 the ocean. Pursuant to NPS Management Policy 4.10 (NPS 2006c), to prevent the loss of natural night
41 skies, the NPS should minimize light that emanates from park facilities, and also seek the cooperation of
42 park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial
43 light into the night scene of the ecosystems of parks. Furthermore, the NPS will not use artificial lighting
44 in areas such as sea turtle nesting locations where the presence of the artificial lighting could disrupt a
45 park's dark-dependent natural resource components (NPS 2006c). Impacts of artificial light sources on

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1 animals will be discussed in chapters 3 and 4 under the threatened and endangered species, state-listed
2 and sensitive species, and wildlife and wildlife habitat impact topics.

3 **SOCIOECONOMICS**

4 Management or regulation of ORV use at the Seashore could impact the local economy by changing the
5 demand for goods and services from ORV users in these communities. The eight villages located within
6 the Seashore boundaries serve as access points to the Seashore for visitors, including ORV users. These
7 villages receive economic benefit from the ORV users who take advantage of the goods and services
8 these communities offer. The communities are concerned that if a permit system or other ORV
9 restrictions are implemented that make it harder for ORV users to use the area, fewer tourists may come
10 to the villages, resulting in impacts to the local economy.

11 Commercial fishermen currently have ORV access to areas that are closed to other ORV users because of
12 safety reasons (i.e., narrow beach conditions), but they do not have access to areas closed for resource
13 protection. On Ocracoke Island, two soundside access points have been identified for commercial use.
14 Limits placed on ORV use at the Seashore may limit the activities of local commercial fishermen.
15 Disrupting the ability of commercial fishermen to conduct business at the Seashore could negatively
16 impact them.

17 **SEASHORE MANAGEMENT AND OPERATIONS**

18 Accommodating recreational uses while protecting sensitive species requires a sufficient number of
19 personnel and an adequate level of funding. Past anecdotal evidence suggested that the Seashore did not
20 have enough personnel to properly enforce existing ORV management decisions. If operational
21 requirements increase under the new ORV management plan, it would require an increased commitment
22 of limited NPS resources (staff, money, time, and equipment).

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

24 The following issues were dismissed from further analysis.

25 **Geologic Resources:** ORV use may also impact the ocean beach at Cape Hatteras National Seashore by
26 disturbing sand, compacting sand, creating ruts, and changing local topography. Studies have also shown
27 that heavy ORV use could result in increased beach erosion (see the literature review in appendix A).
28 However, the Seashore is part of a dynamic coastal barrier ecosystem, and visual effects of ORVs on
29 ocean beaches can no longer be visible in a matter of hours due to daily tidal action, winds, rain,
30 hurricanes, and other storm events. Although ORV use could impact geologic resources if ORVs are
31 driven through dunes where there is no designated ramp, the use of ramps is strictly enforced and ORVs
32 illegally cutting through dunes are rare occurrences at the Seashore, resulting in impacts that would be
33 minor or less. ORV use can cause the collapse of beach escarpments and potentially affect sea turtle
34 habitat. Ruts from ORV tires can also impact the behavior of piping plovers, and compaction of sand can
35 impact invertebrate populations that are a food source for many of the shorebird species at the Seashore.
36 However, these secondary impacts are addressed under the other impact topics in the plan/EIS including
37 of threatened and/or endangered species, state-listed and special status species, and wildlife and wildlife
38 habitat. Therefore, the issue of geologic resources was not retained as an impact topic.

39 **Geohazards:** There are no known geohazards in the Seashore that would be affected by the
40 implementation of an ORV management plan.

Issues Considered But Dismissed from Further Analysis

1 **Vegetation:** Numerous scientific studies have documented the impacts of ORV use on vegetation.
2 However, because vegetation that exists near ORV use areas at the Seashore is almost exclusively
3 wetland vegetation, impacts to vegetation were analyzed under the wetlands section in this plan/EIS.
4 Potential impacts to the federally listed seabeach amaranth are addressed under the threatened and
5 endangered species analysis in this document. Other vegetation that could be impacted from ORV use
6 includes vegetation near the dunes, which functions to trap sand and facilitate natural dune building
7 processes. All of the alternatives considered in this plan/EIS would include prohibitions from driving on
8 the dunes, as well as mechanisms for establishing the ORV corridor so that any impacts to dune
9 vegetation would be minimized. In addition, the plan/EIS would also include consultation and compliance
10 under the *North Carolina Coastal Area Management Act (CAMA)*, which includes provisions for
11 minimization of impacts to natural dunes. Given the alternative elements that minimize dune impacts, as
12 well as the alternatives compliance with the CAMA, impacts to vegetation associated with dune processes
13 would be expected to be negligible to minor and were not carried forward for detailed analysis in this
14 document.

15 **Unique Ecosystems, Biosphere Reserves, World Heritage Sites:** There are no known biosphere
16 reserves, World Heritage sites, or unique ecosystems listed in the Seashore; therefore, implementation of
17 an ORV management plan would have no effect. The Seashore is classified as a Globally Important Bird
18 Area and potential impacts to bird species are included for discussion in this document.

19 **Water Quality / Marine and Estuarine Resources:** ORV use has the potential to impact water quality at
20 the Seashore due to fluids leaking from submerged vehicles or tire ruts altering natural drainage patterns.
21 However, water quality impacts from submerged vehicles would not rise above the level of negligible as
22 long as the vehicle was removed from the water in a timely fashion. Also, due to the ephemeral
23 (temporary) nature of tire ruts in beach sand, they would not result in impacts to water quality. Therefore,
24 this impact topic was dismissed from further analysis.

25 **Wildlife and Wildlife Habitat – Fish, Marine Mammals, and Mammals:** Essential fish habitat at the
26 Seashore is located on the soundside in areas of submerged vegetation. As previously discussed, water
27 quality impacts from ORV use would be negligible at most and would be associated primarily with
28 vehicle use on the ocean side. Therefore, there would be no impacts to essential fish habitat and it is not
29 addressed as an impact topic in this plan/EIS. Mammalian species at the Seashore include red fox (*Vulpes*
30 *vulpes*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), Virginia
31 opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), deer mice (*Peromyscus* spp.),
32 white-tailed deer (*Odocoileus virginianus*), muskrat (*Ondatra zibethica*), nutria (*Myocastor coypus*), otter
33 (*Lutra* spp.), mink (*Neovison vison*), and others. Impacts to mammals from ORV use and management
34 would be expected to be negligible as most of these species do not use ORV routes and areas as habitat.
35 The alternatives discussed in this ORV management plan do not involve the removal of mammalian
36 predators. Any impacts to the potential for an increase of mammalian predators due to increased human
37 activity are discussed as an indirect impact to wildlife species in chapter 4 of this document. Impacts
38 associated with predator control efforts will be discussed in the Seashore's forthcoming Predator Control
39 Program for Protected Species Management / Environmental Assessment and as a cumulative impact in
40 chapter 4 of this document. Although harassment of resting or stranded marine mammals on the beach
41 could occur from various park users, including those using ORVs, the plan will include measures to
42 educate all visitors about marine mammal protection, resulting in negligible to minor impacts. For the
43 reasons mentioned above, impacts to terrestrial and marine mammals were dismissed from further
44 analysis in this document.

45 **Air Quality:** Currently, Cape Hatteras National Seashore is located in an area classified by the U.S.
46 Environmental Protection Agency (EPA) as being in attainment for all six criteria air pollutants.
47 Activities associated with ORV use (such as driving or idling engines) result in the emission of criteria air

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1 pollutants; the pollutants of most concern for this project include nitrogen oxides (NO_x), volatile organic
 2 compounds (VOCs), and particulate matter (PM). For this reason, the NPS completed a modeling analysis
 3 to quantify the magnitude of annual emissions associated with ORV activities at Cape Hatteras National
 4 Seashore, and utilized these results to determine whether additional air quality modeling was necessary to
 5 estimate downwind pollutant concentrations and associated impacts.

6 Emission factor estimates were computed using the current EPA recommended model for mobile source
 7 emissions, the EPA-developed Mobile Source Emissions Model (MOBILE6), and ORV data specific to
 8 the Seashore. The results of this analysis show that for the current average vehicle use patterns on the
 9 Seashore, emissions of VOCs, NO_x and PM are all individually below 5 tons per year (TPY). Emissions
 10 for these pollutants associated with the upper bound estimates for ORV use patterns (i.e., the highest
 11 estimates of observed ORV use anticipated to occur park-wide on an annual basis under any of the
 12 alternatives) are just above 5 TPY, but all below 7 TPY. Given these low annual emission levels, daily
 13 pollutant concentrations resulting from ORV use are anticipated to be extremely low. Accordingly, it was
 14 determined that implementation of the ORV management plan would result in negligible air quality
 15 impacts, and air quality was dismissed from further analysis and discussion. The MOBILE6 modeling
 16 results and report are available on the plan/EIS project website at <http://parkplanning.nps.gov/CAHA>.

17 **Prime Farmlands:** There are no designated prime farmland soils in the Seashore.

18 **Streamflow Characteristics:** Actions related to ORV management would not have an effect on
 19 streamflow characteristics. The proposed actions would not occur in any area that would impact
 20 streamflow.

21 **Introduce or Promote Non-Native Species:** While the potential for vehicles to bring non-native species
 22 to the Seashore occurs, only a small number of non-native species can live in the salt and wind of the
 23 seashore environment. Additionally, ORVs are prohibited from driving on vegetation at the Seashore.
 24 Therefore, the potential for spreading plants from one area of the Seashore to another by driving on
 25 Seashore vegetation is also very low. Phragmites (*Phragmites australis*), a non-native plant species, is
 26 present at the Seashore, but is not likely to be transported by ORVs because its primary method of
 27 colonization is by rhizomes (underground root extensions) and not by seeds, which are prone to spreading
 28 by vehicle tires (Wisconsin DNR 2007). Therefore, because of the low potential for ORVs to promote
 29 non-native species in such a dynamic, salty environment, this topic was not carried forward for analysis in
 30 this EIS.

31 **Archeological Resources:** Archeological resources are the remains of past human activity and records
 32 documenting the scientific analysis of these remains. Archeological features are typically buried but may
 33 extend above ground; they are commonly associated with prehistoric peoples but may be products of
 34 more contemporary society (NPS 1998). Cape Hatteras National Seashore is rich in prehistoric and
 35 historic culture. The Outer Banks are rich with history of humankind's attempt to survive at the edge of
 36 the sea, and with accounts of dangerous storms, shipwrecks, and valiant rescue efforts. As of fiscal year
 37 2007, the NPS Archeological Sites Management Information System listed 28 archeological sites within
 38 the Seashore, ranging from a single projectile point (spear, dart, or arrow tip), to cemeteries, to the Cape
 39 Hatteras Lighthouse Complex, as well as shipwrecks. The condition of almost all of the extant resources
 40 was listed as good (NPS 2007d).

41 None of the archeological remains associated with structures, such as lighthouse complexes, are in
 42 immediate danger of damage from ORV users because those areas are not frequented by ORV
 43 users/riders. Other archeological sites, such as cemeteries, are on the soundside of the island and are also
 44 not in areas frequented by ORV users. Therefore, the impact to these types of sites is considered
 45 negligible.

Issues Considered But Dismissed from Further Analysis

1 Thousands of shipwrecks have occurred along the coast. As a result of the ongoing research, the North
2 Carolina Office of State Archaeology (OSA) Underwater Archaeology Branch catalog lists 63 historic
3 shipwreck remains on beaches at the Seashore as of January 2008 (OSA 2008). At this time, none of the
4 shipwrecks within the boundaries of the Seashore are listed in the National Register of Historic Places
5 (National Register). One shipwreck, the Laura A. Barnes on Bodie Island Beach, was considered eligible
6 for the National Register until its recent destruction by beach erosion during Hurricane Isabel (Stover
7 pers. comm. 2009).

8 Shipwrecks on the beach are the resources of most concern because many of these shipwreck sites are
9 ephemeral; in other words, they are uncovered and covered by storms, winds, and tides. This makes it
10 difficult for NPS to manage them. If visible, the location of the resource is marked and protected, but
11 many times the sand will move again before this is possible. Once resources are covered, or partially
12 covered, it is possible that they could be run over or hit by ORV users who are unable to see them under
13 the sand. In addition to unintentional impacts on the Seashore's cultural resources, some resources have
14 been knowingly disturbed and even destroyed. ORV access also allows visitors to reach a shipwreck and
15 take portions of the shipwreck that would normally be too large or heavy to remove if on foot (Stover
16 pers. comm. 2009). During inventories of the condition of known shipwreck locations over the past seven
17 years, NPS has found that an average of 25 to 30 of the 63 known shipwrecks are constantly being
18 damaged by natural and human forces (Stover pers. comm. 2008).

19 The impact from unintentional ORV damage or intentional vandalism may be measurable or perceptible,
20 but it is localized within a relatively small area of the site. Therefore, impacts on shipwrecks are
21 considered minor. In general, impacts do not affect the character-defining features of any listed or eligible
22 National Register archeological site at the Seashore. Therefore, this topic was not carried forward for
23 further analysis.

24 **Cultural Landscapes:** The NPS defines cultural landscapes as settings that humans have created in the
25 natural world. They reveal fundamental ties between people and the land. They are special places:
26 expressions of human manipulation and adaptation of the land. Although only one Cultural Landscape
27 Report has been prepared for the Cape Hatteras Light Station (NPS 2003a), there are five cultural
28 landscapes within the Seashore's official database: Bodie Island Light Station, Little Kinnakeet Life
29 Saving Station, Cape Hatteras Light Station, Hatteras Weather Bureau Station, and Ocracoke Light
30 Station (NPS 1997; Stover pers. comm. 2008). None of these cultural landscapes is in the areas of routine
31 ORV use under any of the proposed action alternatives, and none should be impacted by the
32 implementation of an ORV management plan. In addition, because the oceanside ORV use areas under all
33 alternatives are close to one mile from the Cape Hatteras Light Station, there should be no cultural
34 landscape viewshed impacts from the base or the top of the lighthouse resulting from ORV use (Stover
35 pers. comm. 2008).

36 **Historic Structures and Districts:** According to Director's Order 28, structures are defined as material
37 assemblies that extend the limits of human capability. In plain language, this means a constructed work,
38 usually immovable by nature or design, consciously created to serve some human activity. Examples are
39 buildings, monuments, dams, roads, railroad tracks, canals, millraces, bridges, tunnels, locomotives,
40 nautical vessels, stockades, forts and associated earthworks, Indian mounds, ruins, fences, and outdoor
41 sculpture. The Seashore contains 36 historic structures, 20 of which are in good condition (NPS 2007b).
42 Structures at the Seashore range from cemeteries to entire complexes. For example, three historic U.S.
43 Life Saving Service stations still stand at Chicamacomico, Little Kinnakeet, and Bodie Island. The
44 Hatteras Weather Bureau Station and Ocracoke Light Station are listed in the National Register. The
45 Bodie Island Light Station, Bodie Island Lifesaving/Coast Guard Station, and Cape Hatteras Light Station
46 are listed in the National Register as historic districts. In general, ORV use does not occur in the areas
47 surrounding standing structures, because structures are located off the beach in the dunes or on the

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1 soundside of the Seashore. There are two tower concrete pad foundations (not standing structures). One is
2 at Cape Point and the other is near Frisco Bath House. Only the foundation at Cape Point is in an area of
3 ORV use but it is often buried and only becomes visible when the sands shift. Neither of these
4 foundations is in danger of impact from ORVs.

5 **Ethnographic Resources:** An ethnographic study for the Seashore was completed in late 2005 (Impact
6 Assessment, Inc. 2005). The study looked at the eight villages in the Seashore that reflect the nearly
7 300-year history and culture of the Outer Banks to support the Seashore in interpretation of its cultural
8 resources, stewardship of ethnographic resources, and community relations with the villages.
9 Archival/documentary research and ethnographic fieldwork was completed as part of the study to further
10 socio-cultural understanding of the villages adjoining the Seashore. The villages contain a mix of
11 populations that have evolved from the original British settlers, European seafarers, farmers, and other
12 more recent migrants to the Outer Banks. No discrete, continuous ethnic groups or traditionally associated
13 peoples (NPS *Management Policies 2006*, chapter 5) are documented for the Seashore; therefore, no
14 ethnographic resources (NPS *Management Policies 2006*) would be impacted by the implementation of
15 an ORV management plan.

16 In 2008, the Cape Hatteras Preservation Alliance submitted a request to the North Carolina Department of
17 Cultural Resources (NCDCCR) for Bodie Island Spit and adjoining beaches, Cape Point and adjoining
18 beaches, Hatteras Inlet and adjoining beaches, and South Point Ocracoke and adjoining beaches to be
19 recognized as Traditional Cultural Properties (TCPs), eligible for inclusion in the National Register. The
20 NCDCCR responded to this request in a letter dated June 2, 2009, stating that a significance ascribed to a
21 property in only the last 50 years cannot be considered traditional, and that the application focused on the
22 past 50 years. The NCDCCR also stated that in order to make the case that the sites qualify as TCPs worthy
23 of preservation, documentation must be presented to substantiate the community's historically rooted
24 beliefs, customs, and practices as they relate to recreational fishing and identify the "living community of
25 people" who have established a pattern of land use reflected in the cultural traditions valued by its long-
26 term residents. Further, documentation must show that the four sites are the specific places that played a
27 significant role in the community's historically rooted beliefs, customs, and practices and that those
28 beliefs, customs, and practices are integral to the community's cultural identity. The letter pointed out that
29 most of the application's text appeared to focus on the past 50 years when recreational fishing at the sites
30 has almost completely supplanted commercial fishing, a long-established practice (although not
31 necessarily a traditional cultural practice as interpreted by the NPS) and the application provided no
32 historical documentation to establish that recreational fishing practices of the past 50 years have a direct
33 relationship and continuity with the traditional beliefs, customs, or practices associated with historical
34 commercial fishing patterns on the Outer Banks. The NCDCCR concluded that, based on the limited
35 information in the application, there appears to be little if any justification that the properties qualify as
36 TCPs.

37 The NPS concurs with this analysis, and has not found or been presented either with sufficient evidence
38 that Outer Banks communities have cultural practices and beliefs associated with specific beaches or with
39 a sufficient demonstration of an association with cultural practices and beliefs that are integral to the
40 continuing cultural identity of any community. On October 21, 2009, the NPS further replied to this
41 request stating that there is not sufficient evidence as to whether there are Outer Banks communities that
42 have cultural practices and beliefs associated with specific beaches or sufficient information
43 demonstrating an association between any community's cultural practices and beliefs that are integral to
44 the continuing cultural identity of that community. Because no TCPs were found to exist at the Seashore,
45 this topic was not carried forward for analysis.

46 **[Note: Will be updated before Camera Ready Draft]**

Issues Considered But Dismissed from Further Analysis

1 **Museum Collections:** Museum objects are manifestations and records of behavior and ideas that span the
2 breadth of human experience and depth of natural history. The Seashore has collections of artifacts on
3 display at the Cape Hatteras Lighthouse and at each visitor center. The official Seashore archives and
4 artifact collections are housed at Fort Raleigh National Historic Site at Manteo. These various collections
5 are not located on the ocean or soundside beaches and would not be impacted by implementation of an
6 ORV management plan. Therefore this topic was not carried forward for further analysis.

7 Indian Trust Resources. The federal Indian trust responsibility is a legally enforceable fiduciary
8 obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights. No
9 Indian trust resources have been identified for Cape Hatteras National Seashore. Therefore, this impact
10 topic is eliminated from further consideration.

11 Sacred Sites. Of the federally acknowledged tribes recognized pursuant to Public Law 103-454, 108
12 Statute 4791, the Tuscarora Nation is the only tribe affiliated with the Seashore. NPS is not aware of any
13 historic properties that may be of religious and cultural significance to the Tuscarora Nation that would
14 potentially be affected by the management alternatives described in the draft plan/EIS. The Seashore has
15 consulted with the Tuscarora Nation about the ORV management draft plan/EIS, and the Tuscarora
16 Nation has not informed the Seashore of sacred sites or other historic properties of religious or cultural
17 significance to them which would be potentially affected. Therefore, the topic of sacred sites has been
18 dismissed from further consideration.

19 **Environmental Justice:** On February 11, 1994, the President of the United States issued Executive Order
20 12898: Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. The
21 executive order is designed to focus the attention of federal agencies on the human health and
22 environmental conditions in minority communities and low-income communities. Environmental justice
23 analyses are performed to identify the disproportionate placement effects of high and adverse
24 environmental or health impacts from proposed federal actions on minority or low-income populations,
25 and to identify alternatives that could mitigate these impacts.

26 Data from the U.S. Department of Commerce 2000 Census of Population and Housing (U.S. Census
27 Bureau 2008) identify minority populations as Black or African American; American Indian and Alaska
28 Native; Asian; Native Hawaiian and other Pacific Islander; of some other race; of two or more races; and
29 Hispanic or Latino. Poverty status, used in this plan/EIS to define low-income status, is reported as the
30 number of persons with income below poverty level. The 2000 Census defines the poverty level as an
31 annual income of \$8,794, or less, for an individual and an annual income of \$17,603, or less, for a family
32 of four.

33 Dare and Hyde counties in North Carolina had a population of 35,793 in the year 2000, of whom 4,185
34 people (12%) were minorities and 3,271 (9%) were living below poverty level. People of Hispanic or
35 Latino origin composed 787 (2%) of the total population; 2,854 (8%) were Black or African American;
36 107 (0.3%) were American Indian or Alaskan Native; 143 (0.4%) were Asian; 0 were Native Hawaiian or
37 other Pacific Islander; 317 (0.8%) were of some other race; and 347 (0.9%) were of two or more races. It
38 should be noted that persons of Hispanic or Latino origin may be of any race. The only village at the
39 Seashore that is a Census Designated Place is Ocracoke Village. Ocracoke had a population of 769 in the
40 year 2000, of whom 30 (3.9%) were minorities and 68 (9.3%) were living below poverty level.

41 The census block group containing the villages of Rodanthe, Waves, Salvo, and Avon had a population of
42 1,600 in the year 2000, of whom 55 people (3%) were minorities and approximately 11% were living
43 below the poverty level. The census block group containing Hatteras Village had a population of 709 in
44 the year 2000, of whom four people were minorities and approximately 3% were living below the poverty

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1 level. The census block group containing the villages of Buxton and Frisco had a population of 1,692 in
2 the year 2000, of whom 24 were minorities and approximately 5% were living below the poverty level.

3 The data for the counties and the areas containing the villages indicate poverty rates that are lower than
4 the national and state average of 12% in the year 2000. None of the minority populations in the area of the
5 Seashore were above the state or national averages for those populations (U.S. Census Bureau 2008).
6 Therefore, based on the definitions provided in the executive order for minority or low-income
7 populations, there are no such populations that would be disproportionately impacted by the
8 implementation of this plan/EIS.

9 **Energy Resources:** This topic involves assessing energy requirements and the potential for energy
10 conservation associated with the various alternatives, but is most relevant to facility construction projects.
11 The majority of ORV use at the Seashore involves gaining access to fishing areas, where vehicles are then
12 turned off once the desired fishing spot is reached. Because vehicular access to the beach would be
13 maintained under this plan/EIS at current or reduced levels, there would only be negligible impacts on
14 energy resources, as public fuel consumption would not change to a large degree as a result of the
15 implementation of this plan. However, due to differences in management intensity among the alternatives,
16 there would be differences in energy (fuel) consumption from implementation of the ORV management
17 plan. The Seashore would continue to operate under the wise energy use guidelines and requirements
18 stated in the NPS 2006 Management Policies, Executive Order 13123 (Greening the Government
19 Through Effective Energy Management), Executive Order 13031 (Federal Alternative Fueled Vehicle
20 Leadership), Executive Order 13149 (Greening the Government Through Federal Fleet and
21 Transportation Efficiency), and the 1993 NPS Guiding Principles of Sustainable Design.

22 **Green House Gas Emissions and Climate Change:** There is strong evidence linking global climate
23 change to human activities, especially greenhouse gas emissions associated with the burning of fossil
24 fuels (IPCC 2007). Some of the activities associated with ORV management and use would result in
25 fossil fuel consumption, for example, vehicular trips by Seashore personnel conducting monitoring and
26 management activities such as erecting, moving, or removing species closures; marking ORV corridors;
27 and law enforcement patrol and response in ORV areas would consume fossil fuels. Equipment used to
28 construct and maintain ramps, interdunal roads, and parking areas would also consume fossil fuels.
29 Additionally visitors driving ORVs on the Seashore beaches would result in fossil fuel consumption and
30 release of greenhouse gas emissions. However, greenhouse gas emissions associated with the plan would
31 be negligible in comparison to local, regional, and national greenhouse gas emissions. Therefore, the issue
32 of the contribution of ORV management and use activities to climate change through greenhouse gas
33 emissions was dismissed from further analysis.

34 **Urban Quality, Gateway Communities:** A gateway community is defined by the NPS *Management*
35 *Policies 2006* as a community that exists in close proximity to a unit of the national park system whose
36 residents and elected officials are often affected by the decisions made in the course of managing the
37 park. Because of this, there are shared interests and concerns regarding decisions. Gateway communities
38 usually offer food, lodging, and other services to park visitors. They also provide opportunities for
39 employee housing and a convenient location to purchase goods and services essential to park
40 administration. The communities within and adjacent to the Seashore would fall under this definition, and
41 the issues and interests that would be impacted by this plan are addressed under the Socioeconomics
42 impact topic.

43 **Paleontological Resources:** No paleontological resources are located within the Seashore that would be
44 impacted by ORV use; therefore, paleontological resources would not be impacted by implementation of
45 an ORV management plan.

Federal Laws, Policies, Regulations and Plans Directly Related to Off-Road Vehicle Management

1 **Health and Safety:** Large numbers of vehicles and pedestrians use many of the same Seashore beaches at
 2 the same time, increasing the potential for visitor use conflicts and safety issues. Health and safety issues
 3 related to ORV use are discussed under the Visitor Use topic.

4 **Topography and Soils:** Issues related to topography and soils include impacts to the sand and beach
 5 environment, which are discussed above under geologic resources. Since no other impacts would occur to
 6 soils or topographic conditions, these were not included as separate impact topics.

7 **FEDERAL LAWS, POLICIES, REGULATIONS AND PLANS DIRECTLY** 8 **RELATED TO OFF-ROAD VEHICLE MANAGEMENT**

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

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

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

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

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

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

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

36 This CFR section states, “operating a motor vehicle is prohibited except on park roads, in parking areas
 37 and on routes and areas designated for off-road motor vehicle use.” Additionally, routes and areas
 38 designated for ORV use shall be promulgated as special regulations, with designations complying with

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1 | Executive Order 11644 and 36 CFR 4.10. Routes and areas may be designated only in national recreation
2 areas, national seashores, national lakeshores, and national preserves. As a result of the plan/EIS and
3 special regulation, the Seashore will be in compliance with this regulation.

4 **OTHER APPLICABLE FEDERAL LAWS, POLICIES, REGULATIONS**
5 **AND PLANS**

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

10 **Code of Federal Regulations, Title 36**

11 Title 36, chapter 1, provides the regulations “for the proper use, management, government, and protection
12 of persons, property, and natural and cultural resources within areas under the jurisdiction of the National
13 Park Service.” These regulations are utilized to fulfill the statutory purposes of the units of the national
14 park system: to conserve scenery, natural and historical objects, and wildlife, and to provide for the
15 enjoyment of those resources in a manner that will leave them unimpaired for the enjoyment of future
16 generations. Part 2 of these regulations establishes resource protection, public use, and recreation
17 regulations applicable to public use of units of the national park system. Part 4 of these regulations
18 establishes vehicle and traffic safety regulations applicable to areas within a park that are open to public
19 traffic, which under this plan/EIS will include designated ORV routes.

20 **Coastal Zone Management Act, 1966**

21 The *Coastal Zone Management Act* (CZMA) (16 USC 1451 et seq.) seeks to
22 preserve and protect coastal resources. Through the CZMA, states are
23 encouraged to develop coastal zone management programs (CZMPs) to allow
24 economic growth that is compatible with the protection of natural resources, the
25 reduction of coastal hazards, the improvement of water quality, and sensible
26 coastal development. The CZMA provides financial and technical incentives for
27 coastal states to manage their coastal zones in a manner consistent with CZMA
28 standards and goals. CZMA Section 307 states, “Each Federal agency activity
29 within or outside the coastal zone that affects any land or water use or natural
30 resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent
31 practicable with the enforceable policies of approved State management programs.”

*The Coastal Zone
Management Act
(CZMA) seeks to
preserve and protect
coastal resources.*

32 The CAMA (G.S. 113A) established the state’s cooperative program of coastal area management,
33 including unified policies, criteria, standards, methods, and processes for dealing with land and water use
34 decisions of more than local significance. This Act established the Coastal Resources Advisory Council
35 and North Carolina Coastal Resources Commission, under the state’s Department of Environment and
36 Natural Resources (NCDENR). The NCDENR Division of Coastal Management uses the rules and
37 policies of the North Carolina Coastal Resources Commission to protect, conserve, and manage North
38 Carolina’s coastal resources through an integrated program of planning, permitting, education, and
39 research. These activities are carried out through the state’s responsibilities under the CAMA, the North
40 Carolina Dredge and Fill Law (G.S. 113-229), and the federal CZMA in the 20 coastal counties. The
41 CAMA program was federally approved in 1978 and is the state’s CZMP under the CZMA. Localities are
42 responsible for planning while the state establishes areas of environmental concern. A project must obtain
43 a CAMA permit if it:

Other Applicable Federal Laws, Policies, Regulations and Plans

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

5 As a part of this program, the Coastal Resources Commission designated “areas of environmental
6 concern” in the 20 coastal counties and set rules for managing development in these areas. An AEC is an
7 area of natural importance that may be easily destroyed by erosion or flooding or that may have
8 environmental, social, economic, or aesthetic values that make it valuable to North Carolina. At least 90
9 days prior to taking action, NPS would provide a consistency determination stating how the plan/EIS is,
10 to the maximum extent practicable, consistent with the enforceable policies of the CAMA.

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

12 The 1973 ESA provides for the conservation of ecosystems upon which threatened and endangered
13 species of fish, wildlife, and plants depend. Section 7 of this Act requires all federal agencies to consult
14 with the Secretary of the Interior on all projects and proposals with the potential to impact federally
15 endangered or threatened plants and animals. It also requires federal agencies to use their authorities in
16 furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and
17 threatened species. Federal agencies are also responsible for ensuring that any action authorized, funded,
18 or carried out by the agency is not likely to jeopardize the continued existence of any endangered species
19 or threatened species or result in the destruction or adverse modification of designated critical habitat.
20 Section 9 of the Act makes it unlawful for a person to “take” a listed animal without a permit. The term
21 “take” is defined in the Act as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect
22 or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act
23 which actually kills or injures wildlife. Such an Act may include significant habitat modification or
24 degradation where it actually kills or injures wildlife by significantly impairing essential behavioral
25 patterns, including breeding, feeding, or sheltering.” Listed plants are not protected from take, although it
26 is illegal to collect or maliciously harm them on federal land. The Act also imposes civil and criminal
27 penalties for violations of any provisions of the Act.

28 **Critical Habitat Designation for Piping Plovers**

29 Under the authority of Section 4 of the ESA, the USFWS must, to the maximum extent prudent and
30 determinable, designate critical habitat for protected species. “Critical habitat” refers to (1) specific
31 geographic areas occupied by the species at the time it is listed as threatened or endangered that contain
32 features essential for the conservation of a threatened or endangered the species and that may require
33 special management or protection; and (2) areas outside the areas occupied by the species at the time it is
34 listed that are nonetheless determined to be essential to the conservation of the species. On October 21,
35 2008 (73 FR 62816), the USFWS published a revised designation for the following areas as critical
36 habitat for the wintering population of the piping plover in the Seashore: (1) Unit NC–1, Oregon Inlet; (2)
37 Unit NC–2, Cape Hatteras Point; (3) Unit NC–4, Hatteras Inlet; and (4) Unit NC–5, Ocracoke Island.
38 Unit NC–1 is approximately 5 miles long, and consists of about 485 acres of sandy beach and inlet spit
39 habitat on Bodie Island and Pea Island. Unit NC–2 comprises 646 acres and extends south approximately
40 2.8 miles from the ocean groin near the old location of the Cape Hatteras Lighthouse to the point of Cape
41 Hatteras, and then extends west 4.7 miles along South Beach to the edge of ramp 49 near the Frisco
42 campground. Unit NC–4 is approximately 5 miles long and consists of 410 acres of sandy beach and inlet
43 spit habitat on the western end of Hatteras Island and the eastern end of Ocracoke Island. Unit NC-5
44 consists of 502 acres on the western portion of Ocracoke Island beginning at the beach access point at the

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1 edge of ramp 72 (South Point Road), extending west approximately 2.1 miles to Ocracoke Inlet, and then
 2 back east on the Pamlico Sound side. On February 6, 2009, Cape Hatteras Access Preservation Alliance
 3 and Dare and Hyde Counties, North Carolina filed a legal challenge to the revised designation. On August
 4 18, 2010, a U.S. District Court granted the government's motion for summary judgment and dismissed
 5 the case with prejudice, and the critical habitat designation for these four units remains in effect. Under
 6 Section 7(a)(2) of the ESA, if a federal action may affect a listed species or its critical habitat, the
 7 responsible federal agency must enter into consultation with the USFWS to ensure that the affected
 8 critical habitat would remain functional to serve its intended conservation role for the species.

9 **Antideficiency Act**

10 The *Antideficiency Act* is a series of statutes (originating from 16 Stat. 251 in 1870) that prohibit federal
 11 managers from making or authorizing expenditures in excess of the amount available to them from
 12 appropriations or other funds, unless authorized by law. Based on this, the plan/EIS created must be able
 13 to be implemented through expected funding sources.

14 **Marine Mammal Protection Act, 1972**

15 The *Marine Mammal Protection Act* (MMPA) prohibits, with certain exceptions, the taking of marine
 16 mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals
 17 and marine mammal products into the United States. The MMPA defines "take" as "to harass, hunt,
 18 capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." It defines harassment as
 19 "any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine
 20 mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in
 21 the wild by causing disruption of behavioral patterns, including but not limited to, migration, breathing,
 22 nursing, breeding, feeding, or sheltering." The MMPA recognizes that some marine mammal species or
 23 stocks may be in danger of extinction or depletion as a result of human activities, and that these species or
 24 stocks must not be permitted to be depleted. The MMPA, as amended in 1994, provides for certain
 25 exceptions to the take prohibitions, such as Alaska Native subsistence and permits and authorizations for
 26 scientific research; a program to authorize and control the taking of marine mammals incidental to
 27 commercial fishing operations; preparation of stock assessments for all marine mammal stocks in waters
 28 under U.S. jurisdiction; and studies of pinniped-fishery interactions.

29 This Act is relevant to this plan/EIS in two ways. ORVs are often used to respond to stranded marine
 30 mammals, and can be essential for quick and humane response. These actions are coordinated by the
 31 National Oceanic and Atmospheric Administration (NOAA) and/or the Seashore with government
 32 vehicles, and are considered beneficial for the protection and management of marine mammals on the
 33 Seashore. ORVs also have the potential to impact resting or stranded marine mammals due to the fact that
 34 ORVs facilitate access to and increase visitor presence in relatively remote sections of the beach, which
 35 could bring people and vehicles into direct, short-term contact with resting or stranded marine mammals.
 36 This increases the potential for resting or stranded marine mammals to be disturbed or harassed. For
 37 example, harassment of resting seals has been documented numerous times on the Seashore, and ORVs
 38 would most likely continue to contribute to this as the area's winter seal population continues to increase.

39 **Migratory Bird Treaty Act of 1918 and Executive Order 13186: Responsibilities of Federal** 40 **Agencies to Protect Migratory Birds**

41 Migratory birds are of great ecological and economic value to this country and to other countries. They
 42 contribute to biological diversity and bring tremendous enjoyment to millions of people who study,
 43 watch, feed, or hunt these birds throughout the United States and other countries. The United States has
 44 recognized the critical importance of this shared resource by ratifying international, bilateral conventions

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1 for the conservation of migratory birds. These migratory bird conventions impose substantive obligations
 2 on the United States for the conservation of migratory birds and their habitats, and through the MBTA,
 3 the United States has implemented these migratory bird conventions with respect to the United States.
 4 Executive Order 13186 directs executive departments and agencies to take certain actions to further
 5 implement the MBTA. The MBTA implements various treaties and conventions between the United
 6 States and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds.
 7 Under this Act, it is prohibited, unless permitted by regulations, to “pursue, hunt, take, capture, kill,
 8 attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for
 9 shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or
 10 cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at
 11 any time, or in any manner, any migratory bird, included in the terms of this Convention...for the
 12 protection of migratory birds...or any part, nest, or egg of any such bird” (16 USC 703). Subject to
 13 limitations in the Act, the Secretary of the Interior may adopt regulations determining the extent to which,
 14 if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or
 15 exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones,
 16 distribution, abundance, economic value, breeding habits and migratory flight patterns.

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

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

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

26 Section 106 of this Act requires federal agencies to consider the effects of their
 27 undertakings on properties listed or potentially eligible for listing on the National
 28 Register of Historic Places. All actions affecting the Seashore’s historic,
 29 archaeological, and cultural resources must comply with this legislation. For this
 30 plan/EIS, compliance with Section 106 is being combined with NEPA
 31 compliance.

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

33 Both the *National Parks Omnibus Management Act of 1998* (NPOMA) (16 USC
 34 5901 et seq.) and NEPA are fundamental to NPS park management decisions. Both acts provide direction
 35 for articulating and connecting the ultimate resource management decision to the analysis of impacts,
 36 using appropriate technical and scientific information. Both also recognize that such data may not be
 37 readily available and provide options for resource impact analysis in this case.

38 **NPS Organic Act, as Amended**

39 By enacting the *Organic Act of 1916*, Congress directed the U.S. Department of the Interior and NPS to
 40 manage units of the national park system “to conserve the scenery and the natural and historic objects and
 41 the wild life therein and to provide for the enjoyment of the same in such manner and by such means as
 42 will leave them unimpaired for the enjoyment of future generations” (16 USC 1). The 1978 *Redwood*
 43 *Amendment* reiterates this mandate by stating that the NPS must conduct its actions in a manner that will

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1 ensure no “derogation of the values and purposes for which these various areas have been established,
 2 except as may have been or shall be directly and specifically provided by Congress” (16 USC 1 a-1).
 3 Congress intended the language of the *Redwood Amendment* to reiterate the provisions of the *Organic*
 4 *Act*, not to create a substantively different management standard. The House Committee report described
 5 the *Redwood Amendment* as a “declaration by Congress” that the promotion and regulation of the national
 6 park system is to be consistent with the *Organic Act*. The Senate Committee report stated that under the
 7 *Redwood Amendment*, “The Secretary has an absolute duty, which is not to be compromised, to fulfill the
 8 mandate of the 1916 Act to take whatever actions and seek whatever relief as will safeguard the units of
 9 the national park system.” Although the *Organic Act* and the *Redwood Amendment* use different wording
 10 (“unimpaired” and “derogation”) to describe what the NPS must avoid, both acts define a single standard
 11 for the management of the national park system—not two different standards. For simplicity, NPS
 12 *Management Policies 2006* uses “impairment,” not both statutory phrases, to refer to that single standard.

13 Despite these mandates, the *Organic Act* and its amendments afford the NPS latitude when making
 14 resource decisions to allow appropriate visitor use while preserving resources. By these acts Congress
 15 “empowered [the NPS] with the authority to determine what uses of park resources are proper and what
 16 proportion of the park’s resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*,
 17 82 F.3d 1445, 1453 [9th Cir. 1996]).

18 Courts consistently interpret the *Organic Act* and its amendments to elevate resource conservation above
 19 visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991) states:
 20 “Congress placed specific emphasis on conservation.” The court in *National Rifle Association of America*
 21 *v. Potter*, says “in the *Organic Act* Congress speaks of but a single purpose, namely, conservation.” The
 22 NPS *Management Policies 2006* also recognize that resource conservation takes precedence over visitor
 23 recreation. The policy dictates: “when there is a conflict between conserving resources and values and
 24 providing for enjoyment of them, conservation is to be predominant” (NPS 2006c, sec. 1.4.3, 10). This
 25 policy has been further reiterated in a recent court ruling on the Yellowstone Winter Use Plan/EIS
 26 (*National Parks Conservation Association v. National Park Service* – No. 07-2112) that states,

27 The *Organic Act* charges the NPS with the duty to provide for the enjoyment: of the
 28 parks’ resources and values in “such manner and by such means as will leave them
 29 unimpaired for the enjoyment of future generations” 16 U.S.C. Section 1. This is not
 30 blanket permission to have fun in the parks in any way the NPS sees fit. As Plaintiffs
 31 articulated at the hearing, the “enjoyment” referenced in the *Organic Act* is not enjoyment
 32 for its own sake, or even enjoyment of the parks generally, but rather the enjoyment of
 33 “the scenery and natural and historic objects and the wild life” in the parks in a manner
 34 that will allow future generations to enjoy them as well.

35 Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on
 36 park resources and values. Yet, the NPS has discretion to allow negative impacts when necessary (NPS
 37 2006c, sec. 1.4.3, 10). While some actions and activities cause impacts, the NPS cannot allow an adverse
 38 impact that constitutes resource impairment (NPS 2006c, sec. 1.4.3, 10). Specifically, NPS *Management*
 39 *Policies 2006*, section 1.4.3.1 states: “In the administration of authorized uses, park managers have the
 40 discretionary authority to allow and manage the use, provided that the use will not cause impairment or
 41 unacceptable impacts.” The *Organic Act* prohibits actions that permanently impair park resources unless a
 42 law directly and specifically allows for the action (16 USC 1a-1). An action constitutes “an impairment”
 43 when its impacts “harm the integrity of park resources or values, including the opportunities that
 44 otherwise would be present for the enjoyment of those resources or values” (NPS 2006c, sec. 1.4.5, 11).
 45 To determine impairment, the NPS must evaluate “the particular resources and values that would be
 46 affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and
 47 the cumulative effects of the impact in question and other impacts” (NPS 2006c, sec. 1.4.5, 11).

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1 Park managers must also not allow uses that would cause unacceptable impacts (NPS 2006c, sec. 1.4.7,
2 12) These are impacts that fall short of impairment, but are still not acceptable within a particular park's
3 environment. For the purposes of these policies, unacceptable impacts are impacts that, individually or
4 cumulatively, would

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

17 Because park units vary based on their enabling legislation, natural resources, cultural resources, and
18 missions, management activities appropriate for each unit, and for areas in each unit, vary as well. An
19 action appropriate in one unit could impair or cause unacceptable impacts to resources in another unit.
20 ~~Thus, this EIS analyzes the context, duration, and intensity of impacts related to the implementation of the~~
21 ~~alternatives for an ORV management plan at Cape Hatteras National Seashore. The DEIS also provides~~
22 ~~an analysis and determination of, as well as the potential for resource impairment or unacceptable~~
23 ~~impacts, as required by Director's Order 12: Conservation Planning, Environmental Impact Analysis and~~
24 ~~Decision-making (NPS 2001a). Since publication of the DEIS in March 2010, the NPS has issued Interim~~
25 ~~Guidance for Impairment Determination in NPS NEPA documents (NPS 2010h). Consistent with the~~
26 ~~Interim Guidance, a draft written impairment determination only for the preferred alternative is included~~
27 ~~in appendix E of this FEIS, and the impact analysis for the no-action alternative A in the FEIS discusses~~
28 ~~the potential of alternative A to result in impairment to sea turtles, common tern, gull-billed tern, and~~
29 ~~black skimmer.~~

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

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

34 **Executive Order 11988: Floodplain Management**

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

1 **NPS Management Policies 2006**

2 NPS *Management Policies 2006* address management of ORVs in section 8.2.3.1, Off-Road Vehicle Use.
3 This section states (NPS 2006c):

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

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

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

27 Management policies relating to resource protection also were considered in developing this plan/EIS. For
28 example, NPS *Management Policies 2006* instructs park units to maintain, as parts of the natural
29 ecosystems of parks, all plants and animals native to park ecosystems, in part by minimizing human
30 impacts on native plants, animals, populations, communities, and ecosystems, and the processes that
31 sustain them (NPS 2006c, sec. 4.4.1).

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

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

- 41 • Cooperate with both the USFWS and the National Marine Fisheries Service (NMFS) to
42 ensure that NPS actions comply with both the written requirements and the spirit of the
43 *Endangered Species Act*. This cooperation should include the full range of activities

Other Applicable Federal Laws, Policies, Regulations and Plans

1 associated with the *Endangered Species Act*, including consultation, conferencing, informal
2 discussions, and securing of all necessary scientific and/or recovery permits.

- 3 • Undertake active management programs to inventory, monitor, restore, and maintain listed
4 species' habitats; control detrimental non-native species; control detrimental visitor access;
5 and re-establish extirpated populations as necessary to maintain the species and the habitats
6 upon which they depend.
- 7 • Manage designated critical habitat, essential habitat, and recovery areas to maintain and
8 enhance their value for the recovery of threatened and endangered species.
- 9 • Cooperate with other agencies to ensure that the delineation of critical habitat, essential
10 habitat, and/or recovery areas on park-managed lands provides needed conservation benefits
11 to the total recovery efforts being conducted by all the participating agencies.
- 12 • Participate in the recovery planning process, including the provision of members on recovery
13 teams and recovery implementation teams where appropriate.
- 14 • Cooperate with other agencies, states, and private entities to promote candidate conservation
15 agreements aimed at precluding the need to list species.
- 16 • Conduct actions and allocate funding to address endangered, threatened, proposed, and
17 candidate species.

18 Section 4.4.2.3 of the NPS *Management Policies 2006* also states, "NPS will inventory, monitor, and
19 manage state and locally listed species in a manner similar to its treatment of federally listed species, to
20 the greatest extent possible. In addition, the Service will inventory other native species that are of special
21 management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and
22 will manage them to maintain their natural distribution and abundance" (NPS 2006c, sec. 4.4.2.3).

23 **Cape Hatteras National Seashore Enabling Legislation, 1937**

24 This legislation was an act of Congress that provided for the authorization of the Cape Hatteras National
25 Seashore. Section 3 of the Seashore's enabling legislation (the Act) states, "the administration, protection,
26 and development of the aforesaid national seashore shall be exercised under the direction of the Secretary
27 of the Interior by the National Park Service, subject to the provisions of the Act of August 25, 1916
28 (39 Stat. 535)," which is more commonly known as the *Organic Act*. Section 3 continues by stating, "that
29 the legal residents of villages...shall have a right to earn a livelihood by fishing within the boundaries to
30 be designated by the Secretary of the Interior, subject to such rules and regulations as the said Secretary
31 may deem necessary in order to protect the area for recreational use as provided for in this Act." Section 4
32 of this legislation states, "Except for certain portions of the area, deemed to be especially adaptable for
33 recreational uses, particularly swimming, boating, sailing, fishing, and other recreational activities of
34 similar nature, which shall be developed for such uses as needed, the said areas shall be permanently
35 reserved as a primitive wilderness and no development of the project or plan for the convenience of
36 visitors shall be undertaken which would be incompatible with the preservation of the unique flora and
37 fauna or the physiographic conditions now prevailing in this area."

38 **Code of Federal Regulations Title 36, Section 7.58, Commercial Fishing**

39 Section 7.58 contains the regulations governing commercial fishing at the Seashore. This section includes
40 details on the requirements for commercial fishing permits, sport fishing zones, beach sanitation, and
41 conservation of aquatic life.

1 **Code of Federal Regulations Title 36, Section 2.2, Wildlife Protection**

2 Section 2.2 address the protection of wildlife at the Seashore and prohibits the following: the taking of
3 wildlife, except by authorized hunting and trapping activities conducted in accordance with paragraph (b)
4 of Section 2.2; the feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting,
5 breeding or other activities; and possessing unlawfully taken wildlife or portions thereof.

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

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

11 Director's Order 12 requires that impacts to park resources be analyzed in terms of their context, duration,
12 and intensity. It is crucial for the public and decision makers to understand the implications of those
13 impacts in the short and long term, cumulatively, and within context, based on an understanding and
14 interpretation by resource professionals and specialists. ~~Director's Order 12 also requires that an analysis
15 of impairment to park resources and values be made as part of the NEPA document. Since publication of
16 the DEIS in March 2010, the NPS has issued Interim Guidance for Impairment Determinations In NPS
17 NEPA Documents (Interim Guidance) (NPS 2010h). Consistent with the Interim Guidance, a draft
18 written impairment determination only for the preferred alternative is included in appendix E of this FEIS,
19 and the impact analysis for the no action alternative A in the FEIS discusses the potential of alternative A
20 to result in impairment to sea turtles, common tern, gull billed tern, and black skimmer.~~

21 **NPS Director's Order 28: Cultural Resource Management**

22 Director's Order 28 sets forth the guidelines for management of cultural resources, including cultural
23 landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic
24 resources. This order calls for the NPS to protect and manage cultural resources in its custody through
25 effective research, planning, and stewardship in accordance with the policies and principles contained in
26 the *NPS Management Policies 2006*.

27 **NPS Director's Order 77: Natural Resource Protection**

28 Director's Order 77 addresses natural resource protection, with specific guidance provided in Reference
29 Manual 77: Natural Resource Management. Natural Resource Management Reference Manual 77 offers
30 comprehensive guidance to NPS employees responsible for managing, conserving, and protecting the
31 natural resources found in National Park System units. The Reference Manual serves as the primary
32 guidance on natural resource management in units of the National Park System. Reference Manual
33 chapters that are particularly relevant to this plan/EIS include endangered, threatened, and rare species
34 management; geologic resources management; native animal management; shoreline management;
35 vegetation management; special use permitting; wetland protection (Director's Order 77-1); and
36 floodplain management (Director's Order 77-2).

37 **RELATIONSHIP TO OTHER CAPE HATTERAS NATIONAL SEASHORE PLANNING DOCUMENTS,**
38 **POLICIES AND ACTIONS**

39 The following plans, policies, and actions occurring at the Seashore were considered during the
40 development of this plan/EIS.

Comment [seh6]: We just explained about impairment and the interim guidance three pages ago under the Organic Act . We're separating NEPA and the Organic Act to the extent feasible per the Interim Guidance, so I think it's better to delete this. Confirmed 010810 with SOL that it's OK to delete these sentences.

Other Applicable Federal Laws, Policies, Regulations and Plans

1 Past Off-Road Vehicle Planning Efforts

2 As described under “Summary of Off-Road Vehicle Use and Management at Cape Hatteras National
3 Seashore” earlier in this chapter, the Seashore has engaged in various ORV management activities since it
4 was established. All of these past planning efforts were taken into consideration during the development
5 of this plan/EIS.

6 General Management Plan

7 The 1984 General Management Plan / Development Concept Plan / Environmental Assessment for Cape
8 Hatteras National Seashore was developed to guide the preservation, use, development, and operation of
9 the Seashore for a 5- to 10-year period. The relationship of the General Management Plan to ORV use at
10 the Seashore is described in greater detail under “Summary of Off-Road Vehicle Use and Management at
11 Cape Hatteras National Seashore” earlier in this chapter.

12 Resource Management Plan

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

18 Visitor Services Project Report

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

26 Long-Range Interpretation Plan

27 A long-range interpretation plan for the Seashore was completed in September 2007. The Long-Range
28 Interpretation Plan recommends actions to be taken over the next five to seven years to improve the
29 Seashore’s personal services program and interpretive media, and provides an achievable implementation
30 strategy (NPS 2007d). Because the plan addresses exhibits, interpretive information, outreach, and
31 education, it was considered in the development of this plan/EIS.

32 RELATIONSHIP TO OTHER FEDERAL PLANNING DOCUMENTS AND ACTIONS

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

36 Piping Plover Atlantic Coast Population Recovery Plan

37 ORV management activities described in this plan/EIS considered the 1996 USFWS Piping Plover
38 Atlantic Coast Population Recovery Plan (USFWS 1996a). This population of piping plovers was listed

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1 as threatened in 1986 and has increased from approximately 800 pairs to almost 1,350 pairs in 1995.
 2 However, pressure on Atlantic Coast beach habitat from development and human disturbance is pervasive
 3 and unrelenting, and the species is sparsely distributed. Increased human activity in Atlantic Coast parks,
 4 which includes increased ORV use, is cited as one of the many reasons the piping plover was listed.

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

6 This plan/EIS considered the USFWS Recovery Plan for the Great Lakes Piping Plover. The Great Lakes
 7 population, members of which are believed to overwinter at the Seashore, was listed as endangered under
 8 provisions of the ESA on January 10, 1986. The Great Lakes population had declined from a historic size
 9 of several hundred breeding pairs to 17 at the time of listing. From 1986 through 2002, the population
 10 fluctuated between 12 and 51 breeding pairs, with breeding areas remaining largely confined to Michigan.
 11 The restricted breeding range of this population creates a gap in the distribution of piping plovers across
 12 North America, with the Great Lakes population isolated from the two other breeding populations
 13 (Atlantic and Northern Great Plains) (USFWS 2003).

14 **Atlantic Green, Hawksbill, Leatherback, Kemp's Ridley, and Loggerhead Turtle Recovery Plans**

15 The USFWS and the NMFS recovery plans for the U.S. population of Atlantic green, hawksbill,
 16 leatherback, Kemp's ridley, and loggerhead sea turtles were considered when developing this plan/EIS.
 17 Each of these species is federally listed and the Seashore considered the individual recovery plans (NMFS
 18 and USFWS 1991, 1992a, 1992b, 1993, 2008).

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

20 This plan/EIS considered the Marine Mammal Recovery Efforts of the NMFS. The NMFS Office of
 21 Protected Resources is charged with implementing the MMPA and the ESA with respect to marine
 22 mammal species under the NOAA Fisheries jurisdiction which includes whales, dolphins, porpoises,
 23 seals, and sea lions. These efforts are relevant to this plan/EIS because ORVs are often used to respond to
 24 stranded marine mammals, and can be essential for quick and humane response. These actions are
 25 coordinated by NOAA and/or the Seashore with government vehicles, and are considered beneficial for
 26 the protection and management of marine mammals on the Seashore. ORVs also have the potential to
 27 impact resting or stranded marine mammals due to the fact that ORVs facilitate access to and increase
 28 visitor presence in relatively remote sections of the beach, which could bring people and vehicles into
 29 direct, short-term contact with resting or stranded marine mammals. This increases the potential for
 30 resting or stranded marine mammals to be disturbed or harassed. For example, harassment of resting seals
 31 has been documented numerous times on the Seashore, and ORVs will most likely continue to contribute
 32 to this as the area's winter seal population continues to increase.

33 **Cape Lookout National Seashore Interim Protected Species Management Plan / Environmental** 34 **Assessment and Off-Road Vehicle Management Plan / Environmental Impact Statement**

35 Located south of Ocracoke Inlet, Cape Lookout National Seashore also developed an interim protected
 36 species management plan / environmental assessment. The Cape Lookout National Seashore Interim
 37 Protected Species Management Plan / Environmental Assessment will guide management practices for
 38 the protection of special status species occurring at Cape Lookout National Seashore until a long-term
 39 ORV management plan/EIS and regulation is developed. Prior to the implementation of the interim
 40 protected species management plan in 2007, Cape Lookout conducted a range of species management
 41 activities that were less protective, but still provided a level of protection to the Seashore's federally listed
 42 species, state-listed species, and species of special concern through species monitoring and management
 43 and protective buffers. Cape Lookout National Seashore is developing a long-term ORV management

Other Applicable Federal Laws, Policies, Regulations and Plans

1 plan/EIS. The Cape Lookout National Seashore ORV Management Plan/EIS is being developed during
 2 the same timeframe as the Cape Hatteras National Seashore ORV management plan/EIS, and will cover
 3 similar issues.

4 **RELATIONSHIP TO OTHER STATE AND LOCAL PLANNING DOCUMENTS, POLICIES, ACTIONS,**
 5 **LAWS, AND REGULATIONS**

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

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

9 Recreational fishing at the Seashore is guided by the North Carolina Division of Marine Fisheries
 10 regulations. The North Carolina Division of Marine Fisheries manages all marine and estuarine resources
 11 in the state. As part of this function, the division publishes an annual recreational fishing guide that sets
 12 minimum lengths and bag limits for various species. Beginning January 1, 2007, the State of North
 13 Carolina required recreational anglers to have a license for saltwater fishing.

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

15 The Nongame and Endangered Wildlife Program, established in North Carolina in 1983, aims to prevent
 16 species from becoming endangered through maintaining viable, self-sustaining populations of all native
 17 wildlife, with an emphasis on species in decline. The NCWRC has a Comprehensive Wildlife Strategy to
 18 protect state-listed species. This strategy includes securing funding for state fish and wildlife agencies to
 19 take preventative actions that help keep rare species from becoming endangered, and keep common
 20 species common (NCWRC 2005). Species listed through this program as state threatened, endangered, or
 21 of special concern were taken into consideration during the development of this plan/EIS. Endangered
 22 and threatened wildlife and wildlife species of special concern are protected under Article 25 of chapter
 23 113 of the *North Carolina General Statutes*.

24 **North Carolina Wildlife Resource Commission Handbook for Sea Turtle Volunteers in**
 25 **North Carolina**

26 The NCWRC published the Handbook for Sea Turtle Volunteers in North Carolina (NCWRC 2006). The
 27 handbook provides guidance to volunteers in conducting biologically sound management projects to
 28 benefit sea turtles and to help ensure compliance with laws pertaining to rare and endangered species at
 29 all levels of government. An annual permit is issued to the Seashore by the NCWRC under the authority
 30 of the USFWS. This handbook was considered in the development of this plan/EIS because turtle
 31 management is guided by this document.

32 **North Carolina Natural Heritage Program**

33 Among other responsibilities, the North Carolina Natural Heritage Program (NCNHP) identifies the most
 34 important places for the conservation of rare species and high quality natural communities in the state. As
 35 of January 2008, the NCNHP had identified more than 2,400 of these places, officially referred to as
 36 Significant Natural Heritage Areas (SNHAs). If a natural area cannot be purchased by NCNHP, its
 37 ecological significance can be recognized through a registry agreement, which is a voluntary agreement
 38 with the landowner that provides limited protection but recognizes the owner's commitment to
 39 conservation of the area. There are 10 SNHAs located within the boundaries of the Seashore. The NPS
 40 signed two agreements with NCNHP for the formal protection of nine of these areas. The Buxton Woods
 41 SNHA was registered in 1979 and eight other SNHAs were registered in the 1987 agreement. The

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1 purpose of the agreements was to “express the sincere intentions of the National Park Service to refrain
 2 from making or permitting changes that negatively affect the natural values for which this area was
 3 registered within the boundaries outlined.” It specifically stated, “Vehicular traffic on beach locations will
 4 be regulated to prevent damage to nesting colonies of water birds.” The registered SNHAs potentially
 5 relevant to this plan/EIS are Turtle Pond and Cape Hatteras Lighthouse Pond, Cape Hatteras Point,
 6 Hatteras Sand Flats, Ocracoke Island - Eastern End, and Ocracoke Island - Western End Sand Flats. The
 7 unregistered Hatteras Island - Middle Section SNHAs is also in the Seashore. The significance of these
 8 SNHAs is primarily the habitat that they provide for shorebirds such as piping plover, American
 9 oystercatchers, and several species of colonial waterbirds, although several sensitive plant communities
 10 are also identified as part of these ecological communities. All of the action alternatives in this EIS
 11 provide increased levels of shorebird protection than what was occurring at the time the NPS and NCNHP
 12 signed the agreement to register and protect these natural areas. However, at this time, the exact on-the-
 13 ground location of any proposed improvements is not known, although general locations have been
 14 identified for each alternative in chapter 2 of this document. The NPS will consult with NCNHP when the
 15 Seashore begins the process to identify exact locations for constructing or relocating ramps, interdunal
 16 roads, or parking lots that are in an SNHA to ensure that the construction avoids impacts to any sensitive
 17 species.

18 North Carolina Department of Transportation

19 The North Carolina Department of Transportation (NCDOT) has various projects related to NC-12 and
 20 other Outer Banks access issues. The NCDOT is considering some long-term projects in response to the
 21 changing physical landscape of the area such as a bridge from Avon to Buxton, which is a possible area
 22 for a future inlet. The Outer Banks Task Force has developed a long-term management plan for NC-12
 23 that was considered during the development of this plan/EIS. NC-12 connects the communities located
 24 within Cape Hatteras National Seashore to the mainland of North Carolina. Island residents depend on the
 25 roadway for off-island community services, such as hospitals, emergency response, and waste collection.
 26 NC-12 is also the primary evacuation route for all permanent and temporary residents on the island when
 27 severe weather is approaching. Storms frequently cause the ocean to overwash NC-12 and deposit large
 28 quantities of sand over portions of the roadway. The storms sometimes damage NC-12, which interrupts
 29 access and services to the island and causes hardships for island residents. NC-12 must be continually
 30 repaired and maintained to prevent permanent loss of access on Hatteras Island. To address these issues a
 31 task force was formed comprising the NCDOT, NPS, U.S. Army Corps of Engineers (Corps), USFWS,
 32 NMFS, Federal Highway Administration (FHWA), Dare and Hyde counties, and the NCDENR. The
 33 mission of this task force is to develop a long-range protection and maintenance plan for the
 34 transportation system on the Outer Banks. As part of this task force, hot spots for erosion have been
 35 identified and include Northern Pea Island, Sandbag area, Rodanthe “S” curves, Buxton / Canadian Hole,
 36 Hatteras Village, and Ocracoke (OBTF 2009).

37 The NCDOT is proposing to build a new bridge to replace the existing Herbert C. Bonner Bridge,
 38 originally built in the 1960s, over Oregon Inlet before the end of the bridge’s reasonable service life. The
 39 NCDOT and the FHWA released a supplemental draft EIS regarding this replacement, and a supplement
 40 to the EIS was released in 2007 (OBTF 2007; FHWA 2007). In September 2008, NCDOT announced its
 41 preferred alternative, known as the Parallel Bridge with Phased Approach / Rodanthe Bridge Alternative.
 42 This alternative includes constructing a new Oregon Inlet bridge (Phase I) west of the existing structure,
 43 and later elevating NC-12 onto a series of bridges during Phases II-IV. Replacement of the Oregon Inlet
 44 bridge is expected to be complete in 2014 (NCDOT 2008).

1 **North Carolina Coastal Area Management Act**

2 Details regarding the CAMA were presented earlier in this document under the CZMA description on
3 page 42.

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4 **Dare and Hyde County Planning Documents**

5 The development and implementation of this plan/EIS considered the planning efforts of Dare and Hyde
6 counties, primarily with respect to the cumulative impacts analysis and consistency determination. Since
7 1974, when the North Carolina General Assembly ratified the CAMA, each of the local governments in
8 the twenty-county coastal region have been developing and updating land use plans. These land use plans
9 have directed development in these areas and are responsible for the pattern of development we see today
10 in Dare and Hyde counties. Both of these plans recognize the development that has occurred and the
11 corresponding need for an increase in services as a result. These past patterns of land use development
12 have influenced the amount of land available for habitat throughout the county, including portions of the
13 counties located within the Seashore.

14 In Dare County, the County Planning Board serves as an advisory board to the Dare County Board of
15 Commissioners. In compliance with the CAMA, Dare County prepared guidance and policies for land use
16 development, known as the Land Use Plan (Dare County 2003), which provides local elected officials
17 with a set of guidelines for development patterns and other land use issues that are important to the
18 community. The Land Use Plan includes policies on various topics and implementation activities such as
19 policies on water quality, residential and commercial development patterns, beach access, oceanfront and
20 estuarine development, stormwater management, wastewater, and transportation. The latest version of the
21 Dare County Land Use Plan was certified by the North Carolina Coastal Resources Commission in July
22 2003, and must be updated every five years. The 2008 plan update was submitted to the state for review
23 in mid-January 2009 and as of February 1, 2010, was still under review (Owens pers. comm. 2010). The
24 Land Use Plan applies to the unincorporated portions of Dare County, while each of the municipalities in
25 Dare County adopts its own plans for its respective planning jurisdiction. The Dare County Land Use
26 Plan works in conjunction with the zoning ordinance, as well as the CAMA. Except for the mainland
27 villages and Wanchese, the remainder of unincorporated Dare County is zoned. Detailed zoning maps
28 have been adopted for the villages of Duck, Collington, Roanoke Island, Avon, Buxton, and Hatteras. The
29 villages of Rodanthe, Waves, Salvo, and Frisco are zoned S-1, which is a minimal zoning district that
30 allows all uses but does establish some building setbacks and height limitations. In addition, the county
31 adopted a Special Environmental District (SED-1) for the Buxton Woods maritime forest. This zoning
32 district establishes special standards for land clearing and vegetation removal that are intended to protect
33 the vegetative canopy of the Buxton Woods forest (Dare County 2003).

34 The Hyde County Land Use Plan, written in 1986, was updated in 1992, 1997, and 2006. Hyde County
35 Land Use Plan, in compliance with the CAMA, analyzes land development in the area to plan for future
36 uses. The plan sets forth the following vision for the Island of Ocracoke (Hyde County 2006).

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

- 41 • Efforts to maintain the historic village assets.
- 42 • Efforts to preserve traditional native occupations and crafts including hunting and commercial
43 fishing.

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- 1 • Efforts to enhance the Island shopping opportunities with small locally owned shops and
- 2 businesses.
- 3 • Efforts to provide affordable housing.
- 4 • Cooperative efforts with the community, NPS, and DOT to maintain access to the Island and
- 5 provide necessary amenities. Ocracoke and Mainland should emphasis access.
- 6 • Support village craftsmen.

7 **Outer Banks Scenic Byway**

8 In the early 1990s, the NCDOT declared the Outer Banks corridor a state scenic byway. In September
 9 2003, NCDOT completed an Outer Banks Scenic Byway Corridor Management Plan in preparation for
 10 seeking National Scenic Byway status. The Corridor Management Plan, updated in 2008, explored the
 11 “six intrinsic qualities” of the byway – scenic, natural, cultural, historic, archaeological, and recreational.
 12 The corridor management plan recognized the Seashore as one of the important natural components of the
 13 byway. The 2008 plan included recommendations for stewardship of the natural and cultural resources at
 14 the Seashore. Based on these planning efforts, the Outer Banks road corridor was officially designated as
 15 a National Scenic Byway on October 16, 2009.

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

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

- 20 • ORV users are requested to observe a suggested speed limit of 15 miles per hour;
- 21 • ORVs users must enter and leave the beach only at designated ramps (never between ramps or on
- 22 the dunes);
- 23 • ORVs should be driven only on the portion of beach that lies between the foot of the dunes and
- 24 the ocean;
- 25 • ORV users are requested to proceed with caution and consideration of other beach visitors;
- 26 • ORVs must have a state road registration and valid license plate; and
- 27 • ORV operators must have a current driver’s license.

28 In addition to these general guidelines, the surrounding municipalities have individual ORV regulations,
 29 as shown in table 6.

30 **TABLE 6. ORV REGULATIONS FOR OUTER BANKS MUNICIPALITIES**

Regulation/Guideline	Duck	Kill Devil Hills	Nags Head	Kitty Hawk and Southern Shores ^a
Observe 15 miles-per-hour (mph) speed limit	X	X	X	
Use designated ramps to enter/exit the beach	X	X	X	
Drive only between foot of dunes and ocean	X	X	X	
Be cautious/considerate of other visitors	X	X	X	

Other Applicable Federal Laws, Policies, Regulations and Plans

Vehicle must be registered with valid license plate	X	X	X	
Operator must have current license	X	X	X	
No permit is required between October 1 and April 30	X	X		
Vehicle must have 4-wheel drive		X		
Night driving is permitted		X		
Government, law enforcement, emergency, rescue services exempt	X	X	X	X
Commercial fishermen exempt				X
ORV must be permitted by regulations governing ORVs			X	

^a No motorized vehicles are allowed on beaches at Kitty Hawk and Southern Shores except for commercial fishermen and government/emergency vehicles.

8/9/2010 draft

CHAPTER 2: ALTERNATIVES

NEPA requires federal agencies to explore a range of reasonable alternatives that address the purpose of and need for the action. The alternatives under consideration must include the “no-action” alternative as prescribed by 40 CFR 1502.14. Two no-action alternatives are included for analysis in this plan/EIS, because management changed partway through the planning process in May 2008, after the consent decree was signed (see chapter 1 of this document for more information). Action alternatives may originate from the proponent agency, local government officials, or members of the public at public meetings or during the early stages of project development. Alternatives may also be developed in response to comments from coordinating or cooperating agencies.

The alternatives analyzed in this document, in accordance with NEPA, are the result of internal scoping, public scoping meetings, and information developed during the negotiated rulemaking process. Public and agency comments on the draft plan/EIS were analyzed and considered. As a response to these comments, NPS has made changes to the alternatives, where appropriate, which are reflected in this final plan/EIS. A copy of the original draft plan/EIS showing all additions, deletions, and other changes that have been made in the preparation of this final plan/EIS, including changes to the alternatives, is available electronically at <http://parkplanning.gov/caha>.

These alternatives meet the management objectives of the Seashore, while also meeting the overall purpose of and need for proposed action. Alternative elements that were considered but were not technically or economically feasible, did not meet the purpose of and need for the project, created unnecessary or excessive adverse impacts to resources, and/or conflicted with the overall management of the Seashore or its resources were dismissed from further analysis.

Comment [seh1]: Should this say “The action alternatives” instead of “These alternatives”?

The NPS explored and evaluated six alternatives in this plan/EIS, as follows:

- **Alternative A: No Action—Continuation of Management under the Interim Protected Species Management Strategy.** Under this no-action alternative, management of ORV use and access at the Seashore would be a continuation of management based on the 2007 Cape Hatteras National Seashore Interim Protected Species Management Strategy/EA and the Superintendent’s Compendium 2007, as well as elements from the 1978 draft interim ORV management plan that were incorporated in Superintendent’s Order 7.
- **Alternative B: No Action—Continuation of Terms of Consent Decree Signed April 30, 2008, and amended June 4, 2009.** Under alternative B, management of ORV use would follow the terms described under alternative A, except as modified by the provisions of the consent decree, as amended. Modifications in the consent decree include changes to resource protection buffers and closures for various species at the Seashore and added restrictions related to night driving.
- **Alternative C: Seasonal Management.** Alternative C would provide visitors to the Seashore with a degree of predictability regarding areas available for ORV use, as well as vehicle-free areas, based largely on the seasonal resource and visitor use characteristics of various areas in the Seashore.
- **Alternative D: Increased Predictability and Simplified Management.** Under alternative D, visitors to the Seashore would have the maximum amount of predictability regarding areas available for ORV use and vehicle-free areas for pedestrian use. Restrictions would be applied to larger areas over longer periods of time to minimize changes in designated ORV and ~~non-ORV~~ vehicle-free areas over the course of the year.

Chapter 2: Alternatives

- 1 • **Alternative E: Variable Access and Maximum Management.** Alternative E would provide use
2 areas for all types of visitors to the Seashore with a wide variety of access for both ORV and
3 pedestrian users, but often with controls or restrictions in place to limit impacts on sensitive
4 resources. Interdunal road and ramp access would be improved, and more pedestrian access
5 would be provided through substantial additions to parking capacity at various key locations that
6 lend themselves to walking on the beach.
- 7 • **Alternative F: ~~The NPS Preferred Alternative Management Based on Advisory Committee~~**
8 **~~Input.~~** The NPS considered a variety of concepts and measures that either originated during the
9 negotiated rulemaking process from members of the negotiated rulemaking advisory committee
10 (Committee) or were discussed during Committee, subcommittee, or work group sessions.
11 Although the Committee as a whole did not reach a consensus on a recommended alternative, in
12 creating this action alternative the NPS- made management judgments as to which combination of
13 concepts and measures would make an effective overall ORV management strategy. This used the
14 Committee's input to create this action alternative, which is designed to provide visitors to the
15 Seashore with a wide variety of access opportunities for both ORV and pedestrian users.
16 Alternative F would provide a reasonably balanced approach for visitor use when designating
17 ORV routes and vehicle free areas and providing for the protection of park resources distribution
18 of beach miles designated as ORV routes and vehicle-free areas, while providing for the
19 protection of park resources, open some areas to ORV use earlier and for a longer time than the
20 other action alternatives. To support access to both vehicle-free areas and designated ORV
21 routes, This alternative F would involve the construction of new parking areas, a pedestrian
22 access trails, ORV ramps, and improvements and additions to the interdunal road system. Based
23 in part on public and agency comments on the draft plan/EIS, this alternative has been modified
24 within the range of alternatives described in the draft plan/EIS.

25 **ELEMENTS COMMON TO ALL ALTERNATIVES**

26 The following describes elements of the alternatives that are common to all alternatives, including the no-
27 action alternatives.

28 **Vehicle/Operator Requirements**

- 29 • **Vehicle Requirements.** All vehicles operating in any area of the Seashore must comply with the
30 following:
- 31 – Meet all requirements to operate legally on state highways where the vehicle is registered,
32 including any required vehicle equipment.
 - 33 – Have a valid vehicle registration, insurance, and license plate.
- 34 • **Operator Requirements.** Any person operating a vehicle in any area of the Seashore must
35 comply with the following:
- 36 – Observe any law applicable to vehicle use on a paved road in the state of North Carolina.
 - 37 – Hold a current driver's license (Superintendent's Compendium, Section 4.2(a)).
 - 38 – Use a seatbelt.
- 39 • **Operator and Passenger Requirements.** Any vehicle operator and/or passenger in a vehicle
40 operating in any area of the Seashore must comply with the following:
- 41 – Open containers of any type of alcoholic beverage are prohibited in vehicles.

Elements Common to all Alternatives

- 1 - ORV drivers and/or passengers are prohibited from sitting on the tailgate or roof or hanging
2 outside of moving vehicles. Those in truck beds must be seated on the floor with the tailgate
3 closed; children in truck beds must be accompanied by an adult.

- 4 • **Right-of-Way Requirements.** ~~Vehicle~~ right-of-way between vehicles is not defined by the
5 Seashore, and the standard driving rules must be followed.

6 Ramp Configuration

- 7 • If Bonner Bridge construction closes ramp 4, a new ramp 3 would be constructed north of the
8 Oregon Inlet campground and day-use parking would be provided.

9 Boat Access

- 10 • Launch sites, as designated under 36 CFR 3.8(a)(2), are identified in the Superintendent's
11 Compendium. Launching or recovery of vessels is prohibited within resource closures.

12 National Park Service Regulations

13 Title 36: Parks, Forests, and Public Properties of the U.S. Code of Federal Regulations is applicable in all
14 national parks, including Cape Hatteras National Seashore. These regulations include those in Title 36
15 applicable to the operation of ORVs in the Seashore and those applicable to individuals recreating at the
16 Seashore. Of particular note are the provisions of 36 CFR 1.5 and 1.6, which state that the superintendent
17 may impose public use limits, or close all or a portion of a park area to all public use or to a specific use
18 or activity; designate areas for a specific use or activity; or impose conditions or restrictions on a use or
19 activity, and may establish a permit, registration, or reservation system.

20 Enforcement

21 Violations could result in fines or mandatory court appearances as defined in the Collateral Schedule,
22 Eastern District of North Carolina, National Park Service.

23 Areas of Vehicle Operation

24 During the shorebird and turtle breeding seasons, standard resource protection buffers would apply, which
25 could restrict ORV access to certain areas of the Seashore. Refer to table 37-2 on page xxx284 of this
26 document for a description of access closures that occurred during the 2007-2010~~09~~ seasons.

27 Visitors accessing the Seashore by ORV must drive only on marked ORV routes, comply with posted
28 restrictions, and adhere to the following:

- 29 • Driving or parking outside of marked and maintained ORV routes is prohibited.
30 • Operating a vehicle of any type within safety or resource closures is prohibited.
31 • Accessing the beach and designated ORV routes is allowed only via designated beach access
32 ramps and soundside access roads.
33 • Reckless driving—for example, cutting circles or defacing the beach—is prohibited.
34 • Observing pedestrian right-of-way is required.

Comment [mbm2]: Table was updated to include 2010 data

Chapter 2: Alternatives

1 **Commercial Fishing / Permitted Uses**

- 2 • Commercial fishing permit holders with ORVs would be allowed to enter administrative and
3 safety closures, but not resource closures or lifeguarded beaches. Two designated commercial
4 fishing access points exist on the soundside of Ocracoke Island, where only vehicular access for
5 commercial fishing is allowed.
- 6 • Kite flying, kiteboards, and ball and Frisbee tossing are prohibited within or above all bird
7 closures.

8 **Protected Species Management**

- 9 • In general, because of the dynamic nature of the Seashore beaches and inlets, protected species
10 management could change by location and time; new sites (bars, islands) could require additional
11 management, or management actions may become inapplicable for certain sites (e.g., habitat
12 changes with vegetation growth, new overwash areas).
- 13 • Areas with symbolic fencing (string between posts) would be closed to recreational access.
- 14 • Data collection would continue to document breeding and nest locations.
- 15 • Essential vehicles could enter restricted areas subject to the guidelines in the Essential Vehicles
16 section of the USFWS Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised
17 Recovery Plan (USFWS 1996a). Due to the soft sand conditions of the Seashore, essential
18 vehicles would be allowed to travel up to 10 mph.

19 **Accessibility for ~~the~~ Visitors with Disabilities**

20 The Seashore would provide access to ~~disabled~~ visitors with disabilities as follows:

- 21 • Beach access points and boardwalks ~~compliant with the Americans with Disabilities Act~~
22 ~~requirements~~ would be provided at Coquina Beach, the Frisco Boathouse, the Ocracoke Pony
23 Pen, and the Ocracoke day use area.
- 24 • Beach access would be provided through the issuance of special use permits for areas in front of
25 the villages to allow ORVs to transport ~~disabled~~ visitors with disabilities to the beach and then
26 return the vehicle back to the street.
- 27 • Beach wheelchairs could be checked out at each District on a first-come, first-served basis.

28 **Infrastructure**

- 29 • The Seashore has four campgrounds at Oregon Inlet, Frisco, Cape Point, and Ocracoke. The
30 campgrounds would be open seasonally. Dates the campgrounds open or close would be subject
31 to change.
- 32 • Fishing piers are located near Frisco and at Avon and Rodanthe on Cape Hatteras Island, and a
33 marina is located at Oregon Inlet on Bodie Island. These would continue to be available to the
34 public.¹

¹ The Frisco pier was closed for public safety reasons, due to deteriorating conditions, and then f. Further damaged by Hurricane Earl occurred in September 2010. The future of this pier is not known at this time.

No-Action Alternatives

1 **Education and Outreach**

2 Under all alternatives, the Seashore would continue to

- 3 • Post signage in the Seashore so information on beach closures and Seashore resources is readily
4 available and presented in a clear manner to the public.
- 5 • Post signs regarding applicable ORV regulations at ORV access ramps, beach routes, and
6 soundside areas.
- 7 • Notify the public of species management closures and beach access status through weekly
8 resource and beach access reports, press releases, email updates, and postings at the Seashore
9 visitor centers and other NPS visitor facilities and on the Seashore website.
- 10 • Provide education and outreach materials regarding protected species (including seabeach
11 amaranth) and measures taken by the Seashore to protect nesting birds and sea turtles at Seashore
12 visitor centers and other NPS visitor facilities, on ORV access ramp bulletin boards, in the
13 Seashore newspaper, and on the Seashore website. These materials include regulations regarding
14 trash disposal, wildlife feeding, fireworks, and pets, and the impacts of such activities on sensitive
15 Seashore species.
- 16 • Provide education and outreach materials regarding visitor safety at Seashore’s visitor centers and
17 other NPS visitor facilities, on ORV access ramp bulletin boards, in the Seashore newspaper, and
18 on the Seashore website.
- 19 • Provide education and outreach materials regarding ORV-driving requirements at Seashore
20 visitor centers and other NPS visitor facilities, on ORV access ramp bulletin boards, in the
21 Seashore newspaper, and on the Seashore website.
- 22 • Solicit input from interested parties regarding how to convey information about the species
23 management program.
- 24 • Conduct educational programs during the bird and sea turtle hatching season, such as having
25 public school students participate in post-hatching sea turtle nest examinations in order to learn
26 about sea turtles.
- 27 • Publish annual protected species reports on the Seashore website regarding the previous breeding
28 season.

29 **NO-ACTION ALTERNATIVES**

30 The no-action alternative is developed for two reasons. First, a no-action alternative may represent the
31 agency’s past and current actions or inaction on an issue continued into the future, which may represent a
32 viable alternative for meeting the agency’s purpose and need. Second, a no-action alternative may serve
33 to set a baseline of existing impacts continued into the future against which to compare the impacts of
34 action alternatives. For most agency decisions, one no-action alternative can serve both of these purposes.
35 Here, however, the situation is more complex.

36 As stated in chapter 1, “in order to provide continued visitor access through the use of ORVs, NPS must
37 promulgate a special regulation authorizing ORV use at the Seashore,” and the purpose of this plan is to
38 develop such a regulation. Without a special regulation, continued ORV use would conflict with NPS
39 regulations (36 CFR 4.10). The consent decree recognizes this and sets a deadline of April 1, 2011, for the
40 promulgation of a final special regulation. As the district court has recognized in another case, absent an
41 ORV plan and regulation, as a legal matter ORV use is “prohibited.” [The NPS acknowledges that if it](#)

Chapter 2: Alternatives

1 ~~does not promulgate a special regulation to authorize ORV use, then ORV use would, in fact, be~~
 2 ~~prohibited at the Seashore. If NPS does not promulgate a regulation, continuing its past inaction, this legal~~
 3 ~~prohibition would remain, and the result could be that the district court would expressly ban ORV driving~~
 4 ~~on the Seashore.~~

5 “No ORV use” thus could represent a result of NPS past inaction continued into the future, and thus
 6 might satisfy the first purpose of a no-action alternative. It is not, however, a viable alternative for
 7 meeting the purpose and need for this action. It was considered but dismissed in the broader range of
 8 alternatives that were identified. See ~~page xx82~~ for a discussion of the reasons that, for this plan/EIS,
 9 “Prohibit the Use of Off-Road Vehicles” is not considered a reasonable alternative.

10 NPS also does not believe that a “no ORV use” alternative would fully serve the function of a no-action
 11 alternative, because it would not satisfy the second purpose. It would not serve as an environmental
 12 baseline of existing impacts continued into the future against which to compare the impacts of action
 13 alternatives. ORV use has occurred continuously before and since the Seashore was authorized and
 14 established. Given this history, a complete ORV prohibition cannot be considered as the “current
 15 management direction or level of management intensity” or as “continuing with the present course of
 16 action,” which is how CEQ describes this role of the “no-action” alternative under NEPA.

17 Because there is no history of prohibition at the Seashore, there is also no Seashore monitoring data for an
 18 analysis of its effects. Extrapolation from other sites that prohibit ORV use, and from experience with
 19 resource closures in limited locations and limited times at the Seashore, indicates that prohibition would
 20 likely benefit the Seashore’s wildlife more than the other alternatives, though benefits could be similar to
 21 those from alternative D. Prohibition would be easier for the Seashore to administer than the other
 22 alternatives, though it might increase the need for additional parking areas, with their attendant costs and
 23 effects. It would detract from the experience of those visitors who prefer ORVs for access, while
 24 enhancing the experience of other visitors who prefer beaches without the presence of vehicles.
 25 Prohibition would adversely affect the economies of the villages in the Seashore more than the other
 26 alternatives because ORV users would not have the opportunity to shift their visits to different areas of
 27 the Seashore or to different dates or times of day when driving would be allowed. These conclusions,
 28 however, are largely speculative and cannot substitute for a baseline of existing impacts.

29 Similarly, using the management measures -enforced in 2004 (which were adopted from the 1978 draft
 30 plan) as a no-action alternative would fail to meet the agency’s purpose and need to regulate ORVs in a
 31 manner that is consistent with applicable law, and would not appropriately address resource protection
 32 (including protected, threatened, and endangered species), potential conflicts among the various Seashore
 33 users, and visitor safety. In addition, it would neither bring the Seashore into compliance with the criteria
 34 of Executive Orders 11644 and 11989 for designation of ORV routes nor meet the second purpose of a
 35 “no-action” alternative to serve as a baseline of existing impacts continued into the future against which
 36 to compare the impacts of action alternatives.

37 For this plan/EIS the range of alternatives includes two no-action alternatives. Alternative A represents
 38 continuing management as described in the Interim Strategy. This management strategy was challenged in
 39 court and subsequently modified by the consent decree that was signed on April 30, 2008. Alternative B
 40 represents continuing management as described in the consent decree. These two no-action alternatives
 41 are analyzed to capture the full range of management actions that occurred and are currently occurring
 42 during the planning process for this plan/EIS. Tables 7 and 8 at the end of this chapter compare the
 43 actions that would be taken under each alternative, and figure 2 includes the maps of all alternatives.

1 **ALTERNATIVE A: NO ACTION—CONTINUATION OF MANAGEMENT UNDER THE INTERIM**
 2 **PROTECTED SPECIES MANAGEMENT STRATEGY**

3 Under this no-action alternative, management of ORV use and access at the Seashore would be a
 4 continuation of management based on the selected alternative identified in the July 2007 FONSI for the
 5 2006 Interim Strategy and the 2007 Superintendent's Compendium, as well as elements from the 1978
 6 draft interim ORV management plan that were incorporated in Superintendent's Order 7, as amended in
 7 2006. These actions would include providing ORV access throughout the Seashore, except in areas of
 8 temporary resource, safety, or administrative closures. Under alternative A, all the entire Seashore- ocean
 9 and inlet shoreline and existing soundside routes would be designated as a route or area and would be
 10 open 24 hours a day year-round, but subject to temporary resource closures, seasonal ORV closures in
 11 front of the villages, and temporary ORV safety closures. As described in the FONSI, the Interim Strategy
 12 provides for the use, if feasible and if alternative routes are not available, of short-term bypasses when
 13 resource closures for shorebirds block the ORV corridor at Cape Point and the spits, and when a turtle
 14 nest hatching could lead to the blocking of access to the spits, Cape Point or South Beach. The FONSI
 15 describes the following criteria for bypasses:

- 16 a. The bypass area will be routed around dunes and vegetation if possible. If necessary, ground
 17 leveling, consistent with the state coastal management program, may be considered if dune fields
 18 do not exceed 36 inches in height. Leveling will be done by hand (no machinery will be used).
 19 b. The bypass will take advantage of natural terrain (e.g., blowouts) to minimize ground
 20 altering disturbance to the natural areas and avoid impacts to wetlands.
 21 c. The bypass will be at a minimum wide enough to allow one ORV to safely pass, and a
 22 maximum of two lanes if "line of sight" vision is compromised.
 23 d. Natural area disturbance to accommodate avoidance of turtle or bird nesting will not exceed
 24 6,000 square feet.
 25 e. Minimal vegetation impact will be allowed.
 26 — Federal or state-listed plants or plants falling under the category of special concern
 27 (e.g., seabeach amaranth, dune blue curls) will not be compromised.
 28 — Vegetation in altered areas will be expected to recover within the following growing
 29 season. If vegetation does not recover within one growing season, or by other natural
 30 process (such as overwash creating habitat), the Seashore will initiate restoration of
 31 vegetation.
 32 — Any vegetation removal will be performed with hand tools (no machinery will be
 33 used).

34 Areas will be restored if predicted recovery period exceeds one season. Bypass routes will not infringe
 35 upon or fragment an adjacent resource/safety closure. Bypass routes will not disturb or impact any
 36 cultural resource (i.e., shipwrecks).
 37

38 Vehicles would be allowed on the beach overnight only if someone associated with the vehicle is actively
 39 fishing. The ORV corridor would be marked by posts placed approximately 150 feet landward from the
 40 average, normal high tide line, or if less than 150 feet of space is available, at the vegetation or the toe of
 41 the remnant dune line, except during breeding season in protected species areas. Existing ORV safety
 42 closures would be maintained and new closures established as needed to address safety conditions such as
 43 debris on the beach or narrow beaches. Narrow beaches would be reopened as the beach widens. The
 44 beach in front of Cape Hatteras Lighthouse and Buxton Woods Road would remain closed to ORV access
 45 for administrative purposes. Suitable interior habitats for piping plovers at spits and at Cape Point would
 46 be closed year-round to all recreational users to provide for resting and foraging for all species.
 47 This no-action alternative would not require vehicles to have permits and would not involve any carrying-
 48 capacity restrictions. The speed limit would be 25 mph (unless otherwise posted) on Seashore beaches for
 49 public and private vehicles, although the speed limit in front of villages from September 16 to May 14

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1 would be 10 mph. There would be no increase in parking facilities associated with this alternative. Under
 2 this no-action alternative, all the entire Seashore-ocean and inlet shoreline and existing soundside routes
 3 would, for purposes of the rulemaking process, be a designated route or area, subject to temporary
 4 closures. Alternative A is analyzed as a baseline for comparison with the other alternatives in the plan/EIS
 5 following the requirements in 40 CFR 1502.14(d). Details of the management actions under this
 6 alternative are described in tables 8 and 9.

7 **ALTERNATIVE B: NO ACTION—CONTINUATION OF TERMS OF THE CONSENT DECREE SIGNED**
 8 **APRIL 30, 2008, AND AMENDED JUNE 4, 2009**

9 A consent decree was signed on April 30, 2008, in U.S. District Court, whereby the parties involved in
 10 the lawsuit challenging NPS's management of beach driving under the Interim Strategy along Cape
 11 Hatteras National Seashore agreed to a settlement of the case. Terms of the consent decree required the
 12 NPS to complete an ORV Management Plan for the Seashore by December 31, 2010, complete and
 13 promulgate the final Special Regulation by April 11, 2011, and provide details of specific species-
 14 protection measures to take place until the plan was completed. Under alternative B, management of ORV
 15 use and access at the Seashore would be based on the management under alternative A, but modified by
 16 specific species-protection measures from the consent decree, ~~which provide for large prenesting closures~~
 17 ~~and other access restriction. These modifications that~~ are required until the ORV plan and final Special
 18 Regulation are completed. These management modifications included increasing the size of the buffers
 19 provided to various species at the Seashore, as well as adding restrictions related to night driving. On June
 20 4, 2009, the following changes were made to the consent decree, as approved by the courts and agreed to
 21 by the parties involved in the lawsuit and settlement:

- 22 • Commercial fishermen would be granted access to beaches at 5:00 a.m. instead of 6:00 a.m.,
 23 provided certain conditions from the modified consent decree are met.
- 24 • After September 15, all unhatched turtle nests would only require full beach closures from sunset
 25 until 6:00 a.m., instead of 24 hours a day.
- 26 • The NPS would not be required to expand a buffer for vandalism if the violator is apprehended. If
 27 the buffer has been expanded and then the violator is caught, the NPS can retract the expansion.

28 All other provisions in the consent decree remain the same. Under alternative B, beaches would be closed
 29 to all ORV use between the hours of 10:00 p.m. and 6:00 a.m. from May 1 to September 15, and open to
 30 ORV use from 10:00 p.m. to 6:00 a.m. with a permit from September 16 to November 15. This permit
 31 could be obtained online or at NPS offices or local tackle shops. From March 15 to November 30, an
 32 ORV-free zone at least 10 meters wide would be located in the ocean backshore wherever there is
 33 sufficient beach width to allow an ORV corridor at least 20 meters wide above the mean high tide line.
 34 Under alternative B, buffers for protected species would be larger than those identified in alternative A,
 35 and would include a required 1,000-meter buffer for unfledged piping plover chicks. In addition to ORV
 36 use, this 1,000-meter buffer would also apply to pets, as well as to kite flying, Frisbee throwing, and
 37 similar activities. Under this alternative, beach fires would be prohibited within 100 yards of turtle nest
 38 protection areas, as specified in the Superintendent's compendium. As in alternative A, suitable interior
 39 habitats for piping plovers at spits and at Cape Point would be closed year-round to all recreational users
 40 to provide for resting and foraging for all species. In case of a conflict between the Interim Strategy and
 41 the measures described in the consent decree, the consent decree would prevail. Details of the
 42 management actions under this alternative are described in tables 8 and 9.

1 ACTION ALTERNATIVES

2 The action alternatives would establish areas that allow ORV use and vehicle-free ~~(or non-ORV)~~ areas
3 where ORV use is prohibited. Although ORV areas are specifically identified, these areas do not prohibit
4 other uses, in effect making both ORV and ~~non-ORV~~ vehicle-free areas multi-use recreation areas.

5 ELEMENTS COMMON TO ~~A~~ ALL ACTION ALTERNATIVES

6 The action alternatives, alternatives C, D, E, and F, provide a range of reasonable alternatives. The
7 following describes elements of the management actions common to all the action alternatives.

8 Ramp Configuration

- 9 • ~~A New~~ ramps would be constructed at mile 32.5, 62, and 64.
- 10 • Ramp 2 would be relocated approximately 0.5 mile south of Coquina Beach.

11 Off Road Vehicle Access and Routes

12 The following would apply:

- 13 • Visitors accessing the Seashore by ORV must use only designated beach access ramps and
14 soundside access routes to enter designated ORV routes and areas.
- 15 • ORV operators must drive only on designated and marked ORV routes and must comply with
16 posted restrictions.

17 Seashore Management and Operations

- 18 • Based on experience with implementing ORV management since 2007, staffing at the Seashore
19 would need to increase under any action alternative to address basic functions of implementing an
20 ORV management program. Staff would be hired to accomplish the following functions:
21 coordination/management of the ORV program, coordination of science and adaptive
22 management and resource education, and assistance with public information.

23 Education and Outreach

24 The Seashore would

- 25 • Improve signage related to beach closures and Seashore resources so that it is more readily
26 available and presented in a clear manner to the public.
- 27 • Work with local organizations and businesses, including real estate rental agencies and
28 hotels/motels, to ensure wider distribution of ORV and resource protection educational
29 information. This would include encouraging these businesses to provide information about
30 removal of beach equipment from the beaches at night.
- 31 • Provide information about and encourage the use of turtle friendly lighting.
- 32 • Encourage the Visitors Bureau and local tackle shops to link their websites to the Seashore's
33 website to ensure that different segments of the visiting public have up-to-date information on
34 beach closures and, if an ORV permitting system is developed, ORV permitting information.

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- 1 • Develop a user-friendly ORV educational program (e.g., video ~~or~~ DVD, ~~or~~ online) that could be
 2 self-administered as part of the ORV permitting process at a variety of outlets such as tackle
 3 shops, welcome centers, and NPS offices.
- 4 • Implement more educational programs in local schools and expand the Junior Ranger program to
 5 include more web-based options to interest youth in Seashore resources and stewardship.

6 **Vehicle Requirements**

7 The following requirements would apply:

- 8 • Four-wheel drive would be recommended, although two-wheel-drive vehicles would be allowed.
- 9 • When driving on designated routes, operators would be required to lower tire pressure sufficiently
 10 to maintain adequate traction within the posted speed limit (20 pounds per square inch (psi) is
 11 recommended for most vehicles).
- 12 • Motorcycles would be prohibited on the ocean beachfront.
- 13 • There would be a limit on the number of axles allowed for vehicles and trailers ~~three-axle~~
 14 ~~maximum for all vehicles.~~
- 15 ~~• Trailers would be limited to no more than two axles.~~
- 16 ~~• Maximum vehicle length would be 30 feet.~~
- 17 • Only U.S. Department of Transportation listed and/or approved tires would be allowed.

18 **Equipment Requirements**

- 19 • Vehicles would be equipped with a jack, jack support, shovel, and low-pressure tire gauge.

20 **Speed Limits**

- 21 • The speed limit would be 15 mph, unless otherwise posted. Emergency vehicles would be exempt
 22 when responding to a call.

23 **Parking Areas for Pedestrian ~~Non-ORV~~ Access**

- 24 • Any new parking areas would be located near vehicle-free ~~non-ORV~~ areas and away from eroding
 25 areas or potential inlet areas.
- 26 • New parking areas would implement environmentally appropriate design standards to minimize
 27 stormwater runoff.
- 28 • New or expanded parking areas for ocean-side locations are identified in table 7 and table 7-1.

29 **Beach Fires**

- 30 • Beach fires would be prohibited year-round during hours specified for each alternative in table
 31 8 from midnight to 6:00 a.m. year-round. A permit would be required for all beach fires to ensure
 32 that users are informed of basic safety and resource protection measures. Where fires are
 33 permitted, they would be prohibited within 100 yards of turtle nest protection areas.

1 **Nighttime Beach Use**

- 2 • Camping, as defined in 36 CFR 1.4, would be prohibited on Seashore beaches.
- 3 • Unattended beach equipment (chairs, canopies, volleyball nets, watersport gear, etc.) would be
- 4 prohibited on the Seashore at night. Turtle patrol and law enforcement would tag equipment
- 5 found at night. Owners would have 24 hours to remove equipment before it is removed by NPS
- 6 staff.

7 **Commercial Fishing Vehicles**

- 8 • ~~Vehicles authorized to operate on the beach under a commercial fishing permit issued by the~~
- 9 ~~superintendent would be authorized to enter areas not designated for ORV use. Commercial~~
- 10 ~~fishing vehicles would be authorized by permit to enter all ORV and pedestrian areas that are not~~
- 11 ~~closed for resource protection, and may be authorized by special use permit to access vehicle-~~
- 12 ~~free non-ORV areas and night driving restricted areas if there is no resource conflict.~~

13 **Temporary Emergency Beach Closures**

- 14 • A temporary emergency beach closure may be implemented if any of the following conditions are
- 15 observed:
- 16 – ORV traffic backing up on the beach access ramps, either on- or off-beach bound, which
- 17 threatens to impede traffic flow.
- 18 – ORV traffic on the beach is parked in such a way that two-way traffic is impeded.
- 19 – Multiple incidents of disorderly behavior are observed or reported.

20 **Accessibility for ~~the Disabled~~ Visitors with Disabilities**

- 21 • ~~Some e~~Existing boardwalks would be retrofitted with accessible ramps to the extent that funding
- 22 allows to allow provide for more opportunities for so visitors with disabilities can have more
- 23 opportunities disabled persons to access or view the beach. When new parking areas are
- 24 developed, additional handicap parking spaces would be included, as appropriate.

25 **Construction Measures**

- 26 • Prior to any construction under the action alternatives, wetland delineations would occur and
- 27 wetland habitats would be avoided.

28 **Species Management**

- 29 • Management of protected shorebirds would be accomplished through the implementation of the
- 30 species management measures described in tables 10 and 10-1 at the end of this chapter.
- 31 • Management activities during the breeding season would focus on beach-nesting bird species
- 32 such as the piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-
- 33 billed tern, and black skimmer; however, there would be ongoing evaluation of the breeding
- 34 shorebird species addressed by this plan as part of the periodic review process.
- 35 ~~• Focal beach nesting bird species for management activities during the breeding season include~~
- 36 ~~piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull billed tern.~~

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~~and black skimmer; however, there would be ongoing evaluation of the breeding shorebird species addressed by this plan, as part of the periodic review process.~~

- ~~Prenesting areas for piping plover, American oystercatcher, and Wilson's plover, and colonial waterbirds would be established~~ establishment of Species Management Areas (SMAs). SMAs would be defined as areas of suitable habitat that have had concentrated and recurring use by multiple individuals and/or multiple species of protected shorebirds during the breeding season ~~or nonbreeding season, or concentrations of seabeach amaranth specimens, in two or more than 1 (i.e., 2 or more) of the past five5 years. These areas would be and are managed to reduce or minimize human disturbance. These areasSMAs_would# be re-evaluated and re-designated every 5 years, or after major hurricanes,~~ as part of the periodic review process as described in tables 10 and 10-1.

- ~~Areas of suitable nonbreeding habitat would be that has had concentrated foraging by migrating/wintering shorebirds in more than 1 (i.e., 2 or more) of the past 5 years and is managed to reduce human disturbance during the nonbreeding season.~~ This may include portions of prenesting areasbreeding SMAs t that provide suitable nonbreeding habitat during periods of overlap between the breeding and migrating season; ~~and designated vehicle-free non-ORV areas that are set aside to provide pedestrians with the opportunity for a natural beach experience; and resource closures at some points and spits, based on an annual nonbreeding habitat assessment conducted after the breeding season.~~

- Management and monitoring protocols are ~~also~~ provided for turtles and seabeach amaranth. Details of all species management strategies can be found in tables 10 and 10-1 at the end of this chapter.

- Incorporation of the Piping Plover Recovery Plan, Appendix G: Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the ESA. Appendix G of the Piping Plover Recovery Plan was used as a basis for determining appropriate management measures under all of the action alternatives. This document provides guidance to beach managers and property owners seeking to avoid potential violations of Section 9 of the ESA (16 USC 1538) and its implementing regulations (50 CFR 17) that could occur as the result of recreational activities on beaches used by breeding piping plovers along the Atlantic Coast. These guidelines were developed by the Northeast Region, USFWS (or Service), with assistance from the U.S. Atlantic Coast Piping Plover Recovery Team. The guidelines are advisory, and failure to implement them does not, of itself, constitute a violation of the law. Rather, they represent the USFWS best professional advice to beach managers and landowners regarding the management options that will prevent direct mortality, harm, or harassment of piping plovers and their eggs due to recreational activities. Appendix G makes the following recommendations:

Management of Non-Motorized Recreational Use – On beaches where pedestrians, joggers, sun-bathers, picnickers, fishermen, boaters, horseback riders, or other recreational users are present in numbers that could harm or disturb incubating plovers, their eggs, or chicks, areas of at least 50 meter-radius around nests above the high tide line should be delineated with warning signs and symbolic fencing. Only persons engaged in rare species monitoring, management, or research activities should enter posted areas. These areas should remain fenced as long as viable eggs or unfledged chicks are present. Fencing is intended to prevent accidental crushing of nests and repeated flushing of incubating adults, and to provide an area where chicks can rest and seek shelter when large numbers of people are on the beach.

Available data indicate that a 50 meter buffer distance around nests will be adequate to prevent harassment of the majority of incubating piping plovers. However, fencing around nests should be expanded in cases where the standard 50 meter-radius is inadequate to protect incubating adults or

Comment [mbm3]: Both Tables 10 and 10-1 provide for CWB "pre-nesting areas", though the nature of the pre-nesting closure varies between the two tables: In Table 10, the SMAs would be closed as the pre-nesting areas(). In Table 10-1, the CWB prenesting areas would allow ORV use (on the lower beach) until nesting activity occurred, which means the upper beach would be the prenesting area, similar to how South Beach has been handled I recent years.

Comment [seh4]: Where does the info in Mike's comment above appear in the FEIS?

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1 unfledged chicks from harm or disturbance. Data from various sites distributed across the plover's
 2 Atlantic Coast range indicates that larger buffers may be needed in some locations. This may
 3 include situations where plovers are especially intolerant of human presence, or where a 50 meter-
 4 radius area provides insufficient escape cover or alternative foraging opportunities for plover
 5 chicks. In cases where the nest is located less than 50 meters above the high tide line, fencing
 6 should be situated at the high tide line, and a qualified biologist should monitor responses of the
 7 birds to passersby, documenting his/her observations in clearly recorded field notes. Providing that
 8 birds are not exhibiting signs of disturbance, this smaller buffer may be maintained in such cases.
 9 On portions of beaches that receive heavy human use, areas where territorial plovers are observed
 10 should be symbolically fenced to prevent disruption of territorial displays and courtship. Since
 11 nests can be difficult to locate, especially during egg-laying, this will also prevent accidental
 12 crushing of undetected nests. If nests are discovered outside fenced areas, fencing should be
 13 extended to create a sufficient buffer to prevent disturbance to incubating adults, eggs, or
 14 unfledged chicks. Pets should be leashed and under control of their owners at all times from April
 15 1 to August 31 on beaches where piping plovers are present or have traditionally nested. Pets
 16 should be prohibited on these beaches from April 1 through August 31 if, based on observations
 17 and experience, pet owners fail to keep pets leashed and under control. Kite flying should be
 18 prohibited within 200 meters of nesting or territorial adult or unfledged juvenile piping plovers
 19 between April 1 and August 31. Fireworks should be prohibited on beaches where plovers nest
 20 from April 1 until all chicks are fledged.

21 *Motor Vehicle Management* – The Fish and Wildlife Service recommends the following minimum
 22 protection measures to prevent direct mortality or harassment of piping plovers, their eggs, and
 23 chicks on beaches where vehicles are permitted. Since restrictions to protect unfledged chicks
 24 often impede vehicle access along a barrier spit, a number of management options affecting the
 25 timing and size of vehicle closures are presented here. Some of these options are contingent on
 26 implementation of intensive plover monitoring and management plans by qualified biologists. It is
 27 recommended that landowners seek concurrence with such monitoring plans from either the
 28 Service or the State wildlife agency.

29 *Protection of Nests* – All suitable piping plover nesting habitat should be identified by a qualified
 30 biologist and delineated with posts and warning signs or symbolic fencing on or before April 1
 31 each year. All vehicular access into or through posted nesting habitat should be prohibited.
 32 However, prior to hatching, vehicles may pass by such areas along designated vehicle corridors
 33 established along the outside edge of plover nesting habitat. Vehicles may also park outside
 34 delineated nesting habitat, if beach width and configuration and tidal conditions allow. Vehicle
 35 corridors or parking areas should be moved, constricted, or temporarily closed if territorial,
 36 courting, or nesting plovers are disturbed by passing or parked vehicles, or if disturbance is
 37 anticipated because of unusual tides or expected increases in vehicle use during weekends,
 38 holidays, or special events.

39 If data from several years of plover monitoring suggests that significantly more habitat is available
 40 than the local plover population can occupy, some suitable habitat may be left unposted if the
 41 following conditions are met:

- 42 1. The Service OR a State wildlife agency that is party to an agreement under Section 6 of
 43 the ESA provides written concurrence with a plan that:
 - 44 A. Estimates the number of pairs likely to nest on the site based on the past monitoring
 45 and regional population trends.
 - 46 AND
 - 47 B. Delineates the habitat that will be posted or fenced prior to April 1 to assure a high
 48 probability that territorial plovers will select protected areas in which to court and
 49 nest. Sites where nesting or courting plovers were observed during the last three
 50 seasons as well as other habitat deemed most likely to be pioneered by plovers should
 51 be included in the posted and/or fenced area.

52 AND

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- 1 C. Provides for monitoring of piping plovers on the beach by a qualified biologist(s).
 2 Generally, the frequency of monitoring should be not less than twice per week prior to
 3 May 1 and not less than three times per week thereafter. Monitoring should occur
 4 daily whenever moderate to large numbers of vehicles are on the beach. Monitors
 5 should document locations of territorial or courting plovers, nest locations, and
 6 observations of any reactions of incubating birds to pedestrian or vehicular
 7 disturbance.

8 AND

- 9 2. All unposted sites are posted immediately upon detection of territorial plovers.

10 *Protection of Chicks* – Sections of beaches where unfledged piping plover chicks are present
 11 should be temporarily closed to all vehicles not deemed essential. (See the provisions for essential
 12 vehicles below.) Areas where vehicles are prohibited should include all dune, beach, and intertidal
 13 habitat within the chicks' foraging range, to be determined by either of the following methods:

- 14 1. The vehicle free area should extend 1,000 meters on each side of a line drawn through the
 15 nest site and perpendicular to the long axis of the beach. The resulting 2000 meter-wide
 16 area of protected habitat for plover chicks should extend from the ocean-side low water
 17 line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side
 18 intertidal habitat exists. However, vehicles may be allowed to pass through portions of the
 19 protected area that are considered inaccessible to plover chicks because of steep
 20 topography, dense vegetation, or other naturally-occurring obstacles.

21 OR

- 22 2. The Service OR a State wildlife agency that is party to an agreement under Section 6 of
 23 the ESA provides written concurrence with a plan that:

- 24 A. Provides for monitoring of all broods during the chick-rearing phase of the breeding
 25 season and specifies the frequency of monitoring.

26 AND

- 27 B. Specifies the minimum size of vehicle-free areas to be established in the vicinity of
 28 unfledged broods based on the mobility of broods observed on the site in past years
 29 and on the frequency of monitoring. Unless substantial data from past years show that
 30 broods on a site stay very close to their nest locations, vehicle-free areas should
 31 extend at least 200 meters on each side of the nest site during the first week following
 32 hatching. The size and location of the protected area should be adjusted in response to
 33 the observed mobility of the brood, but in no case should it be reduced to less than
 34 100 meters on each side of the brood. In some cases, highly mobile broods may
 35 require protected areas up to 1000 meters, even where they are intensively monitored.
 36 Protected areas should extend from the ocean-side low water line to the bay-side low
 37 water line or to the farthest extent of dune habitat if no bay-side intertidal habitat
 38 exists. However, vehicles may be allowed to pass through portions of the protected
 39 area that are considered inaccessible to plover chicks because of steep topography,
 40 dense vegetation, or other naturally-occurring obstacles. In a few cases, where several
 41 years of data documents that piping plovers on a particular site feed in only certain
 42 habitat types, the Service or the State wildlife management agency may provide
 43 written concurrence that vehicles pose no danger to plovers in other specified habitats
 44 on that site.

45 *Timing of Vehicle Restrictions in Chick Habitat* – Restrictions on use of vehicles in areas where
 46 unfledged plover chicks are present should begin on or before the date that hatching begins and
 47 continue until chicks have fledged. For purposes of vehicle management, plover chicks are
 48 considered fledged at 35 days of age or when observed in sustained flight for at least 15 meters,
 49 whichever occurs first. When piping plover nests are found before the last egg is laid, restrictions
 50 on vehicles should begin on the 26th day after the last egg is laid. This assumes an average
 51 incubation period of 27 days, and provides a 1 day margin of error. When plover nests are found

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1 after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles
2 should begin on a date determined by one of the following scenarios:

- 3 1. With intensive monitoring: If the nest is monitored at least twice per day, at dawn and
4 dusk (before 0600 hrs and after 1900 hrs) by a qualified biologist, vehicle use may
5 continue until hatching begins. Nests should be monitored at dawn and dusk to minimize
6 the time that hatching may go undetected if it occurs after dark. Whenever possible, nests
7 should be monitored from a distance with spotting scope or binoculars to minimize
8 disturbance to incubating plovers.

9 OR

- 10 2. Without intensive monitoring: Restrictions should begin on May 15 (the earliest probable
11 hatch date). If the nest is discovered after May 15, then restrictions should start
12 immediately.

13 If hatching occurs earlier than expected, or chicks are discovered from an unreported nest,
14 restrictions on vehicles should begin immediately. If ruts are present that are deep enough to
15 restrict movements of plover chicks, then restrictions on vehicles should begin at least 5 days prior
16 to the anticipated hatching date of plover nests. If a plover nest is found with a complete clutch,
17 precluding estimation of hatching date, and deep ruts have been created that could reasonably be
18 expected to impede chick movements, then restrictions on vehicles should begin immediately.

19 *Essential Vehicles* – Because it is impossible to completely eliminate the possibility that a vehicle
20 will accidentally crush unfledged plover chicks, use of vehicles in the vicinity of broods should be
21 avoided whenever possible. However, the Service recognizes that life-threatening situations on the
22 beach may require emergency vehicle response. Furthermore, some “essential vehicles” may be
23 required to provide for safety of pedestrian recreationists, law enforcement, maintenance of public
24 property, or access to private dwellings not otherwise accessible. On large beaches, maintaining
25 the frequency of plover monitoring required to minimize the size and duration of vehicle closures
26 may necessitate the use of vehicles by plover monitors. Essential vehicles should only travel on
27 sections of beaches where unfledged plover chicks are present if such travel is absolutely necessary
28 and no other reasonable travel routes are available. All steps should be taken to minimize number
29 of trips by essential vehicles through chick habitat areas. Homeowners should consider other
30 means of access, e.g., by foot, water, or shuttle services, during periods when chicks are present.
31 The following procedures should be followed to minimize the probability that chicks will be
32 crushed by essential (non-emergency) vehicles:

- 33 1. Essential vehicles should travel through chick habitat areas only during daylight hours,
34 and should be guided by a qualified monitor who has first determined the location of all
35 unfledged plover chicks.
- 36 2. Speed of vehicles should not exceed five miles per hour.
- 37 3. Use of open 4-wheel motorized ATVs or non-motorized all-terrain bicycles is
38 recommended whenever possible for monitoring and law enforcement because of the
39 improved visibility afforded operators.
- 40 4. A log should be maintained by the beach manager of the date, time, vehicle number and
41 operator, and purpose of each trip through areas where unfledged chicks are present.
42 Personnel monitoring plovers should maintain and regularly update a log of the numbers
43 and locations of unfledged plover chicks on each beach. Drivers of essential vehicles
44 should review the log each day to determine the most recent number and location of
45 unfledged chicks.

46 Essential vehicles should avoid driving on the wrack line, and travel should be infrequent enough
47 to avoid creating deep ruts that could impede chick movements. If essential vehicles are creating
48 ruts that could impede chick movements, use of essential vehicles should be further reduced and, if
49 necessary, restricted to emergency vehicles only.

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- 1 • **Incorporation of the 2008 Loggerhead Sea Turtle Recovery Plan.** The following elements
 2 from the Loggerhead Sea Turtle Recovery Plan were considered in development of the action
 3 alternatives:
- 4 2225. Prohibit recreational equipment on nesting beaches at night. Sea turtles prefer to nest on
 5 the mid to upper beach, protecting their nests from repeated and prolonged high tides.
 6 Recreational equipment (e.g., beach furniture, umbrellas, marine craft, tents) that are left on the
 7 beach at night can prevent nesting turtles from reaching the mid to upper beach. Therefore, at
 8 night, all recreational equipment should be completely removed from the beach by hand and
 9 stored behind the primary dune. Regulations should be developed and enforced to ensure these
 10 types of impediments to nesting are managed or eliminated.
- 11 Maintain at least the current length and quality of protected nesting beach. As of 2007, 1,581
 12 km of nesting beach in the U.S. were identified as being within conservation lands in public
 13 (Federal, state, or local government) ownership and privately owned conservation lands (e.g.,
 14 non-profit conservation foundations). Most of these lands are generally managed in a way that
 15 benefits sea turtle conservation. Public lands that have lighted development, armoring, or other
 16 profound threats to sea turtle nesting have not been included. In compiling the list of
 17 conservation lands, human visitation was not considered a profound threat to sea turtle nesting.
 18 Therefore, public lands designated for human recreation have been included. At a minimum, the
 19 amount of nesting beach in such protected status should be maintained.
- 20 251. Develop, fully implement, and effectively enforce light management plans to address
 21 direct and indirect (e.g., sky glow, uplighting) artificial lighting on nesting beaches.
- 22 2511. Implement and enforce lighting ordinances on lands under local government
 23 jurisdiction. Where lighting ordinances have been adopted and adequately enforced,
 24 hatchling disorientation has been managed at acceptable levels. All coastal counties and
 25 communities with nesting beaches should adopt and fully enforce ordinances from
 26 March through October in Brevard through Broward counties, Florida, and from May
 27 through October elsewhere. The State of Florida's Model Lighting Ordinance
 28 [<http://myfwc.com/seaturtle>] should be used as a template for developing new or
 29 revising existing lighting ordinances. In addition, Port Authorities should develop and
 30 enforce lighting management plans to ensure their direct and indirect lighting does not
 31 impact nesting and hatchling turtles on nearby beaches.
- 32 61. Minimize impacts to sea turtles on nesting beaches.
- 33 6113. Use the least manipulative method to protect nests. Until such time as a
 34 management plan for protecting nests is developed, the least manipulative method
 35 should be employed to protect nests. Because the incubation environment greatly
 36 influences the developing embryo, nest relocation can involve the transfer of eggs from
 37 an appropriate environment to an inappropriate one. As a general rule, nests should only
 38 be relocated if they are low enough on the beach to be washed daily by tides or if they
 39 are situated in well documented highrisk areas that routinely experience serious erosion
 40 and egg loss (e.g., nests laid near river mouths or beneath eroding sea walls).
- 41 Natural events, like storms, that accelerate beach erosion and accretion can sometimes
 42 reduce hatching success in existing nests. While damage from storm events can be
 43 severe, it is difficult to predict the precise areas where the storm is most likely to inflict
 44 damage. Because of the negative effects of relocating eggs and the unpredictability of
 45 storm events, nests should not be moved out of areas threatened by storms. Nests should
 46 not be relocated in areas where heavy foot traffic, lighting problems, or beach cleaning
 47 are a concern. Foot traffic generally is not a problem for nests, but depending on the
 48 nesting substrate, pedestrian traffic over nests near the time of emergence can cause the
 49 nests to collapse and result in hatchling mortality. Therefore, in areas where foot traffic
 50 is heavy, nests can be marked so pedestrians can avoid them. If a nest is made near a
 51 light that may misorient the hatchlings, efforts should focus on getting the light turned
 52 off or shielded (if protection is necessary, the nest should be caged). If nests are

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1 deposited on beaches that are periodically raked with mechanical equipment, beach
2 raking should be discontinued or the nests should be marked clearly so they can be
3 avoided by the beach cleaners.

4 6114. Discontinue the use of hatcheries as a nest management technique. Relocation of
5 sea turtle nests to hatcheries located higher on the beach was once a common practice
6 throughout the southeast U.S. to mitigate the effects of naturally occurring events, such
7 as erosion and vegetation encroachment, predation, and a variety of human-induced
8 factors. In some areas, the extent and type of coastal development have resulted in
9 significant light pollution problems. As a result, a few hatcheries are still used to protect
10 hatchlings from disorientation. However, relocating nests into hatcheries concentrates
11 eggs in an area and makes them more susceptible to catastrophic events and predation
12 from both land and marine predators. Therefore, in areas where hatcheries are still being
13 used to protect nests and hatchlings from light pollution, management efforts should be
14 shifted to eliminate the lighting problems and phase out the use of hatcheries. At Cape
15 Romain [National Wildlife Refuge (NWR)] in South Carolina, hatcheries are being used
16 as a last resort in response to severe erosion. In this case, the conservation benefits (i.e.,
17 embryo survivorship) are believed to outweigh the potential conservation risks (e.g.,
18 hatchling predation). Given these circumstances, the use of hatcheries at Cape Romain
19 NWR is currently considered appropriate until sufficient habitat for successful
20 incubation is available. Continued use of hatcheries on the refuge should be based on
21 periodic quantitative assessments of their effectiveness as a management tool.

22 6121. Prohibit nighttime driving on beaches during the loggerhead nesting season.
23 Vehicles on the beach have the greatest potential to come into contact with nesting
24 females and emerging hatchlings at night. In areas where beach driving is still allowed,
25 nighttime vehicle use should be limited to essential vehicles (e.g., emergency or
26 permitted research vehicles) only. When essential vehicles are allowed on the beach at
27 night during the sea turtle nesting season, their potential for harming turtles should be
28 minimized by driving at speeds of 5 miles per hour or less (except when higher speeds
29 are necessary for law enforcement, human safety, or medical emergencies), and by
30 driving seaward of the wrack or debris line or just above it during high tide conditions.
31 In addition, regardless of the time of year, vehicles or equipment driven or used on the
32 beach should be equal to or less than 10 pounds per square inch (psi) based on ground
33 loading characteristics (e.g., all terrain vehicles) to minimize the potential for sand
34 compaction.

35 6123. Manage daytime driving to minimize impacts to loggerheads. In addition to
36 prohibiting nighttime driving of non-essential vehicles on the beach, other measures
37 should be implemented to minimize the potential for impacts to sea turtles. Examples of
38 minimization measures include the designation and enforcement of no-driving zones in
39 areas where the greatest concentration of nests are typically located (e.g., conservation
40 zones near the dunes), monitoring and marking of all sea turtle nests for avoidance, and
41 developing and implementing a vehicle rut removal program seaward of nests during
42 periods when hatchlings are expected to emerge.

43 614. Minimize harassment of nesting females and hatchlings. Resident and visitor use of
44 nesting beaches can adversely affect nesting sea turtles, incubating egg clutches, and
45 hatchlings. Intentional and unintentional disturbance and harassment of nesting females
46 and hatchlings is an increasing problem on many beaches. Problem areas where repeated
47 incidents of turtle harassment have been reported should be identified, and law
48 enforcement efforts should be focused there.

49 6142. Conduct public education campaigns to minimize harassment of nesting females
50 and hatchlings. Resident and visitor use of nesting beaches can adversely affect nesting
51 sea turtles and hatchlings. The most serious threat caused by human presence on the
52 beach is the disturbance of nesting females. Disturbance of nesting females can cause
53 them to leave the beach without finishing nesting and thus delay egg laying, shift their

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1 nesting beaches, and select poor nesting sites. Hatchlings rely on a store of energy and
 2 nutrients within their retained yolk sac to make their way from the nest to their offshore
 3 developmental habitat. Any delays they encounter on the beach by pedestrians may
 4 impair their ability to migrate offshore. Beachgoers should be informed through
 5 presentations and educational materials about the potential impacts to sea turtles from
 6 pedestrians on the beach and how to avoid frightening or disorientating any nesting and
 7 hatchling turtles encountered. In addition, signage at access points to the beach is
 8 recommended to further inform residents and visitors about proper nesting beach
 9 etiquette.

10 6143. Increase the number of interpretive turtle walks to meet demand and minimize
 11 overall disturbance to nesting females and hatchlings. In the U.S., numerous state-
 12 permitted organizations conduct organized turtle walks to allow the public to view the
 13 nesting process. Thousands of coastal visitors and local residents attend these organized
 14 turtle watches each year; however, thousands more are turned away due to the limited
 15 number of walks available. As a result, numerous unsupervised individuals who were
 16 unable to get into a turtle walk often try to find turtles by themselves and inadvertently
 17 end up harassing them. Interpretive turtle walks also are a mechanism for garnering
 18 support for sea turtle conservation through education and should be expanded to
 19 accommodate the high public demand for participation.

20 6144. Enforce laws to minimize harassment of nesting females and hatchlings.
 21 Intentional and unintentional disturbance and harassment of nesting turtles and
 22 hatchlings is an increasing problem on many beaches. Problem areas should be
 23 identified and law enforcement efforts should be focused in these areas to deter
 24 harassment of nesting turtles and hatchlings.

25 615. Develop and enforce guidelines for special events on the beach to minimize
 26 impacts on nesting females, nests, and hatchlings. A wide variety of special events (e.g.,
 27 volleyball tournaments, concerts) take place on the beach. Some of these events
 28 considerably increase the number of people and equipment in a given area. Many events
 29 are scheduled outside of the sea turtle nesting period, but some do occur during the
 30 nesting season. State resource agencies and local governments should develop and
 31 enforce guidelines for special events that will occur during the nesting season to ensure
 32 there will be no direct or indirect impacts on nesting turtles, nests, and emerging
 33 hatchlings.

- 34 • **Establishment of Buffer Distances.** The potential impacts of human disturbance on beach-
 35 nesting birds and their chicks are well documented and described in chapter 3 of this document. A
 36 buffer is an area surrounding a sensitive resource, such as bird nests or chicks, which is restricted
 37 (or closed) to visitor access during critical life cycle stages in order to reduce human disturbance
 38 and the risk of mortality due to pedestrians and ORVs. The sensitivity of beach-nesting birds to
 39 human disturbance varies by species and can vary among individual birds of the same species
 40 depending upon the circumstances. Buffer distances for managed species are detailed in tables 11
 41 [and 11-1](#). The buffer distances identified in the action alternatives were developed after
 42 consideration of the best available science, which includes existing guidelines and
 43 recommendations, such as the Piping Plover Recovery Plan (USFWS 1996a) and [the USGS](#)
 44 [Open-File Report 2009-1262 \(2010\) on the management of species of special concern at the](#)
 45 [2005 USGS protocols for the Seashore](#), as well as relevant scientific literature (research, studies,
 46 reports, etc.) for the respective species. In addition, buffer distances were developed using the
 47 practical knowledge gained by NPS resources management staff during two years of
 48 implementing the Interim Strategy (2006–2007) and ~~two~~ [three](#) years implementing the consent
 49 decree (2008–~~2009~~2010). In 2007 under the Interim Strategy, which identified the buffer
 50 distances that would be used under alternative A, NPS staff implemented a total of 126 shorebird
 51 management actions that involved establishing, modifying, or removing fencing around resource
 52 closures. In 2009 [and 2010](#) under the consent decree, which identified the buffer distances that

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1 would be used under alternative B, NPS staff implemented a total of 202 ~~and 164~~ shorebird
2 management actions, ~~respectively~~.

3 The buffer distances ~~identified as common to all action alternatives~~ are intended to provide
4 adequate protection to minimize the impacts of human disturbance on nesting birds and chicks in
5 the majority of situations, given the level of visitation and recreational use in areas of sensitive
6 wildlife habitat at the Seashore and issues related to non-compliance with posted resource
7 protection areas. For example, under the action alternatives the buffer distance for nesting piping
8 plovers is set at 75 meters ~~in areas managed under both ML1 and ML2 measures~~, and would be
9 expanded upon disturbance or when chicks are present. A 1992 study at Assateague Island
10 National Seashore (Loefering 1992), a national seashore with a similar type of barrier island
11 habitat and recreational use as Cape Hatteras, found that on average, incubating plovers flushed
12 from their nests at a distance of 78 meters (256 feet), although some birds flushed when
13 researchers were as far as 174 meters (571 feet) away. Researchers reported that the minimum
14 agitation distance to nesting piping plover was 50 meters, and suggested a buffer radius of
15 225 meters. The recommended buffers for piping plover under this plan/EIS not only took into
16 consideration the Piping Plover Recovery Plan, but also studies in similar environments such as
17 Assateague Island. Buffers for the other bird species were developed in a similar manner, taking
18 into consideration the best available studies, combined with Seashore staff observations of how
19 the species react in the specific environment of the Seashore. The action alternatives' buffers,
20 when combined with the ~~Species Management Areas (SMAs) under alternatives C, D, and E~~ and
21 ~~the prenesting areas and vehicle-free areas for all action alternatives~~, are designed to be effective
22 for species protection and operationally feasible to implement and sustain.

23 ORV Permits

- 24 • Permits would be required for vehicular use on designated ORV routes.
- 25 • There would be no limit on the number of permits issued.
- 26 • Permits would be available at designated permit issuing stations ~~and online~~.
- 27 • Permit stickers would be affixed to vehicles in a manner approved by the NPS.
- 28 • Permits could be revoked for violation of applicable Seashore regulations or terms and conditions
29 of the permit.

30 ADAPTIVE MANAGEMENT APPROACHES INCLUDED IN THE 31 ACTION ALTERNATIVES

32 The Department of the Interior requires that its agencies “use adaptive management to fully comply” with
33 CEQ guidance that requires “a monitoring and enforcement program to be adopted ... where applicable,
34 for any mitigation” (516 DM 1.3 D (7); 40 CFR 1505.2). Adaptive management is based on the
35 assumption that current resources and scientific knowledge are limited. Nevertheless, adaptive
36 management attempts to apply available resources and knowledge and adjusts management techniques as
37 new information becomes available.

38 Adaptive management incorporates scientific experimental methods into the management process while
39 providing flexibility to adjust to changes in the natural environment. It is based on a continuing, iterative
40 process of

- 41 • Applying management actions.

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- 1 • Monitoring consequences.
- 2 • Evaluating monitoring results against plan objectives.
- 3 • Adjusting management.
- 4 • Using feedback to make future management decisions.

5 | All action alternatives incorporate adaptive management initiatives (outlined in table 10 and table 10-1)
 6 that are designed to assist the Seashore in meeting the objectives of this plan/EIS and desired future
 7 conditions as outlined in chapter 1 of this document. These species-specific initiatives include
 8 implementing additional research and monitoring for piping plover, sea turtles, and seabeach amaranth,
 9 based on available funding. Information obtained from the implementation of adaptive management
 10 initiatives would be integrated into future decision making.

11 PERIODIC REVIEW UNDER THE ACTION ALTERNATIVES

12 A systematic review of data, annual reports, and other information would be conducted by NPS every
 13 five years, after storms or events that Seashore management determines to be a major modification of
 14 habitat quantity or quality, a major hurricane, or if necessitated by a significant change in protected
 15 species status (e.g., listing or de-listing), in order to evaluate the effectiveness of management actions in
 16 making progress toward the accomplishment of stated objectives and desired future conditions (see
 17 chapter 1 of this document). Periodic review could result in changes to the management actions in order
 18 to improve effectiveness. When desired future conditions for resources are met or exceeded, periodic
 19 review and adaptive management may allow for more flexible management of recreational use, provided
 20 adverse impacts of such use are effectively managed and wildlife populations remain stable. Where
 21 progress is not being made toward the attainment of desired future conditions goals, periodic review and
 22 adaptive management may result in increased restrictions on recreational use provide for additional
 23 management including increased appropriate restrictions on recreational use. Components subject to
 24 periodic review vary among the action alternatives.

25 DISCUSSION OF ACTION ALTERNATIVES

26 ALTERNATIVE C: SEASONAL MANAGEMENT

27 This alternative is designed to provide visitors to the Seashore with a degree of predictability regarding
 28 areas available for ORV use, as well as vehicle-free areas, based largely on the seasonal resource- and
 29 visitor-use characteristics of various areas in the Seashore. This alternative would manage ORV use by
 30 identifying areas that historically do not support sensitive resources or that historically have lower visitor
 31 use. Many of these areas would generally be designated as ORV routes year-round. Areas of high
 32 resource sensitivity and high visitor use would generally be designated as seasonal ORV routes, with
 33 restrictions based on seasonal resource and visitor use or as year-round non-ORV vehicle-free areas. Some
 34 areas would be designated as vehicle-free year-round to provide opportunities for non-ORV users to
 35 experience the Seashore without the presence of vehicles. The establishment of ORV routes and vehicle-
 36 free areas would be based largely on seasonal resource requirements and year-round visitation patterns
 37 and would provide the public and the Seashore with a structured management approach that clearly states
 38 what areas are available for ORV use and when they are open. The public would have clear direction as to
 39 what would be open seasonally or year-round; however, it would require some effort on the public's part
 40 to be informed and to understand what areas are open and when use is permitted. Implementation would
 41 require an increase in Seashore staff and resources for public education and enforcement, but would
 42 provide for efficient Seashore operations with the identification of defined use areas.

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1 Generally, most areas where there is a seasonally designated ORV route would be open to ORVs from
 2 October 15 to March 14, primarily due to concerns about resource protection for birds and turtles during
 3 breeding and hatching/fledging periods and to minimize conflicts with high visitor use periods. Areas that
 4 would be seasonally designated vehicle-free would include SMAs and some village beaches. These
 5 seasonal vehicle-free areas would primarily occur during periods of high visitation and high resource
 6 sensitivity—the summer and shoulder season months. The spits and points would be closed to ORVs
 7 from March 15 to October 14 to provide resource protection. A pedestrian access corridor would be
 8 provided at Bodie Island Spit, Cape Point, and South Point although the corridor could close during the
 9 breeding season as resource protection buffers and closures are established. Existing soundside ORV
 10 access areas would be retained and designated as ORV routes, including existing primitive parking and
 11 designated boat launch areas. The Seashore would maintain posts and signage defining the location of the
 12 parking areas and ORV access routes on the soundside.

13 ORV routes under this alternative would still be subject to temporary resource closures established when
 14 protected species breeding behavior warrants and/or if new habitat is created. In addition to the breeding
 15 season measures, resource closures and/or vehicle-free areas would be established, based on an annual
 16 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 17 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 18 access corridor in areas designated by the NPS (common to all alternatives).

19 Designated ORV routes would be established seasonally in areas with high visitation and/or sensitive
 20 resources and year-round in some areas that historically do not support sensitive resources or that have
 21 lower visitor use. To facilitate ORV access to the designated routes, existing ramps would be improved,
 22 reconfigured, and/or supplemented by new ramps, including the construction of ramps ~~47, and 48, 62,~~
 23 ~~and 64.~~ (Note: All action alternatives involve relocating ramp 2 and building a new ramps at 32.5, ~~62, and~~
 24 ~~64.~~) In addition, the interdunal road network would be maintained at its current level of access in most
 25 places, although an extension from ramp 45 west to ramp 49 would be provided. Pullouts or road
 26 widening would be provided where appropriate to provide safe ORV passage on the interdunal roads.
 27 Designated ORV routes would be open to ORV use 24 hours a day from November 16 through April 30,
 28 although SMAs would be closed to ORV use beginning on March 15. From May 1 through November 15,
 29 all potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) would be closed
 30 to non-essential ORV use from 7:00 p.m. to 7:00 a.m. This alternative also involves the addition or
 31 expansion of parking areas at several locations.

32 ORV safety closures would be designated as conditions warrant and would be evaluated for reopening by
 33 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
 34 access; pedestrian and commercial fishing access would generally be maintained through ORV safety
 35 closures.

36 Alternative C would include a Seashore-wide carrying-capacity element (“peak use limit”), which would
 37 be based on a physical space requirement of an average of one vehicle per 20 linear feet for Bodie and
 38 Hatteras Island Districts and one vehicle per 30 linear feet for the Ocracoke Island District. The provision
 39 of a lower carrying-capacity on Ocracoke Island would provide for a less crowded visitor experience in
 40 this area, enhancing the types of experiences available throughout the Seashore. The carrying capacity
 41 could be implemented whenever overcrowding could cause safety concerns, such as peak use periods
 42 during major summer holidays and weekends. The allowable number of vehicles in each area subject to
 43 the carrying capacity would be determined by the space requirements and the beachfront length of the
 44 area.

45 Alternative C would include an ORV permit system, with no limit on the number of permits issued.
 46 Permit fees would be determined based on the recovery of NPS costs incurred in managing ORV use.

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1 Only annual permits would be available under this alternative, but these would be valid for 12 months
 2 from date of purchase so they could extend over the length of a season. To obtain the permit, ORV
 3 owners would be required to complete a short education program in person or online and pass a basic
 4 knowledge test demonstrating their understanding of the rules and regulations governing ORV use at the
 5 Seashore, beach-driving safety, and resource closure requirements. Following completion of the test,
 6 owners would need to sign for their permits to acknowledge that they understand the rules and that all
 7 drivers of the permitted vehicles will abide by the rules and regulations governing ORV use at the
 8 Seashore. A violation of the rules and regulations by the owner or driver of an ORV could result in
 9 revocation of the vehicle permit, and the owner/permittee would not be allowed to obtain another permit
 10 for any vehicle for a specified period of time.

11 Every five years the NPS would conduct a systematic review of the ORV and species management
 12 measures identified in this alternative as being subject to periodic review. This could result in changes to
 13 those management actions in order to improve effectiveness.

14 Designated routes and areas under alternative C are shown on figure 2 and described in table 7. Details of
 15 the management actions under this alternative are described in table 8 [and species management strategies](#)
 16 [are described in table 10](#).

17 **ALTERNATIVE D: INCREASED PREDICTABILITY AND SIMPLIFIED MANAGEMENT**

18 This alternative is designed to provide visitors to the Seashore with the maximum amount of
 19 predictability regarding routes available for ORV use and vehicle-free areas for pedestrian use, which
 20 means establishing year-round ORV routes and ~~non-ORV vehicle-free areas designations consistent with~~
 21 ~~approved use patterns over the course of the year~~. Under this alternative, ORV routes would be
 22 determined by identifying areas that historically do not support sensitive resources and areas of lower
 23 visitor use. These areas would be designated as ORV routes year-round. Areas of historically high
 24 resource sensitivity or high visitor use would not be designated as ORV routes. The establishment of
 25 ORV routes and vehicle-free areas on a year-round (rather than seasonal) basis would provide the public
 26 and the Seashore with a simplified management approach that would increase predictability and reduce
 27 confusion about what and when areas are available for ORV use, and reduce the need for staff resources
 28 on the beach. Because of the relative simplicity of the elements of this alternative, implementation would
 29 require a lower level of Seashore staff and resources than other action alternatives and would maximize
 30 the efficiency of Seashore operations.

31 Year-round vehicle-free areas would include lifeguarded beaches and the areas in front of villages, as well
 32 as designated SMAs. These vehicle-free areas would provide for visitor safety during periods of high
 33 visitation, particularly in the summer months, and would also provide a vehicle-free experience for
 34 visitors during the off-season. Soundside access would continue as currently provided under the no-action
 35 alternatives. Vehicle-free areas would also be established year-round at Cape Point and the spits to
 36 provide a simplified approach to sensitive species management for Seashore operations, maximizing
 37 contiguous protected areas and eliminating seasonal changes in designated ORV routes and the demands
 38 associated with enforcing those changes. Other uses would still be allowed in these vehicle-free areas
 39 outside any identified resource closures or SMAs. All SMAs would be managed using the ML1 strategy,
 40 which would involve larger and longer species protection buffers and would not allow pedestrian access
 41 once prenesting closures are established. Pedestrian access to these areas would be allowed once breeding
 42 activities are completed.

43 ORV routes under this alternative would still be subject to temporary resource closures established when
 44 protected species breeding behavior warrants and/or if new habitat is created. In addition to the breeding
 45 season measures, resource closures within some vehicle-free areas would be established, based on an

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1 annual nonbreeding habitat assessment conducted after the breeding season, to provide areas of
 2 nonbreeding shorebird habitat while still allowing a pedestrian or pedestrian/ORV access corridor in areas
 3 designated by the NPS (common to all alternatives).

4 To facilitate access to designated ORV routes, existing ORV ramps would be improved, reconfigured,
 5 and/or supplemented by new ramps [at 62 and 64](#). (Note: All action alternatives involve relocating ramp 2
 6 and building [a new ramps](#) at 32.5, [62, and 64](#)). No new or ~~expanding~~ [expanded](#) parking areas would be
 7 provided under alternative D. Designated ORV routes would be open to ORV use 24 hours a day from
 8 November 16 through April 30. From May 1 through November 15, all potential sea turtle nesting habitat
 9 (ocean intertidal zone, ocean backshore, and dunes) would be closed to non-essential ORV use from 7:00
 10 p.m. to 7:00 a.m. to provide for sea turtle protection and allow enforcement staff to concentrate their
 11 resources during the daytime hours.

12 ORV safety closures would not be designated; ORV users would drive at their own risk and would be
 13 expected to rely on their knowledge of beach driving to determine if an area is safe to access based on
 14 their assessment of current conditions.

15 Alternative D would not include a carrying-capacity requirement, but would limit vehicles to a one-
 16 vehicle-deep parking configuration so that areas would not become overcrowded such that a safety
 17 concern would occur.

18 Alternative D would include a simple vehicle permit system, with no limit on the number of permits
 19 issued. Permit fees would be based on the recovery of NPS costs incurred in managing ORV use, but the
 20 fee should be lower than fees under alternatives C, E, or F due to the decreased management costs under
 21 this alternative. Only annual (based on the calendar year, as opposed to a 12-month period) permits would
 22 be available under this alternative. To obtain a permit, ORV drivers would be required to read the rules
 23 and regulations governing ORV use at the Seashore, including beach-driving safety and resource closure
 24 requirements. Owners would need to sign for their permit to acknowledge that they understand the rules
 25 and that all drivers of the permitted vehicle will abide by the rules and regulations governing ORV use at
 26 the Seashore. Special consideration would be paid to providing beach safety information because of the
 27 lack of safety closures under this alternative. A violation of the rules and regulations by the owner or
 28 driver of the ORV could result in revocation of the vehicle permit, and the owner/permittee would not be
 29 allowed to obtain another permit for any vehicle for a specified period of time.

30 Every five years the NPS would conduct a systematic review of the species management measures
 31 identified in this alternative as being subject to periodic review. This could result in changes to those
 32 management actions in order to improve effectiveness.

33 Designated routes and areas under alternative D are shown on figure 2 and described in table 7. Details of
 34 the management actions under this alternative are described in table 8 [and species management strategies](#)
 35 [are described in table 10](#).

36 **ALTERNATIVE E: VARIABLE ACCESS AND MAXIMUM MANAGEMENT**

37 This alternative is designed to provide visitors to the Seashore with a wide variety of access opportunities
 38 for both ORV and pedestrian users, including to the spits and points, but often with controls or restrictions
 39 in place to limit impacts on sensitive resources. During the shorebird breeding season, some ORV routes
 40 may be kept open to use for longer periods of time by providing ORV pass-through zones at some spits
 41 and points and by improving interdunal road and ramp access. More pedestrian access would be provided
 42 through substantial additions to parking capacity at various key locations that lend themselves to walking
 43 on the beach. Vehicle-free areas would be provided during all seasons for non-ORV users to experience

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1 the Seashore without the presence of vehicles. Like the other action alternatives, this alternative would
 2 manage ORV use by identifying areas that historically do not support sensitive resources and areas of
 3 lower visitor use. Most of these areas would be designated as ORV routes year-round. Areas of high
 4 resource sensitivity and high visitor use would either be designated as seasonal ORV routes, with
 5 restrictions based on seasonal resource and visitor use, or as year-round ~~non-ORV~~ vehicle-free areas. In
 6 addition, the SMAs would be reopened to ORV use approximately six weeks earlier than under
 7 alternative C (September 1 versus October 15).

8 During the shorebird breeding season, ORV pass-through zones would be designated at Bodie Island Spit,
 9 Cape Point, and South Point. The pass-through zones would use standard resource protection buffers and
 10 would not allow pedestrians, pets, ORV stopping, parking, or disembarking of passengers. These pass-
 11 through zones would be established to provide an increased possibility of access during the prenesting
 12 and incubation periods only, and would be subject to resource closures. Once through the pass-through
 13 zone, recreation would be allowed outside any existing resource closures. Both Bodie Island Spit and
 14 South Point would have pedestrian-only areas, when conditions allow, extending access beyond the end
 15 of the ORV route. When unfledged chicks are present, the probability of being able to provide this access
 16 would decrease. Therefore, in addition to the pass-through zones, the Seashore would promote the use of
 17 water taxis as alternative transportation to Bodie Island Spit and South Point, subject to designated
 18 landing zones and resource closures. Alternative E also involves the development of an interdunal
 19 pedestrian trail on Bodie Island. The trail would begin at a new parking area near ~~ramp 4~~ the campground
 20 and would provide access to the inlet. This new trail would also be subject to resource protection closures.

21 The variety of access methods possible under alternative E, based on the establishment of ORV routes,
 22 seasonal vehicle-free areas, designation of ORV pass-through zones, and the promotion of water taxi
 23 service to designated points and spits, would provide the public with ORV and pedestrian access to a
 24 greater number of areas within the Seashore, even during portions of the shorebird breeding season.
 25 However, this alternative would afford less predictability than alternatives C and D regarding areas
 26 available for use and would require a greater amount of oversight and management. Implementation
 27 would perhaps be difficult for the public to understand and would require more Seashore staff and
 28 resources than the other alternatives.

29 Areas that would be seasonally designated vehicle-free would include the areas in front of villages, except
 30 Frisco and Hatteras, and most of the SMAs. The ORV open season in front of the villages would be
 31 defined as November 1 to March 31 and in most SMAs from September 1 through March 14 (when a
 32 resource closure is not limiting access), with ORV access (via a pass-through zone) to Bodie Island Spit,
 33 Cape Point, and South Point from March 15 through August 31 via a pass-through zone, subject to
 34 resource closures. Soundside access would remain open at currently designated boat launch areas, on
 35 Hatteras Inlet Spit from the Pole Road to Cable Crossing and the Spur Road, and on Ocracoke Island
 36 soundside areas where commercial fishing access is currently allowed. Under this alternative, motorcycles
 37 would be allowed on all routes and areas open to ORVs on the soundside.

38 The remaining soundside access points would be closed to ORV use and small parking areas would be
 39 constructed to provide pedestrian access to the water. Signage/posts would be installed at the parking
 40 areas and boat launch areas to prevent damage to vegetation and other soundside resources.

41 ORV routes under this alternative would still be subject to temporary resource closures established when
 42 protected-species breeding behavior warrants and/or if new habitat is created. In addition to the breeding-
 43 season measures, resource closures and/or vehicle-free areas would be established, based on an annual
 44 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 45 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 46 access corridor in areas designated by the NPS (common to all alternatives).

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1 To facilitate access to ORV routes, this alternative would extend the existing interdunal road west of ramp
2 45 all the way to ramp 49, ~~and~~ construct two new ramps (47 and 48), and build two new ramps at 62 and
3 64. (Note: All action alternatives involve relocating ramp 2 and building a new ramps at 32.5, ~~62, and 64~~).
4 A new ramp would be established at either 24 or 26, along with a new parking area at the selected
5 location. Designated ORV routes would be open to ORV use 24 hours a day from November 16 through
6 April 30. From May 1 through September 15, all potential sea turtle nesting habitat (ocean intertidal zone,
7 ocean backshore, and dunes) would be closed to non-essential ORV use from 10:00 p.m. to 6:00 a.m. to
8 provide for sea turtle protection and allow enforcement staff to concentrate their resources during the
9 daytime hours. From May 1 through September 15, a limited number of ORV users would be permitted to
10 park and stay overnight at selected spits and points, under the terms and conditions of a special use
11 permit, when such areas are not otherwise closed to protect sensitive resources. From September 16
12 through November 15, ORV routes with no or a low density of turtle nests remaining (as determined by
13 the NPS) would be open between 10:00 p.m. and 6:00 a.m., subject to the terms and conditions of a
14 required permit (see table 8 for details). This alternative also involves the addition of parking spaces at
15 several ramp locations.

16 ORV safety closures could be designated as conditions warrant and would be evaluated for reopening by
17 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
18 access; pedestrian and commercial fishing access would generally be maintained through ORV safety
19 closures. For village beaches that are open to ORV use during the winter season, the village beaches must
20 be at least 20 meters wide from the toe of the dune seaward to the mean high tide line in order to be open
21 to ORV use.

22 Alternative E would include a carrying-capacity requirement for all areas based on a physical space
23 requirement of one vehicle per 20 linear feet for Bodie and Hatteras Island Districts, except 400 vehicles
24 would be allowed within a 1-mile area centered on Cape Point, and one vehicle per 30 linear feet for the
25 Ocracoke Island District. The carrying capacity would be implemented whenever overcrowding could
26 cause safety concerns, such as at peak use periods during major summer holidays and weekends. The
27 allowable number of vehicles in each area would be determined by the space requirements and the
28 beachfront length of the area.

29 Alternative E would include an ORV permit system, with no limit on the number of permits issued.
30 Permit fees would be determined based on the recovery of NPS costs incurred in managing ORV use.
31 Expected permit fees would be higher under this alternative due to the intense level of management
32 required for implementation. Both annual and weekly permits would be available under this alternative.
33 To obtain a permit, ORV owners would be required to complete a short education program in person or
34 online and pass a basic knowledge test demonstrating their understanding of the rules and regulations
35 governing ORV use at the Seashore, beach-driving safety, and resource-closure requirements. Following
36 completion of the test, owners would need to sign for their permit to acknowledge that they understand
37 the rules and that all drivers of the permitted vehicle will abide by the rules and regulations governing
38 ORV use at the Seashore. A violation of the rules and regulations by the owner or driver of the ORV
39 could result in revocation of the vehicle permit, and the owner/permittee would not be allowed to obtain
40 another permit for any vehicle for a specified period of time. The park-and-stay provision would be
41 managed under a separate special use permit. Alternative E would also include a self-contained vehicle
42 (SCV) camping opportunity from November 1 to March 31 at three NPS campgrounds (one in each
43 district), with a separate permit requirement and use limits.

44 Every five years the NPS would conduct a systematic review of the ORV and species management
45 measures identified in this alternative as being subject to periodic review. This could result in changes to
46 those management actions in order to improve effectiveness.

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1 Designated routes and areas under alternative E are shown on figure 2 and described in table 7. Details of
 2 the management actions under this alternative are described in table 8 [and species management strategies](#)
 3 [are described in table 10.](#)

4 **ALTERNATIVE F: NPS PREFERRED ALTERNATIVE MANAGEMENT BASED ON ADVISORY**
 5 **COMMITTEE INPUT**

6 In December 2007, the Department of the Interior established a negotiated rulemaking advisory
 7 committee (Committee) to assist the NPS in the development of an ORV regulation for the Seashore. The
 8 Committee met 11 times from January 2007 through February 2009, and conducted numerous
 9 subcommittee and work group meetings and conference calls. The Committee discussed and explored
 10 options for the full spectrum of ORV management issues covered in this plan/EIS. [As a result of these](#)
 11 [discussions, although the Committee did not reach a consensus on a recommended alternative, the NPS](#)
 12 [considered a variety of concepts and measures that either originated from Committee members or were](#)
 13 [discussed during Committee, subcommittee, or work group sessions. Although the Committee as a whole](#)
 14 [did not reach a consensus on a recommended alternative, in creating this action alternative the NPS has](#)
 15 [made a management judgment as to which combination of concepts and measures would make an](#)
 16 [effective overall ORV management strategy, the NPS has used the Committee's input to create this action](#)
 17 [alternative. In any case of conflicting advice from Committee members about any particular issue, the](#)
 18 [NPS has made a management judgment as to which approach would make an effective overall ORV](#)
 19 [management alternative.](#) The NPS has also included under alternative E some ORV management
 20 approaches identified by the Committee that would require more intensive management (such as park-
 21 and-stay and SCV camping), in keeping with the maximum management theme of that alternative.

22 [After reviewing public and agency comments, the NPS revised alternative F by adopting some of the](#)
 23 [simpler approaches from the other alternatives, e.g., instead of SMAs, using standard buffers with](#)
 24 [prenesting and nonbreeding closures; simpler and easier to understand hours for night-driving restrictions;](#)
 25 [and using more consistent seasonal closure dates among the villages. Also in response to public and](#)
 26 [agency comments, the amount of construction was decreased and, pedestrian access increased, and The](#)
 27 [bypass provision and criteria from alternative A was incorporated in Alternative F to mitigate effects](#)
 28 [of sea turtle closures that could block fall ORV access to Cape Point, attention paid to increasing](#)
 29 [management efficiency and reducing costs of implementation. Designation of ORV routes was adjusted to](#)
 30 [provide balance between ORV areas and vehicle-free areas.](#)

31 This alternative is designed to provide visitors to the Seashore with a wide variety of access opportunities
 32 for both ORV and pedestrian users, including access to the spits and points, but often with controls or
 33 restrictions in place to limit impacts on sensitive resources. This means that some areas may be kept open
 34 to ORV users for longer periods of time by reopening some ORV corridors at the spits and points sooner
 35 after shorebird breeding activity is completed than in alternatives C or E, and by improving interdunal
 36 road and ORV ramp access. Pedestrian access would be enhanced by providing increased parking
 37 capacity at various points of access to vehicle-free areas. Such areas would be provided during all seasons
 38 so non-ORV users can experience the Seashore without the presence of vehicles. Like the other action
 39 alternatives, this alternative would manage ORV use by identifying areas that historically do not support
 40 sensitive resources and areas of lower visitor use. [Some](#) ~~Many~~ of these areas would ~~generally~~ be
 41 designated as ORV routes year-round. Areas of high resource sensitivity and high visitor use would
 42 generally be designated as [vehicle-free areas year-round or as](#) seasonal ORV routes, with restrictions
 43 based on seasonal resource and visitor use, ~~or as year-round non-ORV areas.~~

44 [The year-round designation of vehicle-free areas and ORV routes, in conjunction with the species](#)
 45 [management strategies described in table 10-1, would provide for species protection during both the](#)
 46 [breeding season and the nonbreeding season. SMAs would not be designated under this alternative and](#)

Comment [seh5]: Add an "s" here on "comment" if you're going to add one in the first sentence of this paragraph.

Comment [seh6]: MIKE: OK to add this?

Comment [seh7]: Delete because the cost of alt F in the FEIS is more than in the DEIS

Comment [mbm8]: All changes look fine to me

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1 one set of standard buffers, similar to the ML2 buffers in the other action alternatives, would be utilized.
 2 In addition, the SMAs could reopen to ORV use as early as July 31, which is up to four weeks earlier than
 3 under alternative E (September 1), when the shorebird breeding season is completed at each site (typically
 4 in August). During the shorebird breeding season, pedestrian shoreline access along ocean and inlet
 5 shorelines below the high-tide line would be permitted in front of (i.e., seaward of) prenesting areas until
 6 breeding activity is observed, then standard buffers for breeding activity would apply. ~~standard buffers for~~
 7 ~~breeding activity would apply~~ the prenesting area would be closed to pedestrians. The NPS retains
 8 discretion at all times to enforce more proactive closures or take other measures, if considered necessary,
 9 consistent with its obligations under the law. Prenesting areas would generally be closed March 15
 10 through July 31 (or August 15 if black skimmers are present), or until two weeks after all chicks have
 11 fledged and breeding activity has ceased, whichever comes later. For all species closures, including
 12 prenesting closures, the NPS ~~shall~~ would not reduce buffers to accommodate an ORV corridor or ORV
 13 ramp access.

Comment [mbm9]: We need a universal change any place in the document that it says (for alt F) "one set of standard buffers, equivalent to the ML2 buffers". It needs to be changed to "similar to", because the nest buffer in table 10-1 for WIPL has been revised to 75 m. In Table 10 in the DEIS, it was 150 m.

14 ~~a shoreline pedestrian access corridor would be established at Bodie Island Spit would be designated as a~~
 15 ~~seasonal ORV route from September 15 through March 14 and would be vehicle-free from March 15~~
 16 ~~through September 14, and ORV access corridors would be established at Cape Point and South Point.~~
 17 ~~These corridors would use standard resource protection buffers and would be subject to resource closures.~~
 18 ~~When unfledged chicks are present, the probability of being able to provide this access would decrease.~~
 19 Like alternative E, alternative F also involves the development of an interdunal pedestrian trail on Bodie
 20 Island. The trail would begin at a new parking area near ~~ramp 4 the campground~~ and would provide
 21 access to the inlet. This new trail would also be subject to resource-protection closures. Year-round ORV
 22 routes would be designated at Cape Point and South Point, with 35-meter-wide (115-foot-wide) ORV
 23 corridors during the breeding season. Standard resource-protection buffers would apply to these ORV
 24 corridors. When nests occur near the ORV corridor or unfledged chicks are present, the probability of
 25 being able to provide this access would decrease. The provision and criteria described in alternative A for
 26 creation of short-term bypasses would be incorporated in alternative F only for sea turtle nests and only
 27 between Ramp 44 and Cape Point. Alternative F would include the construction of a short seasonal ORV
 28 route to provide pedestrian access ~~a new pedestrian trail~~ to the sound on Ocracoke Island. In addition, the
 29 NPS would consider applications for commercial use authorizations to offer beach and water shuttle
 30 services and would apply for funding to conduct an alternative transportation study to evaluate the
 31 feasibility of alternative forms of transportation to popular sites, such as inlets and Cape Point.

Comment [seh10]: MIKE: should this say "at Cape Point or between ramp 44 and Cape Point"?

Comment [mbm11]: "between Ramp 44 and Cape Point" seems good to me.

32 The variety of access methods possible under alternative F, based on the establishment of year-round and
 33 seasonal ORV routes and vehicle-free areas, and increased interdunal roads and parking to support access,
 34 would provide the public with ORV and pedestrian access to a greater number of areas within the
 35 Seashore. This alternative would afford less predictability than alternative C or D, but ~~somewhat~~ more
 36 predictability than alternative E, regarding areas available for use, and it would require a comparable level
 37 of oversight and management to alternative E.

38 Areas that would be seasonally designated as vehicle free would include the areas in front of Ocracoke
 39 Campground and villages, except for Rodanthe north of the pier and Buxton, which would be vehicle free
 40 year-round. The ORV open season ~~area dates open to for~~ ORV use in front of the seasonally-designated
 41 villages and Ocracoke Campground would be November 1 to March 31 when visitation and rental
 42 occupancy is lowest. These areas would be vehicle free April 1 to October 31 when visitation and rental
 43 occupancy is highest. When these beaches are open to ORV use, a safety closure would be implemented
 44 on portions of the beach that are not consistently at least 20 meters (66 feet) wide during normal high
 45 tides.

46 To facilitate access to ORV routes, this alternative would add new ramp 25.5 approximately 2.5 miles
 47 south of ramp 23, relocate ramp 59 to 59.5, and add a new ramp 63 across from Scrag Cedar Road. (Note:

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1 All action alternatives involve relocating ramp 2 and building a new ramp at 32.5). New interdunal roads
 2 would facilitate access to locations that have either seasonal or year-round restrictions on ORV use.
 3 Locations for interdunal roads would include: on inland of South Beach from ramp 45 to ramp 49, with
 4 one new ramp at 47.5 and on Hatteras Inlet Spit extending from the intersection of Pole and Spur Roads
 5 southwest toward the inlet, stopping at least 100 meters from the inlet northeast and southwest from the
 6 southern terminus of the Pole Road, and on North Ocracoke Spit from ramp 59 extending northeast
 7 toward the inlet would facilitate access to locations that have either seasonal or year-round restrictions on
 8 ORV use. Existing soundside access points would remain open, with better maintenance than currently
 9 occurs. Signage/posts would be installed at the soundside parking areas and boat launch areas to prevent
 10 damage to vegetation and other soundside resources. This alternative also involves the addition of new
 11 parking areas with associated foot trails or boardwalks to facilitate pedestrian access at a number of
 12 locations/spaces at several ramp locations.

13 ORV routes and vehicle-free areas under this alternative would still be subject to temporary resource
 14 closures established when protected-species breeding behavior warrants and/or if new habitat is created.
 15 Outside the breeding season, in addition to the breeding season measures, vehicle-free areas throughout
 16 the Seashore would provide relatively less-disturbed foraging, resting, and roosting habitat for migrating
 17 and wintering birds. These areas would be open to pedestrians for recreational use. In addition, resource
 18 closures at spits and points and/or vehicle-free areas would also be established, based on an annual
 19 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 20 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 21 access corridor in areas designated by the NPS. This would include three “floating” nonbreeding
 22 shorebird habitat areas located between ramps 23 and 34, between ramps 45 and 49, and south of ramp
 23 72. The “floating area” would be adjusted on a yearly basis to provide nonbreeding habitat in these areas.
 24 The closure would float year to year, depending on where the most effective wintering habitat is located
 25 which would be determined based on a review of the previous year’s monitoring results.

26 Designated ORV routes would be open to ORV use 24 hours a day from November 16 through April 30.
 27 To facilitate access to ORV routes, this alternative would add ramp 39 near Haulover Beach. (Note: All
 28 action alternatives involve relocating ramp 2 and building new ramps at 32.5, 62, and 64). New ramps
 29 would also be established at both 24 and 26, along with new parking areas. Designated ORV routes would
 30 be open to ORV use 24 hours a day from November 16 through April 30. From May 1 through November
 31 September 15, all potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes)
 32 would be closed to non-essential ORV use from 9:00 p.m. 1 hour after sunset until 7:00 a.m. NPS turtle
 33 patrol has checked the beach in the morning (by approximately one half hour after sunrise) to provide for
 34 sea turtle protection and allow enforcement staff to concentrate their resources during the daytime hours;
 35 however, from September 16 through November 15, however, selected ORV routes with no or a low
 36 density of turtle nests remaining (as determined by the NPS) would reopen to night driving, subject to the
 37 terms and conditions established under the ORV of a required permit.

38 ORV safety closures could be designated as conditions warrant and would be evaluated for reopening by
 39 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
 40 access; pedestrian and commercial fishing access would generally be maintained through safety closures.
 41 Alternative F provides specific guidelines for establishing and removing safety closures. Additional
 42 ORV-driving requirements would be implemented to provide for increased pedestrian safety in all areas
 43 open to ORV use, including the village beaches when open to ORV use. Under the carrying capacity
 44 requirement for alternative F, the maximum number of vehicles allowed on any particular ORV route
 45 during peak use periods would be the linear distance of the route divided by 6 meters (20 feet) per vehicle
 46 (i.e., the equivalent of 260 vehicles per mile). Alternative F would include a carrying capacity requirement
 47 (peak use limit) for all areas based on a physical space requirement of one vehicle per 20 linear feet for
 48 Bodie Island, Hatteras Island, and Ocracoke Island Districts, except that 400 vehicles would be allowed

How Alternatives Meet Objectives

1 ~~within a 1-mile area centered on Cape Point. In addition, The carrying capacity would parking within~~
 2 ~~ORV routes would be allowed, but restricted to one vehicle deep. These measures would reduce~~
 3 ~~safety concerns associated with overcrowding, such as at peak use periods during major summer holidays~~
 4 ~~and weekends.~~

5 ~~The allowable number of vehicles in each area would be determined by the space requirements and the~~
 6 ~~beachfront length of the area.~~

7 Alternative F would include an ORV permit system, with no limit on the number of permits issued.
 8 Permit fees would be determined based on the recovery of NPS costs incurred in implementing the ORV
 9 management plan~~managing ORV use that are not already covered by the Seashore's base operating funds.~~
 10 Expected permit fees would be similar to alternative E due to the level of management required for
 11 implementation. Both annual and ~~7-day~~short-term permits would be available under this alternative. To
 12 obtain a permit, ORV owners would be required to complete a short education program in person at an
 13 NPS facility. Ver online and pass a basic knowledge test demonstrating their understanding of the rules
 14 and regulations governing ORV use at the Seashore, beach driving safety, and resource closure
 15 requirements. Following completion of the test, chicle owners would need to sign for their permit to
 16 acknowledge that they understand the rules and that all drivers of the permitted vehicle will abide by the
 17 rules and regulations governing ORV use at the Seashore. A violation of the rules and regulations by the
 18 owner or driver of the ORV could result in revocation of the vehicle permit, and the owner/permittee
 19 would not be allowed to obtain another permit for any vehicle for a specified period of time. In addition to
 20 the mandatory education program for ORV users, the NPS would establish a voluntary resource-education
 21 program targeted toward non-ORV beach users.

22 Every five years the NPS would conduct a systematic review of the ~~ORV and~~ species management
 23 measures identified in this alternative as being subject to periodic review. This could result in changes to
 24 those management actions in order to improve effectiveness.

25 Designated ORV routes under alternative F are shown on figure 2 and described in table 7-1. Details of
 26 the management actions under this alternative are described in table 8 and species management strategies
 27 are described in table 10-1.

28 HOW ALTERNATIVES MEET OBJECTIVES

29 As stated in chapter 1 of this document, all action alternatives selected for analysis must meet all
 30 objectives to a large degree. The action alternatives must also address the stated purpose of taking action
 31 and resolve the need for action; therefore, the alternatives were individually assessed in light of how well
 32 they would meet the objectives for this plan/EIS, which are stated in chapter 1 of this document.
 33 Alternatives that did not meet the objectives were not analyzed further (see the "Alternative Elements
 34 Considered but Dismissed from Further Consideration" section in this chapter).

35 Table 12 compares how each of the alternatives described in this chapter would meet the plan objectives.
 36 Chapter 4 of this document describes the effects of each alternative on each impact topic. These impacts
 37 are summarized in table 13. Tables 12 and 13 are included at the end of this chapter.

1 ALTERNATIVE ELEMENTS CONSIDERED BUT DISMISSED FROM 2 FURTHER CONSIDERATION

3 USE AREAS, ORV MANAGEMENT, AND VISITOR USE

4 Modify the ORV Management Plan In Accordance with Plans Proposed by Groups 5 Outside the NPS

6 During the public comment period for the draft plan/EIS, alternative plans for the management of ORVs
7 and wildlife at the Seashore were submitted. Many of the elements in these proposals have been are
8 already included in the range of alternatives considered, or have been incorporated into the revised
9 alternative F (NPS preferred alternative). Those elements that are not included were considered but
10 dismissed for the reasons discussed below under the headings: Implement Additional Vehicle
11 Requirements, Additional Requirements for Permit Holders, Alternative Methods for Developing ORV
12 Carrying Capacity, Allow for a eGreater Level of Night Driving at the Seashore, Provide an ORV Pass-
13 through Corridor Though All Species Closures/Buffers, Criteria for the Designation of SMAs, Relocate
14 Bird and Turtle Nests, Modify the Turtle Program, Implement a Volunteer Program to Assist with Species
15 Protection, Create an Oversight Committee with External Experts and Scientists, Create New Habitat, and
16 Give Special Consideration Only to Flora and Fauna Listed as Threatened and Endangered.

17 Consider Pea Island National Wildlife Refuge when Considering Use Areas

18 Many commenters suggested that Pea Island NWR (refuge) should be considered when developing this
19 plan/EIS. Suggestions included considering Pea Island the refuge as a vehicle-free area, and conversely,
20 as a potential area where ORVs could be used where there is not a resource conflict. Commenters felt that
21 the refuge Pea Island NWR should be considered a part of the baseline for analysis, and should be
22 considered when providing appropriate visitor use. Although the 5,880-acre Pea Island NWR is located at
23 the northern end of Hatteras Island, and is within the boundary of the Seashore, the refuge is administered
24 by the USFWS and therefore the NPS cannot direct the management of visitor use at the refuge. The
25 Seashore's 1978 draft interim ORV management plan affirmed that the refuge manager has management
26 responsibility for posting closures on beaches within the refuge as he or she may find necessary to
27 implement the regulations of the USFWS. NPS recognizes that approximately 12.1 miles of beach within
28 the refuge has been closed to ORVs for a number of years and at present provides an opportunity for
29 visitors to the north end of Hatteras Island to walk on the beach in the absence of vehicles; however,
30 because the refuge is not administered by the NPS, the Seashore cannot direct the management of visitor
31 use at the refuge. The USFWS is responsible for making decisions about ORV and pedestrian access and
32 has done so under a public planning process in the Pea Island National Wildlife Refuge Comprehensive
33 Conservation Plan (USFWS 2006b), as mandated by the National Wildlife Refuge Improvement Act of
34 1997. Through this process, the USFWS has determined that ORV use would not be appropriate or
35 compatible with the mission of the refuge.

36 NPS also recognizes that there are times and locations on Nags Head and Cape Lookout National
37 Seashore beaches, where ORVs may and may not be driven, providing additional opportunity for
38 recreation with and without vehicles. The NPS acknowledges that there are approximately 12.1 miles of
39 vehicle-free beaches within the refuge that are available for pedestrian use and has ; however, bBecause
40 the refuge it is not administered by the NPS, the Seashore cannot direct the management of visitor use at
41 the refuge Pea Island NWR. The USFWS is responsible for making decisions about ORV and pedestrian
42 access and has done so under a public planning process in the Pea Island National Wildlife Refuge
43 Comprehensive Conservation Plan (USFWS 2006x), as mandated by the National Wildlife Refuge
44 Improvement Act of 1997. Through this process, Currently, the USFWS has determined that ORV use
45 would not be appropriate or compatible with the mission of the refuge. Under the Organic Act, the NPS

Comment [seh12]: This is stated a few lines below. No need to say it twice, so I've deleted it here.

Alternative Elements Considered but Dismissed From Further Consideration

1 is responsible for managing activities in the Seashore to conserve the natural resources unimpaired on
 2 NPS-managed lands within the Seashore, which includes protecting the wildlife and its habitat. Similarly,
 3 under the Seashore’s enabling legislation, NPS is mandated to preserve the unique flora and fauna and
 4 physiographic conditions. The presence of a species outside the Seashore does not mitigate, eliminate, or
 5 affect the authority and responsibility of the NPS under both the Organic Act and the Seashore enabling
 6 legislation to preserve unimpaired the Seashore populations of wildlife.

Comment [dw13]: What precipitated the addition of this language?

7 Prohibit the Use of Off-Road Vehicles

8 Prohibition of ORV use at the Seashore would not meet the purpose, need, and objectives of this
 9 plan/EIS. The purpose of this plan is to “develop regulations and procedures that carefully manage ORV
 10 use/access in the Seashore to protect and preserve natural and cultural resources and natural processes,
 11 provide a variety of visitor use experiences while minimizing ~~minimize~~ conflicts among various users,
 12 and promote the safety of all visitors...” ORV use, if effectively managed, provides convenient access for
 13 many appropriate visitor activities at some popular beach sites including, for example, activities that use
 14 vehicles to transport substantial amounts of gear for the activity. Prohibition, rather than management, of
 15 ORV use could substantially diminish such visitor experience opportunities. Therefore prohibition of all
 16 ORV use would not meet the plan need.

17 In addition to not meeting the purpose, need, and objectives of this plan/EIS, ORV use is a historical use
 18 at the Seashore that has been accounted for in Seashore planning documents. Management goals related to
 19 ORV use are included in the Seashore’s General Management Plan, which states, “Selected beaches will
 20 continue to be open for ORV recreational driving and in conjunction with surf fishing in accordance with
 21 the existing use restrictions” (NPS 1984). Providing for this use would occur in the context of the overall
 22 planning objective of preserving the cultural resources and the flora, fauna, and natural physiographic
 23 conditions, while providing for appropriate recreational use and public access to the oceanside and
 24 soundside shores in a manner that will minimize visitor use conflict, enhance visitor safety, and preserve
 25 Seashore resources. ORV use preceded the establishment of the Seashore and management of this use,
 26 rather than prohibition, continues to be the intent of the NPS. The NPS acknowledges that if it does not
 27 promulgate a special regulation to authorize ORV use, then ORV use would, in fact, be prohibited at the
 28 Seashore; however, bBecause a complete prohibition of ORV use does not meet the purpose, need, and
 29 objectives of this plan/EIS and because ORV use is a use that is accounted for in Seashore plans and
 30 policies, elimination of all ORV use at the Seashore was not carried forward for further analysis.

31 Changes in Infrastructure and Regulations of Other Jurisdictions

32 Commenters suggested elements that would involve jurisdictions outside the NPS, including:

- 33 • Provide NPS parking and beach access points throughout Dare County villages.
- 34 • Lower the speed limit on NC-12 between villages to 45 mph during peak use times to reduce the
 35 danger from vehicles with aired-down tires.
- 36 • Limit the use of bright lighting in oceanfront houses.
- 37 • Create a sound ordinance.
- 38 • Create guidelines for oceanfront structures, such as setbacks from the high-tide mark and
 39 rebuilding guidelines, to address damage to existing oceanfront structures.

40 These suggestions would require action by the county or state. Lowering the speed limit would require a
 41 change in current state regulations. The county would be responsible for changing building codes or
 42 adding more parking and access points. Creating sound or turtle friendly lighting ordinances or occupancy

Chapter 2: Alternatives

1 restrictions for rental homes would require action of the respective counties. The NPS does not have the
 2 authority to require these jurisdictions to undertake such action. However, the NPS has worked with the
 3 communities within the Seashore on many issues, including those related to ORV management, and under
 4 all alternatives would continue to work cooperatively to encourage actions such as turtle-friendly lighting
 5 and education. Although the NPS cannot require Dare County to provide more parking or beach access,
 6 some of the alternatives evaluated in this plan/EIS address additional parking areas on Seashore land.

7 **Implement Additional Vehicle Requirements**

8 During public comment on the draft plan/EIS, commenters recommended additional vehicle requirements
 9 such as requiring vehicles to be oil leak free, permitting only electric vehicles, and requiring that license
 10 plates be displayed properly. The Seashore does not have the capability to efficiently inspect each vehicle
 11 that enters the beach to determine if it is leaking oil. Individual vehicle inspections for leaking fluids
 12 could cause substantial traffic backups, which would adversely affect visitor experience and safety.
 13 However, all vehicles operated in the Seashore must comply with state inspection requirements, which
 14 include regulations on leaking fluids. If the NPS were to observe a vehicle leaking oil, it would be
 15 removed from the beach. The NPS is not proposing to allow only electric vehicles in the Seashore due to
 16 the limited availability of these vehicles to the general public. Obstruction of the rear license plate is a
 17 violation of North Carolina law, which is enforced by NPS law enforcement staff under 36 CFR 4.2(b). In
 18 developing the details of the ORV permit program, the Seashore would consider whether this violation
 19 would be a basis for permit revocation.

20 **Provide All-Terrain Vehicle/Utility Terrain Vehicle Access and Remove the Helmet** 21 **Requirement**

22 Commenters suggested that ATVs and utility terrain vehicles (UTVs) should be allowed on the beach and
 23 that ATV users should not be required to use helmets. The NPS only allows street-legal vehicles on the
 24 beach under the North Carolina Motor Vehicle Code, which does not include ATVs or UTVs.
 25 Alternatives in this plan/EIS do not include changing the requirement for street-legal vehicles. The
 26 Seashore considers ATV and UTV use at the Seashore to be incompatible with visitor use and resource
 27 protection goals and objectives due to the damage they could cause. Further, street-legal vehicles are used
 28 for transportation, but the majority of ATVs and UTVs are used primarily for recreational or utility
 29 purposes, although they may secondarily serve a transportation function. Since ATVs and UTVs would
 30 not be permitted, the issue of requiring helmets is not applicable.

31 **Assign Permits to Users Instead of Vehicles**

32 For the alternatives that include a permit system, permits would be assigned to a particular vehicle
 33 through issuance to the registered owners of vehicles. A permit sticker would then be affixed to the
 34 vehicle, where it would be easily visible by law enforcement personnel. Another option of assigning
 35 permits to the person only, not the vehicle, was considered, but eliminated. Verifying that people have
 36 permits that are movable between multiple vehicles would require substantially more effort by law
 37 enforcement staff, who would have to stop each driver visitor and ask to see their permit. Therefore, to
 38 assist in enforcing the permit system, permits are assigned to the registered owners and affixed to the
 39 vehicles under all alternatives.

40 **Require a Permit for All Users of the Seashore**

41 The idea of an entrance or admission fee for the Seashore was discussed thoroughly during the negotiated
 42 rulemaking process, and was dismissed primarily due to administrative and financial obstacles. The
 43 establishment of an entrance fee would require the NPS to install manned entrance gates in the Seashore

Alternative Elements Considered but Dismissed From Further Consideration

1 to collect visitor fees. However, there are thousands of local residents who have to travel through the
2 Seashore to gain access to their property. The logistics of collecting entrance fees from all visitors would
3 result in delays at entrances and would impede efficient travel along NC-12.

4 In addition, parking and access fees are managed under the Federal Lands Recreation Enhancement Act
5 (FLREA), which does not provide for a cost recovery program. Therefore, the Seashore would be able to
6 retain only a portion of the entrance or parking fees collected and could not use those funds to support key
7 functions associated with an ORV management program, such as law enforcement, maintenance of routes
8 or parking lots, or resource management. As a result, the collection of admission and parking fees was not
9 carried forward for further analysis.

10 **Provide Separate Permits for Different Areas of the Seashore as a Means of Limiting**
11 **Congestion**

12 The ORV permit system is an enforcement and education tool to reduce adverse impacts to park resources
13 and visitor experience. It is not intended to limit the number of ORVs on Seashore beaches. During
14 internal and public scoping as well as the negotiated rulemaking process, the NPS considered various
15 methods for establishing an ORV permit system. A common theme among the alternatives for ORV
16 permits was that fees should be kept reasonable so that all visitors, regardless of income level, would be
17 able to afford to purchase an ORV permit. The most logical method of implementing an ORV permit
18 system would be to use the special park uses authority under 16 USC 3a which would allow the Seashore
19 to recover the cost of implementing the ORV management program. A permit system that required a
20 different permit for different locations in the Seashore would be complex to implement, resulting in
21 increases in NPS management costs. Such costs would ultimately be passed along to ORV users because
22 the permit fees would be based on cost recovery. Therefore, more complex permitting systems were
23 considered but not carried forward for analysis. As a result, the concept of establishing vehicle limits in
24 certain areas through an ORV permit system was not carried forward for further analysis.

Comment [seh14]: Needs a period here.

25 **Additional Requirements for Permit Holders**

26 During public comment on the draft plan/EIS, commenters recommended a range of requirements that
27 could be included in a permit system such as having permit holders report turtle crawl activity. It was
28 determined that requiring the public to report turtles crawls would not be enforceable. Although the
29 Seashore encourages the public to report certain species activities, including turtle crawls, requiring the
30 public to report turtle crawls would not be appropriate as part of an ORV permit program and was not
31 included in the range of alternatives dismissed from further analysis. However, suggestions made for
32 various educational components, such as watching an educational video, are included in the range of
33 alternatives.

Comment [seh15]: This text is consistent with the response to comment about requiring reporting of turtle crawls (the SOL suggested "not be appropriate" instead of "not be enforceable")

34 **Provide Night Parking at the End of Access Ramps on the Beach Side and Along the Sandy**
35 **Road Behind the Dunes at Cape Point and the Spits**

36 Night parking (but not camping) for pedestrian beach access would be allowed at roadside parking areas
37 identified on the maps for alternative F. Allowing vehicles to park overnight on interdunal roads or ORV
38 ramps immediately adjacent to resource sensitive locations would be difficult to patrol and enforce.
39 Additionally, it could place an unrealistic expectation on visitors in such locations to strictly comply with
40 the applicable resource protection restrictions. The NPS does not have the resources to patrol the entire
41 Seashore at night to enforce compliance. The placement of more parked vehicles on ORV routes adjacent
42 to the beach at night would potentially result in additional compliance problems, and was not carried
43 forward for further analysis.

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Locate ORV Routes Behind the Dunes, Away from Pedestrian Users

Routes behind the dunes would be more damaging to the environment in some cases because the land there is not hard, bare beach sand but instead is rather loose sand, and the area contains vegetation and other wildlife. Additionally, interdunal roads would not allow the same degree of access that designated ORV routes would provide to visitors that use ORVs for access to recreational activities. Some interdunal roads would be provided to allow for ORV access around designated vehicle free areas. As a result, locating ORV routes behind dunes as a general practice was not carried forward for further analysis.

Alternative Methods for Determining ORV Carrying Capacity

During public comment on the draft plan/EIS, commenters provided a range of suggestions for determining the ORV carrying capacity at the Seashore. This includes extending carrying capacity limits to all areas of the Seashore, allowing vehicles to stack more than one deep, implementing limits on pedestrian use, and increasing or decreasing the proposed vehicle limits. Overall, the NPS established carrying capacity limitations primarily as a visitor safety mechanism to reduce the potential for vehicle-vehicle and pedestrian-vehicle conflicts that can occur in areas where vehicles and pedestrians coexist. The NPS considered various options for determining carrying capacity limits which are included in the range of the alternatives in this plan/EIS. For more information please see appendix C: Concern/Response Report (response to Concern ID 24129).

Use a Different Term for “Requirement” in Law Enforcement Text

Commenters suggested using the words “courtesy,” “guidelines,” or “rule” instead of “requirements.” Where the word “requirements” is used in an alternative, it implies a level of regulatory enforcement authority. In these areas, changing the word to “guidelines” or “courtesy” would not imply enforcement capability; therefore, this suggestion was not carried forward in the alternatives.

Provide Around-the-Clock Enforcement

Commenters suggested that around-the-clock enforcement would ensure resource protection. The Seashore has no source of funding capable of supporting around-the-clock enforcement in all areas at all times. This suggested level of enforcement is not the norm for any national seashore. The action alternatives provide for increased outreach and education to help improve voluntary compliance, but around-the-clock enforcement would not be feasible and was therefore not included in any alternatives.

Designate a “Backcountry Zone” Where Pedestrians Can Walk

Designation of a backcountry zone is not within the scope of this project. However, the Seashore will address park management zones in the revision of the General Management Plan (GMP) for the Seashore.

Establish Two Marked Travel Paths on the Beach

Marking travel lanes in ORV routes along the length of the Seashore would not be possible nor desirable because of the visual impact. However, alternative F requires that two-way traffic remain unimpeded within ORV routes and also provides the Seashore with the authority to close down a section of beach if two-way traffic is impeded.

Alternative Elements Considered but Dismissed From Further Consideration

1 **Construct an “Access Trail” to Hatteras Spit**

2 Over the past several years, the Seashore has provided ORV access to the back side of Hatteras spit
 3 whenever it is would not result in human safety or resource impacts. Some of the sound shoreline area is
 4 very narrow; having a small strip of sand that is subject to flooding at high tide unless one drives on the
 5 vegetation. This includes wetland vegetation that bounds it on the land side. Because it is problematic to
 6 access the Sound from Pole Road at other points, alternative F provides for ORV access to the Sound
 7 behind the Coast Guard Station, at Cable Crossing and at Spur Road, and did not carry an access trail to
 8 Hatteras Spit forward for further analysis.

9 **Add a Public Soundside Beach on Ocracoke**

10 NPS believes that the suggestion to provide a soundside beach on Ocracoke has merit. However, it is
 11 outside the scope of the ORV plan/EIS and was not included in the alternatives carried forward for further
 12 analysis. The NPS believes that it would be an appropriate topic for the Seashore’s upcoming GMP
 13 revision process.

14 **Divide the Seashore by Different Recreational Uses**

15 The purpose of the plan is to develop regulations and procedures that carefully manage ORV use/access
 16 in the Seashore to protect and preserve natural and cultural resources and natural processes; to provide a
 17 variety of visitor use experiences while minimizing conflicts among various users; and to promote the
 18 safety of all visitors. While it is recognized that individuals who use ORVs do so for a variety of purposes
 19 or to pursue different recreational interests, developing a nuanced approach to designating ORV areas
 20 based on the different individual interests would be extremely difficult and is beyond the scope of this
 21 plan. Therefore, this approach was not carried forward as an element of the alternatives evaluated. The
 22 NPS believes that the range of alternatives evaluated in this plan/EIS provide various ORV routes and
 23 vehicle-free areas, which offer visitors the opportunity to select the locations best suited for pursuing their
 24 respective interests, whether it be fishing, swimming, shell collecting, bird watching or other uses.

25 **Allow for a Greater Level of Night Driving at the Seashore**

26 During public comment on the draft plan/EIS, commenters requested that night driving only be restricted
 27 between May 27 and August 25, and requested that some level of nighttime access be maintained between
 28 these dates. NPS considered a range of dates for night driving from unrestricted night driving, 365 days
 29 per year in alternative A to the dates for nighttime restrictions in alternatives B – F. These dates were
 30 identified based on the sea turtle nesting season to reduce the chance for direct or indirect impacts to
 31 nesting sea turtles from ORV use. Since 2000, three nests were found prior to May 15 (two of which were
 32 leatherback nests) and four nests have been found after September 1. It is important to note that prior to
 33 2008, nest patrols were conducted only from June 1 through August 31 (2001–2005), or May 15 through
 34 September 15 (2006 and 2007). Any nests laid outside of that timeframe had a greater likelihood of not
 35 being found, recorded, and protected by resource management staff.

36 The NPS believes that nighttime restrictions from May 1 until November 15 provide the proper level of
 37 protection for sea turtles. Further, the NPS believe that providing exceptions to this would have adverse
 38 impacts to the species. Direct adverse impacts of nighttime driving were documented during the 2010
 39 nesting season when an ORV driving on the beach at night – in violation of the consent decree – struck
 40 and killed a nesting female loggerhead turtle during the nighttime hours between June 23 and June 24.
 41 The turtle had crawled out of the ocean and attempted to lay a nest between Ramps 70 and 72 on
 42 Ocracoke Island. The ORV hit the turtle and dragged her approximately 12 feet, causing fatal injuries.

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1 The turtle was found dead by NPS turtle patrol at 6:10 a.m. on June 24. This particular incident is the first
 2 documented time a nesting sea turtle has been killed by an ORV at the Seashore (NPS 2010b).

3 The NPS believes that nighttime restrictions from May 1 until November 15 provide the proper level of
 4 protection for sea turtles. Further, the NPS believes that providing exceptions to this would have
 5 unacceptable adverse impacts to sea turtles at the Seashore. For these reasons, the NPS did not
 6 specifically analyze a May 27 to August 25 nighttime driving restriction period.

7 **No Restrictions on ORV Use**

8 Unrestricted ORV use at the Seashore would not meet the purpose, need, and objectives of this plan/EIS.
 9 The purpose of this plan/EIS is to “develop regulations and procedures that carefully manage ORV
 10 use/access in the Seashore to protect and preserve natural and cultural resources and natural processes, to
 11 provide a variety of visitor use experiences while minimizing conflicts among various users, and to
 12 promote the safety of all visitors.” Unrestricted ORV use would not provide for a variety of appropriate
 13 uses and, therefore, not meet the plan/EIS need. Also, the need of the plan/EIS, including providing
 14 consistent management of ORV use, would not be addressed. Unrestricted ORV use would not meet
 15 many of the plan/EIS objectives that relate to managing ORV use. For example, the following three
 16 Visitor Use and Experience objectives would not be met if unrestricted ORV use was allowed:

- 17 • Ensure that ORV operators are informed about the rules and regulations regarding ORV use at the
 18 Seashore.
- 19 • Manage ORV use to allow for a variety of visitor use experiences.
- 20 • Minimize conflicts between ORV use and other uses.

21 Therefore, because it would not meet the purpose, need, and objectives of this plan/EIS, unrestricted ORV
 22 use was not carried forward for further analysis.

23 **SPECIES PROTECTION**

24 **Implement an Escort Program**

25 During development of the Interim Strategy, some alternative elements were considered but not carried
 26 forward because they would be reevaluated in this plan/EIS. One of these elements was the
 27 implementation of an escort program, whereby vehicles would be escorted around resource closures by
 28 Seashore staff.

29 This program would be similar to the situation in 2005, where at Hatteras Inlet Spit, ORV traffic was
 30 permitted only in the ORV corridor once per hour in convoys escorted by bird monitors, to reduce the risk
 31 of mortality to an American oystercatcher brood and to reduce disturbance to an incubating plover nest.
 32 ORVs were permitted to park at the tip of the spit, west of the escort corridor. The spit was closed to
 33 recreation at night. Once the piping plover eggs hatched, Hatteras Inlet Spit was closed to ORV traffic
 34 until the chicks fledged.

35 This type of escort system was considered for this plan/EIS, but, as stated in the Interim Strategy, the
 36 escort system would be extremely labor intensive to initiate, and providing the staffing levels necessary to
 37 adequately implement an escort program would likely not be feasible. This was demonstrated during the
 38 2005 season when the Seashore had to transfer personnel from other NPS units to implement the escort
 39 system. Due to the intensive staffing required for this effort, it was determined that this element would not
 40 meet the plan/EIS objectives related to Seashore operations.

Alternative Elements Considered but Dismissed From Further Consideration

1 **Provide an ORV Pass-through Corridor Through All Species Closures/Buffers**

2 During public comment on the draft plan/EIS, commenters recommended providing a corridor though all
 3 species resource closures and buffers. A buffer or resource closure is an area surrounding a sensitive
 4 resource, such as bird nests or chicks, which is closed to visitor access during critical life cycle stages to
 5 reduce human disturbance and the risk of mortality due to pedestrians and ORVs. Any passages,
 6 corridors, or pass-throughs that cut directly across/through a resource closures would essentially
 7 undermine the biological function of the closure and could render it compromised, perhaps even useless
 8 to the species it is meant to protect if all buffers include ORV corridors. Therefore, the element of
 9 including an ORV corridor in all buffers was not included in the range of alternatives, but a more limited
 10 concept of a pass-through was included in alternative E.

11 **Criteria for the Designation of SMAs**

12 During public comment on the draft plan/EIS, commenters recommended additional criteria for the
 13 designation of SMAs. Such criteria included areas of high quality habitat (even if there has not been
 14 recent breeding activity), how SMAs should be established and expanded, and the use of 10 years (rather
 15 than 5 years) of nesting history to designate these areas. The concept of including high quality habitat was
 16 incorporated in the range of alternatives by the use of prenesting surveys that would result in prenesting
 17 closures of suitable habitat. Although the SMA would not be designated based on the “high quality
 18 habitat” criteria, these areas would still be offered protection through the prenesting survey and closure.
 19 This would also apply to expanding SMAs; as although the SMA itself would not expand habitat outside
 20 the SMA would be protected through prenesting closures or breeding/nesting buffers. For these reasons,
 21 these elements were not carried forward for further analysis.

22 The use of 10 years, rather than 5 years, of nesting history to designate SMAs was not considered a
 23 reasonable alternative because so much potential nesting substrate is impacted and rearranged on an
 24 annual basis, especially during fall and winter storms. Since this area is frequently changing, it is believed
 25 that it is sufficient to use breeding and nesting location data from the five previous years in conjunction
 26 with an annual pre-season habitat assessment. Given how much annual change there is in suitable nesting
 27 substrates on barrier islands, 10 years of nesting/breeding data would very likely capture many sites that
 28 do not presently have sufficient potential to support breeding populations. As a result, the use of 10 years
 29 of nesting data was not carried forward for detailed analysis.

30 **Move Hatched Chicks to Pea Island National Wildlife Refuge or Other Area**

31 Commenters suggested moving hatched bird chicks from the beach to other areas where they would be
 32 protected. This conflicts with NPS responsibilities under the ESA, MBTA, *Organic Act* (as described in
 33 the turtle hatcheries section below), and the *NPS Management Policies 2006*. Further, moving chicks is
 34 not feasible because until they fledge, chicks must remain with their parents for foraging and protection.
 35 Relocating chicks would not meet the plan/EIS objective of minimizing adverse impacts to threatened,
 36 endangered, and other protected species.

37 **Provide Captive Rearing of Piping Plovers and Turtles**

38 Commenters suggested rearing endangered species in captivity. Wildlife managers use captive
 39 breeding/rearing of threatened or endangered species in the following circumstances: (1) to provide an
 40 opportunity to restore populations where direct translocation may risk the persistence of the donor
 41 population; or (2) as a last resort in cases where most or all of the entire remaining wild population are
 42 brought to a captive breeding facility with the goal of avoiding extinction and breeding enough
 43 individuals for eventual reintroduction into the wild (e.g., California condor) (Gilpin and Soulé 1986).

Chapter 2: Alternatives

1 The Kemp's ridley sea turtle hatchery at Padre Island National Seashore is an example of a last-resort
 2 captive rearing facility used to restore a population. None of these situations apply to piping plover or
 3 nesting loggerhead, leatherback, or green sea turtles at Cape Hatteras National Seashore, so this
 4 suggestion was not included in any of the alternatives. Furthermore, the revised Loggerhead Sea Turtle
 5 Recovery Plan (NMFS and USFWS 2008) recommends the use of the least manipulative method to
 6 protect nests and the discontinuance of the use of hatcheries as a nest management technique.

7 Relocate Bird and Turtle Nests

8 Commenters suggested that the Seashore relocate bird or turtle nests to areas of the beach already closed
 9 to ORV use or relocate nests to smaller, more compact areas to facilitate management. These alternatives
 10 have been considered but are not carried forward, as discussed below.

11 **Birds.** Some species of birds, such as the burrowing owl, adapt well to nest relocation, but others do not.
 12 Birds that do not relocate well typically are those that demonstrate higher levels of nest abandonment.
 13 Nest abandonment by piping plovers and American oystercatchers is a documented source of nest failure
 14 at the Seashore. Therefore, relocating nests would likely result in increased nest abandonment and failure.
 15 In addition, moving nests into one area would not be feasible. Plovers and oystercatchers are solitary
 16 rather than colonial nesters (i.e., they nest away from others of their species). Plovers sometimes nest near
 17 tern colonies to benefit from the aggressive behavior of terns protecting their colonies; however, they
 18 typically do not nest with other plovers. Since the purpose of the strategy is species protection, and
 19 moving nests would reduce these species' ability to reproduce, moving nests was eliminated from further
 20 analysis.

21 **Turtles – Routinely Relocate Turtle Nests.** Turtles do not face the same nest-abandonment issues as
 22 those described for birds. Parental investment in the young ends with the laying and burying of eggs.
 23 However, the eggs, subsequent hatchlings, and overall species may face additional problems related to
 24 nest relocation. Studies indicate that the determination of the hatchling sex ratio depends on the
 25 temperature at which the eggs incubate. Changes in these temperatures due to moving eggs may result in
 26 changes to the sex ratio, which would have implications for the species as a whole.

27 Other hatchling characteristics can be altered by relocating nests as well. Sea turtles naturally distribute
 28 their nests both temporally (nest several times throughout the nesting season) and spatially (locate nests
 29 low or high on the beach and in different sections along the beach). This not only helps to avoid
 30 completely losing their reproductive effort in case environmental factors (such as storms, temperature,
 31 and sand conditions) or if other incubation environments factors preclude development of the
 32 hatchlings/embryos, but it also varies the incubation environment of the eggs. In addition to sex ratio, the
 33 incubation environment has also been shown to influence among other things size, early swimming
 34 behavior, and early growth in hatchlings (Foley et al. 2006). Because the characteristics of hatchlings vary
 35 with incubation environments, a scattered nesting pattern also increases the variation of hatchling
 36 characteristics. -This variation ensures that, at all times, at least some hatchlings have characteristics that
 37 are appropriate for survival. The exact characteristics that are best suited for survival vary unpredictably
 38 over space and time (Carthy et al. 2003). Relocating nests and/or concentrating them in one area of a
 39 beach (e.g., hatchery or corral areas) may very well reduce the variety of incubation environments that
 40 could influence the development of hatchling characteristics that increase survival rates (Foley et al.
 41 2006).

42 In addition, handling eggs can result in increased hatch failure. When relocating nests, there is always a
 43 risk of disrupting the membranes inside the eggs, which can kill the embryos. Typically, a blanket policy
 44 of routinely relocating all or most turtle nests is seen as part of an intensive management effort to keep the
 45 species from going extinct, whereas allowing for natural breeding and nesting is the preferred option

Alternative Elements Considered but Dismissed From Further Consideration

1 whenever available. The revised Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008)
 2 recommends the use of the least manipulative method to protect nests and states that as a general rule,
 3 nests should only be relocated if they are low enough on the beach to be washed daily by tide or if they
 4 are situated in well documented high-risk areas that routinely experience serious erosion and egg loss.
 5 Currently in North Carolina, the state permits sea turtle nest relocations for research or when there is an
 6 imminent threat and potential loss of the nest due to erosion or frequent flooding, but not to accommodate
 7 recreational uses. Nests in some states may be moved to avoid damage from beach nourishment or in
 8 highly developed urban areas (e.g., along some urban areas of Florida's Atlantic Coast). None of these
 9 special conditions apply at the Seashore. Consequently, routine relocation of all nests to allow for
 10 recreational access is not considered in this plan/EIS. However, the NPS would continue its current
 11 practice of coordinating with the State of North Carolina to consider relocating an individual nest facing
 12 inundation or other adverse factors.

13 **Turtles – Use Turtle Hatcheries.** Moving all nests or all relocated nests into one hatchery area is not
 14 fully analyzed as part of any alternative. Sea turtle nests may be moved to a guarded hatchery to provide
 15 needed protection from poaching in developing countries where participation in hatchery operations may
 16 be used as an eco-tourism opportunity. Some county or privately owned beaches in Florida or Georgia
 17 may use hatcheries for sea turtle eggs in some circumstances, such as to allow beach nourishment.
 18 However, county responsibilities for endangered or threatened species differ from federal, and
 19 particularly from NPS, responsibilities for these protected species. As a federal agency, the NPS has
 20 responsibilities under the ESA to protect the ecosystem as well as the species that depend on it. The
 21 purpose of the ESA is to “provide a means whereby the ecosystems upon which endangered species and
 22 threatened species depend may be conserved” (sec. 2(b)). Protecting the ecosystem is also necessary to
 23 meet the requirements of the *Organic Act*, which mandates the NPS to conserve Seashore wildlife (refer
 24 to the “Other Applicable Federal Laws, Policies, Regulations and Plans” section in chapter 1 of this
 25 document).

26 Loggerhead sea turtles, the predominant nester at the Seashore, as well as leatherback and green sea
 27 turtles are all currently listed pursuant to the ESA. Any actions that would likely reduce productivity and
 28 cause a decline in the species would not be consistent with the purpose of the Act. The revised
 29 Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008) recommends the discontinuance of the
 30 use of hatcheries as a nest management technique and states that relocating nests into hatcheries
 31 concentrates eggs in an area and makes them more susceptible to catastrophic events and predation from
 32 both land and marine predators. It also can increase the potential for disease, such as fungal problems, to
 33 spread to all nests and result in egg mortality. Using corrals also usually results in hatchlings being
 34 released in the same location.- This has the potential to increase predation in the ocean area surrounding
 35 the release site after the hatchlings reach the water. Therefore, use of hatcheries was not considered in this
 36 plan/EIS.

37 **Modify the Turtle Program**

38 During public comment on the draft plan/EIS, commenters recommended modifying the turtle program to
 39 include nest relocation (discussed above), the use of volunteers (discussed below), different predator
 40 management techniques, varying buffer sizes, and varying the type of data collected for sea turtles. Under
 41 alternative F, sea turtle management procedures at the Seashore are based on the latest scientific research,
 42 and are consistent with the most current U.S. Fish and Wildlife Service Recovery Plan for the Northwest
 43 Atlantic Population of the Loggerhead Sea Turtle (NMFS and USFWS 2008) and NCWRC guidelines
 44 (NCWRC 2006). -Both guidelines documents have been developed by scientific experts in the field of
 45 loggerhead sea turtle biology and conservation. Additional information on why these elements were not
 46 carried forward can be found in Appendix C: Concern/Response Report (see response to Concern ID
 47 24193, 24143 and 24233).

1 **Additions to the Shorebird Monitoring Program and Data Collection**

2 During public comment on the draft plan/EIS, commenters recommended additions to the Seashore's bird
 3 monitoring and data gathering procedures including recording the GPS location for banded birds, that
 4 scopes be used rather than binoculars, use of experimental design comparing bird populations in areas
 5 open or closed to vehicles, and discontinuing use of the SECN protocol for monitoring. A suggestion was
 6 also made that non-breeding surveys be designed to occur at multiple distinct tidal stages. For the
 7 following reasons, NPS would continue to do what it has been doing for the nonbreeding shorebird
 8 surveys. First, SECN is the NPS Southeast Regional Office Inventory and Monitoring Program data
 9 collection arm, and it is appropriate for the Seashore to follow their technical guidance on monitoring
 10 methodology. Second, data collection techniques do not include larger transects because the counts are
 11 not meant to count every single bird, but are designed to show trends over time. Trends over time can be
 12 monitored without counting every bird. Third, the current transects are timed transects, which means they
 13 cannot be interrupted to obtain band data. Finally, the recently signed MOU between the -USFWS and the
 14 NPS (<http://www.fws.gov/migratorybirds/Partnerships/NPSEO13186Signed%204.12.10.pdf>) commits
 15 NPS to working with its Inventory and Monitoring Program, of which SECN is a part, for migratory bird
 16 data collection.

17 **Implement a Volunteer Program to Assist with Species Protection**

18 During public comment on the draft plan/EIS, some commenters recommended the Seashore use
 19 volunteers to implement a range of species management measures such as monitoring nesting activity, a
 20 beach watch program, and vehicle escorts. The primary purpose of the NPS volunteers in parks program
 21 is to use volunteer help that is mutually beneficial to the NPS and the volunteer. The NPS recognizes the
 22 importance of encouraging stewardship through volunteer opportunities and will utilize volunteers when
 23 deemed appropriate and resources are available to run such a program. The NPS will work at integrating
 24 volunteers back into the less sensitive aspects of the species monitoring program. At this time, NPS
 25 believes that the best use of volunteers for species protection activities would be in a trained volunteer
 26 program for watching sea turtle nests that have reached their hatch windows to monitor hatchling
 27 emergence and success reaching the water, and to inform the public on ways to minimize negative
 28 impacts from artificial lighting, predation, and human disturbance. This program should enhance
 29 protection and encourage ownership/stewardship of resources among the public, and provide a beneficial
 30 situation for both the NPS and the volunteers. However, at this time, with the current controversy over
 31 ORV and protected species management, using volunteers to act as vehicle escorts or to monitor nesting
 32 activity (such as the morning sea turtle patrol) is not feasible as an alternative element because actions
 33 taken by trained park staff are so closely scrutinized and criticized and we would not want to ask
 34 volunteers to be responsible for implementing controversial on-site activities or decisions.

35 **~~hatchling minimize.~~ Create an Oversight Committee with External Experts and Scientists**

36 Creating an oversight committee with external experts and scientists under the Federal Advisory
 37 Committee Act (FACA) has been considered but dismissed as a reasonable alternative for further
 38 analysis. FACA restricts the establishment of such committees to situations "when they are determined to
 39 be essential" (FACA sec 2(b)(2)). The creation of the suggested oversight committee is not "essential." In
 40 its practical application, a FACA committee would be mostly redundant with the current NPS process of
 41 seeking scientific and technical consultation or advice as required or appropriate from species scientific
 42 experts in other agencies, organizations and academia. Additionally, the significant administrative costs in
 43 staff time and money incurred in establishing and maintaining a FACA committee are not warranted
 44 when the needed scientific advice can be obtained less expensively and more efficiently. Based on the
 45 recent NPS experience with the negotiated rulemaking committee, established under FACA, the
 46 suggested oversight committee would not be likely to provide the NPS with clear and consistent,

Alternative Elements Considered but Dismissed From Further Consideration

1 actionable; advice, and managing the committee would require a commitment of staff time that could not
 2 be sustained over the life of the plan.

3 **Open All Closed Areas after Breeding Season Is Over**

4 Commenters suggested that all closed areas should be reopened after the breeding season ends. Most
 5 closed areas would likely be reopened after the breeding season if the areas do not provide important
 6 migrating and wintering habitat for Seashore populations of protected species. Therefore, some areas may
 7 be reopened, but automatically opening all closed areas after the breeding season would be inconsistent
 8 with the Seashore's responsibility under various statutes, including its enabling legislation, the *Organic*
 9 *Act*, the ESA, the MBTA, and the *NPS Management Policies 2006*, section 4.4.2.3. The alternatives in the
 10 plan/EIS do consider various ways to address resource-based closures, but the alternatives do not allow
 11 for automatic opening after the breeding season is over if species are still present.

12 **Create New Habitat**

13 Commenters suggested various ways that habitat could be created to provide alternative areas for bird
 14 species at the Seashore. Some of these suggestions included letting ORVs drive on the vegetation to
 15 create habitat or physically creating habitat using dredge material in the sound or by other means. These
 16 suggestions were considered by the Seashore but are not carried forward in this plan/EIS for the following
 17 reasons:

- 18 • **Allow visitors in ORVs to enhance habitat by driving over vegetated areas.** It has long been
 19 documented that even a low level of ORV use can cause severe degradation of coastal vegetation
 20 (Leatherman and Godfrey 1979). The Seashore recognizes that ORV use at certain locations
 21 could be an effective way to manage the encroachment of vegetation into existing shorebird
 22 nesting habitat. However, use of ORVs to create new habitat implies a large-scale use of vehicles
 23 to remove vegetation, which is typically protected under various NPS regulations and under the
 24 Executive Orders on ORV use. While removal of vegetation by any means to create new habitat
 25 may be appropriate and beneficial in certain circumstances, such a project would need to be
 26 planned, implemented, and studied by scientists or resource managers with the appropriate
 27 expertise. Therefore, allowing visitors in ORVs to create habitat was not considered in this
 28 plan/EIS.
- 29 • **Create habitat through physical alteration or the creation of dredge islands.** The NPS
 30 considered creating habitat through various methods. Based on the experience of staff at the
 31 NCWRC, habitat-creation projects tend to be short-lived and labor intensive. Based on experience
 32 with hand pulling, herbicides, fires, and bulldozing, it was found that most of these techniques are
 33 effective for only one season before the vegetation returns. Covering areas with new dredge
 34 material has been shown to last longer, with vegetation returning after four to seven years
 35 (Cameron pers. comm. 2007). Although the NPS recognizes that creation of habitat may be viable
 36 under certain circumstances, it is not an appropriate substitute for providing adequate protection
 37 of existing habitat. If this method is employed, it would occur outside the scope of the plan/EIS
 38 and therefore was not included in the alternatives.

39 **Fence Chicks Away from the ORV Corridor**

40 Commenters suggested using barrier fencing, rather than symbolic fencing, to keep chicks away from the
 41 ORV corridors. Unfledged piping plover and American oystercatcher chicks need access to the intertidal
 42 zone and moist substrate habitat for foraging and chicks of all beach nesting bird species may utilize those

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1 same areas for thermal regulation. Fencing chicks away from these areas would essentially reduce their
2 chances of survival; therefore, this was not considered a reasonable alternative.

3 **Do Not Provide Protection to the Seabeach Amaranth**

4 Commenters suggested that seabeach amaranth is a “farmed” plant and should not be offered special
5 protection. However, the seabeach amaranth is protected as a federally listed threatened plant species.
6 Under the ESA, federal agencies are required to use their authority in furtherance of the purposes of the
7 ESA by carrying out programs for the conservation of endangered and threatened species and to ensure
8 that any agency action authorized, funded, or carried out by the agency is not likely to jeopardize the
9 continued existence of any endangered species or threatened species or result in the destruction or adverse
10 modification of designated critical habitat. Further, *NPS Management Policies 2006* state that “the
11 Service will survey for, protect, and strive to recover all species native to national park system units that
12 are listed under the *Endangered Species Act*” (NPS 2006c). The management policies also state that the
13 NPS will “successfully maintain native plants and animals by preserving and restoring the natural
14 abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal
15 populations and the communities and ecosystems in which they occur; restoring native plant and animal
16 populations in parks when they have been extirpated by past human-caused actions; and minimizing
17 human impacts on native plants, animals, populations, communities, and ecosystems, and the processes
18 that sustain them.” Not providing protection to a federally listed threatened species would be out of
19 compliance with the ESA and contrary to the *NPS Management Policies 2006*, and was therefore not
20 included in the alternatives of this plan/EIS.

21 **Give Special Consideration Only to Flora and Fauna Listed as Threatened and** 22 **Endangered**

23 Commenters suggested that only those species listed as threatened or endangered under the federal ESA
24 should be considered in this plan/EIS. As stated above, the NPS has legal responsibilities under the ESA
25 and its own policies to protect threatened and endangered species. Further, a number of laws,
26 regulations, and policies, in addition to the ESA, guide species management at the Seashore, including the
27 *Organic Act*, the MBTA, NPS regulations and policies, Executive Orders 11644 and 11989: Use of Off-
28 Road Vehicles on the Public Lands (see chapter 1), Executive Order 13186: Responsibilities of Federal
29 Agencies to Protect Migratory Birds, and others (see chapter 1). Executive Order 11644 provides that
30 areas designated for ORV use shall be located to minimize harassment of wildlife or significant disruption
31 of wildlife habitats. *NPS Management Policies 2006* section 4.4.2.3 states, in part, that the NPS will
32 inventory, monitor, and manage state- and locally listed species in a manner similar to its treatment of
33 federally listed species to the greatest extent possible. In addition, the NPS will inventory other native
34 species that are of special management concern to parks (such as rare, declining, sensitive, or unique
35 species and their habitats) and will manage them to maintain their natural distribution and abundance. The
36 combination of laws, regulations, and policies included in this section of the plan/EIS create the
37 framework in which the alternatives are developed, which includes the need to manage species that are
38 considered to be of special concern, such as state-listed species, or those addressed by the MBTA.
39 Because of these responsibilities, only considering flora and fauna listed as federally threatened or
40 endangered was not included in the plan/EIS alternatives.

41 **OTHER ISSUES**

42 **Rebuild the Dunes**

43 One commenter suggested the NPS rebuild the dunes in front of NC-12. While the NPS had engaged in
44 [addressing](#) dune rebuilding [activities](#) in the past, such as to protect NPS structures on Bodie Island, this

Consistency with the Purposes of NEPA

1 activity is beyond the scope of this plan/EIS and could be addressed later in the general management plan
2 process that the Seashore will undertake in the future.

3 **Prohibit Gill Net Fishing**

4 Some commenters asked that the Seashore prohibit gill net fishing. Fishing activities, both commercial
5 and recreational, require a Standard Commercial Fishing License or a Recreational Commercial Gear
6 License from the state of North Carolina. The license and related state fishing regulations specify the type
7 of nets that commercial fishermen are allowed to use, which includes the use of gill nets that conform to
8 requirements for mesh size, yardage, and marking (NCDMF 2009). The type of gear used by commercial
9 fisherman is outside the scope of this plan; therefore, it was not included as an element of the plan/EIS.

10 **Provide an Area for Off-Leash Dogs**

11 Commenters suggested that dogs be allowed off leash at the Seashore, either seasonally, in certain areas
12 of the Seashore under voice control, or through the creation of a dog-training area. Currently, pets at the
13 Seashore are regulated under 36 CFR 2.15, which applies to all units of the national park system and
14 prohibits pet owners from “failing to crate, cage, restrain on a leash which shall not exceed 6 feet in
15 length, or otherwise physically confine a pet at all times.” Creation of off-leash areas would not be
16 consistent with 36 CFR 2.135 and would require its own planning process and promulgation of a special
17 regulation allowing off-leash dog use, which is outside the scope of the plan/EIS.

18 ~~promulgation of a special regulation allowing off-leash dog use, which is outside the scope of the~~
19 ~~plan/EIS. Therefore, this element was not carried forward in any alternative.~~

20 **CONSISTENCY WITH THE PURPOSES OF NEPA**

21 The NPS requirements for implementing NEPA include an analysis of how each alternative meets or
22 achieves the purposes of NEPA, as stated in sections 101(b) and 102(1). Each alternative analyzed in an
23 EIS-NEPA document must be assessed as to how it meets the following purposes:

- 24 1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding
25 generations.
- 26 2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing
27 surroundings.
- 28 3. Attain the widest range of beneficial uses of the environment without degradation, risk of health
29 or safety, or other undesirable and unintended consequences.
- 30 4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain,
31 wherever possible, an environment that supports diversity and variety of individual choice.
- 32 5. Achieve a balance between population and resource use that will permit high standards of living
33 and a wide sharing of life’s amenities.
- 34 6. Enhance the quality of renewable resources and approach the maximum attainable recycling of
35 depletable resources.

36 CEQ Regulation 1500.2 establishes policy for federal agencies’ implementation of NEPA. Federal
37 agencies shall, to the fullest extent possible, interpret and administer the policies, regulations, and public

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1 laws of the United States in accordance with the policies set forth in NEPA (sections 101(b) and 102(1));
2 therefore, other acts and NPS policies are referenced as applicable in the following discussion.

- 3 1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding
4 generations.

5 As noted in the analysis, alternatives B, C, D, E, and F provide increased protection for sensitive
6 species at the Seashore, through increased resource protection buffers and limitations on
7 recreational access. Limitations on access would not only benefit threatened, endangered, and
8 special status species, but would also provide protection to other physical resources at the
9 Seashore such as wetlands, vegetation, and other wildlife.

10 Alternative D would provide year-round SMAs that would limit recreational access in these
11 areas, particularly during the breeding season, and would offer the greatest level of species
12 protection among the action alternatives. Through these access limitations, as well as other
13 provisions such as seasonal night-driving restrictions and the implementation of a permit system
14 that would provide user education and increase awareness alternative D would fully meet the
15 purpose of fulfilling the responsibilities of each generation as trustee of the environment for
16 succeeding generations, by providing the greatest potential for the survival of sensitive species in
17 the long term, while at the same time protecting other physical resources of the Seashore.
18 Alternatives C, E, and F would meet this purpose to a large degree but not fully because of
19 greater potential for impacts to sensitive species from human disturbance as [some-shorebird](#)
20 [breeding habitat SMAs in some locations](#) would include pedestrian or ORV access corridors,
21 thereby increasing recreational access to these sensitive areas. Alternatives E and F would not
22 offer the same level of seasonal night-driving restrictions, with less hours closed each night,
23 providing a somewhat lesser level of protection than alternatives C and D. Further, providing
24 opportunities for access either through park-and-stay or SCV camping under alternative E would
25 also increase recreational access, introducing potential disturbance to protected species, as well
26 as other physical resources at the Seashore.

27 Alternative B would only meet this purpose to a moderate degree, as seasonal night-driving
28 restrictions would offer the species additional protection, but without the SMAs, the proactive
29 restriction of recreation would not be in place and could result in long-term threats to sensitive
30 species from recreational use. Alternative A would only meet this purpose to some degree as
31 there would be no seasonal night-driving restrictions and buffers would require frequent
32 adjustments to provide adequate protection, thereby not providing optimal protection for the
33 species.

- 34
35 2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing
36 surroundings.

37 All alternatives meet this purpose to some degree because the Seashore is a safe visitor
38 destination that is both esthetically and culturally pleasing. The action alternatives (alternatives
39 C, D, E, and F) increase safety by establishing a 15 mph speed limit within the entire Seashore.
40 For pedestrian user groups, the establishment of vehicle-free areas, particularly under alternative
41 D, may provide the greatest safety and esthetic benefits as pedestrian and vehicular uses would
42 be separated. However, alternative D does not establish any safety closures although most areas
43 historically closed for safety reasons would be closed under alternative D. Alternative F would
44 provide additional safety benefits by establishing right-of-way requirements and additional speed
45 limit reductions when pedestrians are present. Also under the action alternatives, the [designation](#)
46 [of establishment of ORV routes](#) and [vehicle-free non-ORV](#) areas would reduce the potential for,

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1 as well as the perception of, visitor conflict issues. Although actual visitor conflicts ~~issues may or~~
 2 may not ~~always happen~~ exist when ~~with~~ these two uses occur in the same area, providing vehicle-
 3 freedom ORV areas would eliminate the potential for conflicts in those areas and address the
 4 feeling of those who perceive there could be a conflict or other safety issue.

5 Of all the alternatives, alternative A would meet this purpose to the least degree, as it would not
 6 separate vehicular and pedestrian uses to the degree that the action alternatives would, and off-
 7 season speed limits would remain at 25 mph. Likewise, alternative B lowers speed limits, but still
 8 does not provide separation of uses and would not address any perceived safety or conflict issues
 9 associated with having ORV and non-ORV use in the same area. Although alternatives C, D, and
 10 E would meet this purpose to a large degree, alternative F would fully meet this purpose by
 11 establishing a reduced speed limit, providing some level of pedestrian and vehicular separation,
 12 and establishing right of way requirements not present in the other alternatives.

- 13 3. Attain the widest range of beneficial uses of the environment without degradation, risk of health
 14 or safety, or other undesirable and unintended consequences.

15 All alternatives offer a wide range of visitor use opportunities, including vehicular use,
 16 recreational fishing, swimming, walking, sunbathing, other general beach recreation, and
 17 commercial fishing. However, the intensity of recreational use allowed under a particular
 18 alternative could lead to resource degradation or risks to health and safety. Alternative A allows
 19 the most intense levels of ORV and pedestrian use that could potentially lead to environmental
 20 degradation and safety concerns and only meets this purpose to some degree. Alternative B
 21 provides additional protection of natural resources through the establishment of larger buffers
 22 and restrictions on night driving for sea turtle protection. However, this alternative does not
 23 directly address the level of recreational use and any safety or environmental concerns that may
 24 be associated with increasing visitor use patterns. Under alternative B, which bases closures on
 25 species behavior, there is the potential for large areas of the Seashore to be closed and these areas
 26 would vary from season to season based on protected species breeding behavior. Therefore,
 27 alternative B meets this purpose to a moderate degree due to added protection for sensitive
 28 species, but does not meet it to a larger degree because the provision of other uses of the
 29 Seashore would be unpredictable. ~~A. The action alternatives C, D, and E include the~~
 30 ~~establishment of SMAs, while alternative F relies on prenesting closures and standard buffers~~
 31 ~~when breeding activity is observed, to reduce the disturbance of habitat for sensitive species~~
 32 ~~habitat. These measures, combined with~~ increased resource protection buffers, reduced speed
 33 limits, some measure of separation of vehicular and pedestrian uses, and methods for establishing
 34 a carrying capacity ~~so as to~~ reduce the environmental and safety concerns associated with large
 35 numbers of vehicles and pedestrians in one area. Therefore, all action alternatives would meet the
 36 intent of this purpose to a moderate or large degree. However, alternative D would reduce the
 37 potential for environmental impacts and visitor conflicts by prohibiting vehicles in all SMAs
 38 year-round. Therefore, alternative D would fully meet this purpose.

- 39 4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain,
 40 wherever possible, an environment that supports diversity and variety of individual choice.

41 Because none of the alternatives would result in impacts to cultural or historic resources that
 42 would exceed minor, these topics were dismissed from further analysis in this plan/EIS. Overall,
 43 since any impacts to cultural or historic resources would not exceed minor, all alternatives would
 44 preserve important historic and cultural aspects of our national heritage in the long term and
 45 would meet this purpose to a large degree, with alternatives that restrict recreational access
 46 seasonally and at night (alternatives B, C, D, E, and F), meeting it for natural resources to a

Chapter 2: Alternatives

1 larger degree than alternative A. As discussed under criteria 1 and 2, due to use restrictions,
 2 alternatives C, D, E, and F would better protect resources, which would in turn support diversity,
 3 and due to the separation of visitor uses and addition of visitor amenities, would better support a
 4 variety of individual choices than alternatives A and B.

- 5 5. Achieve a balance between population and resource use that will permit high standards of living
 6 and a wide sharing of life's amenities.

7 Balancing population and resource use under the plan/EIS would include protecting the resources
 8 unimpaired for the enjoyment of present and future generations and providing access for visitors
 9 to experience the natural resources of the Seashore. NPS *Management Policies 2006* states that
 10 the enjoyment that is contemplated by the *Organic Act* is broad; it is the enjoyment of all the
 11 people of the United States and includes enjoyment both by people who visit parks and by those
 12 who appreciate them from afar. It also includes deriving benefit (including scientific knowledge)
 13 and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress,
 14 recognizing that the enjoyment by future generations of the national parks can be ensured only if
 15 the superb quality of park resources and values is left unimpaired, has provided that when there is
 16 a conflict between conserving resources and values and providing for enjoyment of them,
 17 conservation is to be predominant. As discussed above, alternatives C, D, E, and F would provide
 18 [species management strategies that include pre-nesting areas, standardized buffers when breeding](#)
 19 [activities are observed, SMAs, and](#) seasonal night-driving restrictions, as well as implementation
 20 of a permit system, all of which are expected to benefit the natural resources at the Seashore and
 21 would provide an amenity ([resources](#)) for visitors to experience that would permit a high
 22 standard of living. All of the alternatives evaluated would allow some level of access to the
 23 Seashore that would contribute to the sharing of these amenities. As visitation to the Seashore
 24 increases and the population of the area continues to increase, having areas with designated
 25 resource closures under the action alternatives would contribute to the protection of the
 26 Seashore's natural resources.

27 Given this, alternatives A and B would meet this purpose to some degree because they would
 28 provide the public access to share these amenities, but would not offer a high level of protection
 29 to natural resources. Without a higher level of protection, these amenities may not be available
 30 for the enjoyment of future generations.

31 Alternatives ~~C and E, and F~~ would provide access to the Seashore and the amenities therein,
 32 and offer protection of these amenities by establishing SMAs [and by implementing seasonal](#)
 33 [night-driving restrictions. In alternatives C and E, some of the SMAs would be under ML2](#)
 34 [management measures, which would provide a higher level of access and use to those areas](#)
 35 [\(including ORV and pedestrian corridors\). Alternative F would provide access to the Seashore](#)
 36 [and the amenities therein, and would protect sensitive wildlife habitat through the designation of](#)
 37 [year-round ORV routes and vehicle-free areas, the use of prenesting closures in some locations,](#)
 38 [and standard buffers \(equivalent to ML2\) in all locations, and by implementing seasonal night-](#)
 39 [driving restrictions. Under alternatives C, E, or F, a](#) However, in these alternatives, some of the
 40 ~~SMAs would be under ML2 management measures, which would provide a higher level of~~
 41 ~~access and use to those areas (including ORV and pedestrian corridors).~~ Allowing this level of
 42 use, particularly as the population grows, may not fully protect the natural resources at the
 43 Seashore. As access to certain areas of the Seashore may adversely impact some of the
 44 Seashore's natural resources, especially in light of population growth, ~~these~~ alternatives [C, E, and](#)
 45 [F](#) would only meet this purpose to a moderate degree.

Environmentally Preferable Alternative

1 Alternative D would meet this purpose to a large degree by establishing SMAs that are closed to
 2 ORV use and pets year-round, and pedestrians during the breeding season. Establishing these
 3 areas, year after year, would ensure a level of protection that would allow the natural resources to
 4 remain amenities that contribute to a high standard of living, while providing a level of access to
 5 the Seashore beaches that would ensure that the visiting public would be able to share these
 6 amenities.

- 7 6. Enhance the quality of renewable resources and approach the maximum attainable recycling of
 8 depletable resources.

9 For reasons discussed above, in varying degrees the action alternatives (alternatives C, D, E, and
 10 F) would enhance the quality of the Seashore's biological and physical resources. Alternative B
 11 also provides a greater level of protection for these resources than alternative A. The second
 12 purpose, "approach the maximum attainable recycling of depletable resources," is less relevant to
 13 an ORV management plan, as it is geared toward a discussion of "green" building or
 14 management practices. There would be no construction related to the no-action alternatives, so
 15 this purpose would not apply. The action alternatives would involve the construction of new
 16 ramps and parking areas using environmentally appropriate design standards to minimize
 17 stormwater runoff. Ramps would be constructed of a semi-permeable natural clay/shell base.

18 However, as discussed in chapter 1 of this document, each of the alternatives would require that
 19 the Seashore continue to operate under the wise energy use guidelines and requirements stated in
 20 the NPS *Management Policies 2006*; Executive Order 13123, Greening the Government Through
 21 Effective Energy Management; Executive Order 13031, Federal Alternative Fueled Vehicle
 22 Leadership; Executive Order 13149, Greening the Government Through Federal Fleet and
 23 Transportation Efficiency; and the 1993 NPS Guiding Principles of Sustainable Design and
 24 therefore would fully meet this purpose.

25 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

26 The NPS is required to identify the environmentally preferable alternative in its NEPA documents for
 27 public review and comment. The NPS, in accordance with the U.S. Department of the Interior policies
 28 contained in the Department Manual (515 DM 4.10) and CEQ's Forty Questions, defines the
 29 environmentally preferable alternative (or alternatives) as the alternative that best promotes the national
 30 environmental policy expressed in NEPA (section 101(b)) (516 DM 4.10). The CEQ's Forty Questions
 31 (Q6a) further clarifies the identification of the environmentally preferable alternative stating, "this means
 32 the alternative that causes the least damage to the biological and physical environment; it also means the
 33 alternative which best protects, preserves, and enhances historic, cultural, and natural resources."

34 Alternative D was identified as the environmentally preferable alternative because it bests protects the
 35 biological and physical environment by

- 36 • Providing SMAs in known breeding/nesting areas throughout the Seashore, all under ML1
 37 management. Specifically, these SMAs would provide the following:
 - 38 – A proactive way to protect large areas of the Seashore where protected species are known to
 39 breed and nest by prohibiting ORV use and pets in these areas year-round and only allowing
 40 pedestrian access outside of the breeding season.
 - 41 – The greatest level of spatial and temporal protection through the establishment of SMAs that
 42 are all managed under ML1 procedures year-round.

Chapter 2: Alternatives

- 1 – A benefit to wintering bird populations at the Seashore that would also utilize the large
2 vehicle-free areas provided under the SMAs for alternative D.
- 3 – Buffers around those species found breeding/nesting outside the SMAs, further offering
4 protection to protected species and species of concern at the Seashore.
- 5 – Large, year-round ORV-free areas that would benefit other protected species, including sea
6 turtles and seabeach amaranth.
- 7 – A level of predictability to ORV users at the Seashore that would be expected to decrease the
8 level of non-compliance with species management measures.
- 9 • Including seasonal night-driving restrictions in areas where ORVs are permitted that would
10 restrict nighttime use from 7:00 p.m. to 7:00 a.m. from May 1 to November 15. The seasonal
11 duration of the closures, as well as the length of the nightly closure, would offer protection to sea
12 turtles nesting and hatching during that time, and allow Seashore staff the time to record and
13 document nests each morning, decreasing the possibility of undiscovered nests.
- 14 • Minimizing the extent and location of interdunal roads, ramps, or parking lots that would be
15 added, further minimizing disturbance under this alternative, when compared to alternatives C, E,
16 and F.
- 17 • Implementing a permit system to provide ORV users with education that is expected to decrease
18 the level of non-compliance related to resource closure areas.

19 Overall, establishing SMAs that are closed year-round to ORVs and pets, and closed to pedestrians during
20 the breeding season, along with seasonal night-driving restrictions beginning at 7:00 p.m., the least
21 amount of construction of all the alternatives, and required buffers for all protected species found outside
22 the SMAs, would best protect, preserve, and enhance the Seashore's resources.

23 **NATIONAL PARK SERVICE PREFERRED ALTERNATIVE**

24 To identify the preferred alternative, the planning team evaluated each alternative based on its ability to
25 meet the plan objectives (see table 12) and the potential impacts on the environment (see chapter 4 of this
26 document). Alternative F was identified as the NPS preferred alternative. [Based on public and agency
27 comments received on the draft plan/EIS, the NPS has revised the preferred alternative as described in
28 this document \(the final plan/EIS\).](#)

29 Both alternatives D and F would ~~fully~~ meet ~~most of~~ the plan objectives ~~either fully or~~ to a large degree
30 ~~and are very close in their degree of meeting of all objectives and their relative impacts~~. In terms of
31 species protection, both alternatives would provide the necessary buffers, as well as the proactive
32 establishment of ~~prenesting areas and protection of breeding and nonbreeding shorebird habitat~~ SMAs, ~~for~~
33 ~~the management of threatened and endangered species~~. Seasonal night-driving restrictions would be
34 similar under both of these alternatives, offering comparable protection to sea turtles and foraging bird
35 species. However, alternative F was chosen as the preferred alternative because it would provide ~~not only~~
36 ~~effective resource protection but also would provide the~~ Seashore ~~visitors~~ with more ~~diverse options for~~
37 ~~access and recreational use~~ flexibility in management. ~~Providing approximately 26 miles of the Seashore~~
38 ~~that are designated VFAs year-round, while 28 miles are open to ORV use year-round (subject to~~
39 ~~resources closures), would provide for a greater diversity of visitor use~~. Although designation of all
40 SMAs as year-round ORV closures under alternative D would provide the necessary resource protection,
41 ~~the use of ML1 buffers in all SMAs would preclude all visitor access in these areas during the breeding~~
42 ~~season. If protected species do not utilize portions of the SMAs or if the~~ conditions of the Seashore
43 change and habitat changes, alternative D does not provide as much flexibility ~~for the Seashore to manage~~
44 ~~visitor access~~ as alternative F, ~~which provides for designated ORV routes that would remain open unless~~

National Park Service Preferred Alternative

1 ~~protected species activity results in a resource closure, for the NPS to respond to these conditions.~~
 2 ~~Further, alternative F would provide additional and flexible protection to nonbreeding species through~~
 3 ~~“floating” species closures each year, providing more protection for the species during this life stage than~~
 4 ~~alternative D. In addition to flexibility in providing species protection, both during the breeding and~~
 5 ~~nonbreeding seasons, alternative F would also provide more flexibility and range of experience for visitor~~
 6 ~~use and would enhance access to both VFAs and designated ORV routes by including establishing~~
 7 ~~strategically located new parking areas, pedestrian trails, interdunal routes, and ORV ramps as well as~~
 8 ~~providing both ORV and non-ORV use in SMAs. Because alternative F provides for a greater variety of~~
 9 ~~uses throughout the Seashore, it would have less of an impact on the socioeconomics of the area as well.~~
 10 ~~As detailed in the impact analysis in chapter 4, alternative D would have greater impacts to the economy~~
 11 ~~of the villages within the Seashore. In addition, alternative F also would mitigate the potential economic~~
 12 ~~and visitor impacts by encouraging alternative forms of access (water taxi and beach shuttle) to certain~~
 13 ~~popular areas during times when they may be open for pedestrian use, but the area of beach containing an~~
 14 ~~ORV or pedestrian access ramp across the dune line access to the area may be closed due to a resource~~
 15 ~~closure. By providing an alternate means for accessing these areas, beneficial economic impacts would be~~
 16 ~~expected. Alternative F was is also selected as the NPS preferred alternative because it would~~
 17 ~~incorporate some concepts and measures that originated in or were discussed during input from the~~
 18 ~~negotiated rulemaking process, providing more public input. For these reasons, alternative F was selected~~
 19 ~~as the preferred alternative.~~

20 Alternatives C and E would meet the objectives from a moderate to a large degree, but to a lesser degree
 21 when compared to alternative D because of the larger areas of recreational access allowed. By allowing
 22 more access to various areas of the Seashore during the breeding season of threatened, endangered, and
 23 species of special concern, the level of protection offered to these species would be less than
 24 alternative D.

25 Alternatives A and B, on the whole, would meet the objectives from some degree to a moderate degree.
 26 These alternatives would not meet key objectives (such as those related to providing protection for
 27 threatened and endangered species and minimizing impacts to other natural resources at the Seashore) as
 28 well as the action alternatives. Because these alternatives would not meet the objectives to a large degree,
 29 they were not selected as the preferred alternative. ~~NPS has will considered comments on this draft~~
 30 ~~plan/EIS and may modified or adjusted the preferred alternative accordingly. These Any modifications~~
 31 ~~or adjustments are will be disclosed in the published final EIS. A Record of Decision will follow the final~~
 32 ~~EIS and will be made available to the public.~~

33

CHAPTER 1: PURPOSE OF AND NEED FOR ACTION

This “Purpose of and Need for Action” chapter explains what this ~~draft~~ *Off-Road Vehicle Management Plan / Environmental Impact Statement* (plan/EIS) intends to accomplish and why the National Park Service (NPS) is taking action at this time. This plan/EIS presents four action alternatives for managing off-road vehicle (ORV) use and assesses the impacts that could result from continuing current management (the two no-action alternatives) or implementation of any of the action alternatives. Upon conclusion of this plan/EIS and decision-making process, the alternative selected for implementation will become the ORV management plan, which will guide the management and control of ORVs at Cape Hatteras National Seashore (Seashore) for the next 10 to 15 years. It will also form the basis for a special regulation to manage ORV use at the Seashore. Brief summaries of both the purpose and need are presented here; more information is available in the “Administrative Background” section of this chapter.

PURPOSE OF THE PLAN

The purpose of this plan is to develop regulations and procedures that carefully manage ORV use/access in the Seashore to protect and preserve natural and cultural resources and natural processes, to provide a variety of visitor use experiences while minimizing conflicts among various users, and to promote the safety of all visitors.

NEED FOR ACTION

Cape Hatteras National Seashore provides a variety of visitor experiences. It is a long, essentially linear park, visitation is high, and parking spaces near roads are limited. Some popular beach sites, particularly those near the inlets and Cape Point, are a distance from established or possible parking spaces. Visitors who come for some popular recreational activities such as surf fishing and picnicking are accustomed to using large amounts and types of recreational equipment that cannot practically be hauled over these distances by most visitors without some form of motorized access. For many visitors, the time needed and the physical challenge of hiking to the distant sites, or for some even to close sites, can discourage or preclude access by non-motorized means. As a result, ORVs have long served as a primary form of access for many portions of the beach in the Seashore, and continue to be the most practical available means of access and parking for many visitors.

In addition to these recreation opportunities, the Seashore is home to important habitats created by the Seashore’s dynamic environmental processes, including habitats for several federally listed species including the piping plover and three species of sea turtles. These habitats are also home to numerous other protected species, as well as other wildlife. The NPS is required to conserve and protect all of these species, as well as the other resources and values of the Seashore. In addition, the Seashore was designated a Globally Important Bird Area by the American Bird Conservancy (American Bird Conservancy 2005). This designation recognizes those areas with populations and habitat important at the global level.

The use of ORVs must therefore be regulated in a manner that is consistent with applicable law, and appropriately addresses resource protection (including protected, threatened, ~~and~~ or endangered species), potential conflicts among the various Seashore users, and visitor safety. Section 4.10(b) of the NPS

Off-road vehicle (ORV) — Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain.

Chapter 1: Purpose of and Need for Action

1 regulations in Title 36 of the Code of Federal Regulations (CFR), which implements Executive Orders
 2 11644 and 11989, prohibits off-road use of motor vehicles except on designated routes or areas. It
 3 requires that “routes and areas designated for ORV use shall be promulgated as special regulations” in
 4 compliance with other applicable laws.

5 Therefore, in order to provide continued visitor access through the use of ORVs, the NPS must
 6 promulgate a special regulation authorizing ORV use at the Seashore. In order to ensure that ORV use is
 7 consistent with applicable laws and policies, the Seashore has determined that an ORV management plan
 8 is necessary as part of this process. Thus, the ORV plan and special regulation will:

- 9 • Bring the Seashore in compliance with Executive Orders 11644 and 11989 respecting ORV use,
 10 and with NPS laws, regulations (36 CFR 4.10), and policies to minimize impacts to Seashore
 11 resources and values.
- 12 • Address the lack of an approved plan, which has led over time to inconsistent management of
 13 ORV use, user conflicts, and safety concerns.
- 14 • Provide for protected species management in relation to ORV use ~~upon expiration of~~ replacing
 15 the *Cape Hatteras National Seashore Interim Protected Species Management Strategy /*
 16 *Environmental Assessment* (Interim Strategy) (NPS 2006a), and associated Biological Opinion
 17 and amendments (USFWS 2006a, 2007a, 2008a) as modified by the consent decree.

18 OBJECTIVES IN TAKING ACTION

19 Objectives are what must be achieved to a large degree for the action to be considered a success
 20 (NPS 2001a). All alternatives selected for detailed analysis must meet project objectives to a large degree
 21 and resolve the purpose of and need for action. Objectives must be grounded in the Seashore’s enabling
 22 legislation, purpose, significance, and mission goals, and must be compatible with direction and guidance
 23 provided by the Seashore’s general management plan, strategic plan, and/or other management guidance.
 24 The following are objectives identified by Seashore staff for developing this plan/EIS.

25 MANAGEMENT METHODOLOGY

- 26 • Identify criteria to designate ORV use areas and routes.
- 27 • Establish ORV management practices and procedures that have the ability to adapt in response to
 28 changes in the Seashore’s dynamic physical and biological environment.
- 29 • Establish a civic engagement component for ORV management.
- 30 • Establish procedures for prompt and efficient public notification of beach access status including
 31 any temporary ORV use restrictions for such things as ramp maintenance, resource and public
 32 safety closures, storm events, etc.
- 33 • Build stewardship through public awareness and understanding of NPS resource management and
 34 visitor use policies and responsibilities as they pertain to the Seashore and ORV management.

35 NATURAL PHYSICAL RESOURCES

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

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

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

6 **VEGETATION**

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

8 **OTHER WILDLIFE AND WILDLIFE HABITAT**

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

10 **CULTURAL RESOURCES**

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

13 **VISITOR USE AND EXPERIENCE**

- 14 • Ensure that ORV operators are informed about the rules and regulations regarding ORV use at the
15 Seashore.
- 16 • Manage ORV use to allow for a variety of visitor use experiences.
- 17 • Minimize conflicts between ORV use and other uses.

18 **VISITOR SAFETY**

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

20 **SEASHORE OPERATIONS**

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

24 **PROJECT STUDY AREA**

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

27 **PURPOSE AND SIGNIFICANCE OF CAPE HATTERAS NATIONAL** 28 **SEASHORE**

29 All units of the national park system were formed for a specific purpose (the reason they are significant)
30 and to conserve significant resources or values for the enjoyment of future generations. The purpose and

Chapter 1: Purpose of and Need for Action

1 significance of the park provides the basis for identifying uses and values that individual NPS plans will
2 support. The following provides background on the purpose and significance of the Seashore.

3 | As stated in the Seashore’s enabling legislation (the Act), Congress ~~established~~ authorized the Seashore in
4 1937 as a national seashore for the enjoyment and benefit of the people, and to preserve the area. The Act
5 states:

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

13 The Act also states:

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

21 A 1940 amendment to the enabling legislation authorized hunting and re-designated the area as the Cape
22 Hatteras National Seashore Recreational Area. (Note: The history of the Seashore’s name is described in
23 more detail in the next section of this chapter.)

24 Park significance statements capture the essence of the park’s importance to the nation’s natural and
25 cultural heritage. Understanding park significance helps managers make decisions that preserve the
26 resources and values necessary to the park’s purpose. The following significance statements recognize the
27 important features of the Seashore. As stated in the 2006–2011 Strategic Plan, the Seashore has the
28 following significance (NPS 2007b):

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

36

Purpose and Significance of Cape Hatteras National Seashore



FIGURE 1. CAPE HATTERAS NATIONAL SEASHORE MAP

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1 **DESIRED FUTURE CONDITIONS FOR THREATENED, ENDANGERED,**
 2 **STATE-LISTED, AND SPECIAL STATUS SPECIES**

3 Desired future conditions (also called management targets) describe what park resources will look like
 4 once management goals have been achieved. They derive first from the overarching requirement of the
 5 *Organic Act* to conserve wildlife without impairment for the enjoyment of present and future generations.
 6 To meet the *Organic Act* mandate, the NPS will manage the Seashore to provide habitat and other
 7 conditions necessary to support sustainable populations of these species at the Seashore. Second, desired
 8 future conditions derive from NPS responsibilities as a federal agency under the ESA and the NPS
 9 *Management Policies 2006* to conserve listed species and to contribute recovery goals for them. Finally,
 10 they originate from the NPS policy to manage the same for state-listed species and species of park
 11 management concern as for federally listed species to the extent possible.

12 Desired future conditions are also a learning tool in the context of periodic review and adaptive
 13 management. They provide the basis for evaluation of progress and for the research hypotheses set in the
 14 adaptive management plan. The process of developing the desired conditions points out what is known
 15 and unknown about the resource and where additional research and adaptive management are appropriate.
 16 A definitive methodology for developing desired future conditions does not exist. Desired conditions are
 17 highly variable and therefore are based on conservative estimates that consider species variability, habitat
 18 availability, and environmental factors that could affect the success of any colony or nesting individual.
 19 The adaptive management initiatives that accompany these desired future conditions address the research
 20 that the Seashore may conduct to determine the conditions under which recreational use may be managed
 21 to enhance visitor experience without adversely affecting the achievement and maintenance of the desired
 22 future conditions. In the context of this plan/EIS, the following definitions are applied to desired future
 23 conditions:

- 24 • **Short-term** means 10 years (or two 5-year periodic review cycles) after implementation of plan.
- 25 • **Long-term** means 20 years (or four 5-year periodic review cycles) after implementation of plan.

26 When desired future conditions for resources are met or exceeded, it may allow for more flexible
 27 management of recreational use, provided adverse impacts of such use are effectively managed and
 28 wildlife populations remain stable. The populations of protected species that meet or exceed the goals set
 29 forth in this section would continue to be protected in accordance with applicable federal and state laws
 30 and regulations. Where progress is not being made toward the attainment of desired future conditions,
 31 periodic review and adaptive management may result in increased restrictions on recreational use. The
 32 management targets below are consistent with and contribute to the goals set forth by existing
 33 conservation plans such as U.S. Fish and Wildlife Service (USFWS) recovery plans (USFWS 1996a,
 34 1996b), the Southeastern Coastal Plains–Caribbean Region Report U.S. Shorebird Conservation Plan
 35 (Hunter et al. 2002), the Waterbird Conservation Plan for the Mid-Atlantic/New England/Maritimes
 36 Region (MANEM 2006), and A Conservation Action Plan for the American Oystercatcher (*Haematopus*
 37 *palliatu*s) for the Atlantic and Gulf coasts of the United States, Version 2.0 (Schulte et al. 2007).

38 The NPS considers the desired future conditions to be realistic, sustainable targets for piping plovers
 39 (table 1), nesting sea turtles (table 2), seabeach amaranth (table 3), and sensitive species of shorebirds
 40 (tables 4 and 5) at Cape Hatteras National Seashore.

41

1

TABLE 1. DESIRED FUTURE CONDITIONS FOR PIPING PLOVERS

Variable	Short-Term Target	Long-Term Target	Source
Number of breeding pairs	15	30	Short-term target from highest number of pairs recorded at Cape Hatteras National Seashore (1989) and the Biological Opinion (USFWS 2006a) ^a ; Long-term target from the Piping Plover Recovery Plan (USFWS 1996a, appendix B)
Fledge rate	5-year average of 1.0 chick per pair	5-year average of 1.5 chicks per pair ^b	Short-term target from the Biological Opinion (USFWS 2006a); long-term target from the Piping Plover Recovery Plan (USFWS 1996a)
Depredation rate	5-year average rate of mammalian depredation of eggs is <10%	Same as short-term target	Adapted from the Piping Plover Recovery Plan (USFWS 1996a) ^c

^a The information is in the [2006 Biological Opinion](#) under: Effects of the Action, A. Piping Plovers, Nature of the effect ([USFWS 2006a](#)):

"The biologically appropriate measure of population impacts is not the size of the current remnant population, but rather the potential pairs and productivity foregone. The 15 pairs documented at the Seashore in 1989 and comparison of current habitat with 1989 aerial photos furnish empirical evidence of potential for a population of at least five times the current number [which was 3] (i.e., 15 pairs). However, the demonstrated population growth elsewhere in the range provides evidence that the potential contributions at [CAHA the Seashore](#) are two to four times that number (i.e., 30 to 60 pairs). The USFWS estimated carrying capacity for [CAHA the Seashore](#) to be [sic] 30 pairs. (See USFWS 1996a, appendix B. Actual population growth at many of the sites in other states has exceeded the projections made in this exercise.)"

^b In the future, if the fledge rate target in the Piping Plover Recovery Plan is revised (e.g., revised for Southern Recovery Unit), the Cape Hatteras National Seashore target will be adjusted to conform to the recovery plan.

^c Recovery Plan: Recovery Tasks – Section 1.42 recommends "Deploy predator exclosures to reduce egg predation where appropriate" and states, in part: "Rimmer and Deblinger (1990) found that 24 of 26 nests (92%) protected by exclosures hatched at least one egg, while only six of 24 (25%) unexclosed nests hatched at a Massachusetts site over four years. Melvin et al. (1992) reported 90% (26/29) hatching of exclosed nests versus 17% (4/24) for unexclosed nests at six sites on Outer Cape Cod, Massachusetts."

2

TABLE 2. DESIRED FUTURE CONDITIONS FOR NESTING SEA TURTLES

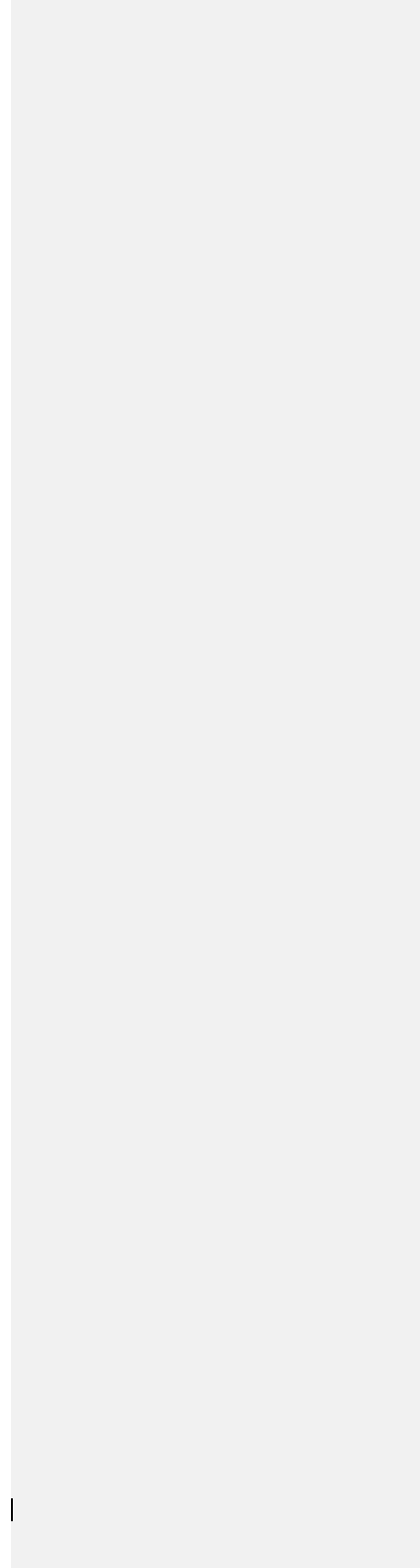
Variable	Short-Term Target	Long-Term Target	Source
Number of loggerhead nests	94 ^a nests with an average annual rate of increase of 2%	115 ^a nests with an average annual rate of increase of 2%	Adapted from 2008 Loggerhead Recovery Plan goal (NMFS and USFWS 2008)
Percent of North Carolina total sea turtle nests	5-year average of 10% of North Carolina total	Same as short-term target	From the Biological Opinion (USFWS 2006a)
Ratio of false crawls to nests	5-year average of 1:1 or less	Same as short-term target	From Dodd 1988
Number of nests relocated	5-year average of <30%; Minimize number of nests relocated for reasons other than "risk of daily overwash or well-documented risk of erosion"	Same as short-term target	From Godfrey pers. comm. 2008

^a Targets are based on 2% annual rate of increase from 2004-2008 average of 77.2 nests. Rate of increase of 2% for the Northern Recovery Unit is identified in the recovery plan. Based on this approach, the 50-year projection is

Desired Future Conditions for Threatened, Endangered, State-Listed, and Special Status Species

201 nests.

1



Chapter 1: Purpose of and Need for Action

1

TABLE 3. DESIRED FUTURE CONDITIONS FOR SEABEACH AMARANTH

Variable	Short-Term Target	Long-Term Target	Source
Number of suitable sites occupied by seabeach amaranth	Develop a seabeach amaranth restoration plan for 4 suitable sites ^a	At least 3 of 4 suitable sites are occupied for 5 consecutive years	From the Seabeach Amaranth Recovery Plan (USFWS 1996b)

^a Suitable sites include Bodie Island Spit, Cape Point, Hatteras Inlet Spits (Hatteras Island Spit and North Ocracoke Spit) and Ocracoke Inlet Spits (Southern Ocracoke Island Spit).

2

TABLE 4. DESIRED FUTURE CONDITIONS FOR AMERICAN OYSTERCATCHERS

Variable	Short-Term Target	Long-Term Target	Source
Number of nesting pairs	5-year average of 30 nesting pairs	5-year average of 45 nesting pairs	Targets based on American oystercatcher conservation action plan (Schulte et al. 2007) and recent Cape Hatteras National Seashore data ^a
Fledge rate (chicks fledged per nesting pair)	5-year average of 0.40 chicks per pair or higher	5-year average of 0.50 chicks per pair or higher	3 % annual increase from current rate of 0.30
Depredation rate	Percentage of nests lost that can be directly attributed to depredation of 30% or less	Percentage of nests lost that can be directly attributed to depredation of 20% or less	Average depredation rates over last 5 years: nests=31.2%, chicks=51.4% (NPS in prep-2009n). The desired future condition is to reduce depredation rates while recognizing some depredation will continue to occur.

^a From page 11 of the conservation action plan (Schulte et al. 2007): "We recommend that the population be stabilized and then gradually increased from its current level to at least 1.5 times its current size."

3

Desired Future Conditions for Threatened, Endangered, State-Listed, and Special Status Species

1

TABLE 5. DESIRED FUTURE CONDITIONS FOR COLONIAL WATERBIRDS

Variable	Short-Term Target ^a	Long-Term Target ^{b3}	Source
Annual peak number of least tern nests ^b	434 <u>5-year average of 462</u> 5 nests	5-year average of 577 nests <u>20% increase over average number of nests</u> b achieved under short-term target	Long-term target equals <u>2009 peak count</u> . Short-term target is mid-point between <u>recurrent average (2007-2010)</u> and the long-term target. <u>2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a</u>
Annual peak number of common tern nests ^b	485 <u>5-year average of 292</u> 4 nests	5-year average of 533 <u>78</u> 3 nests <u>20% increase over average number of nests</u> b achieved under short-term target	Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. <u>Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007), 2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a</u>
Annual peak number of gull-billed tern nests ^b	5-year average of 214 <u>9</u> 7 nests	5-year average of 404 <u>7</u> 2 nests <u>20% increase over average number of nests</u> b achieved under short-term target	Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. <u>Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007), 2007 and 2008 Seashore colonial waterbird surveys (NPS 2008d, 2009k)a</u>
Annual peak number of black skimmer nests ^b	75 <u>5-year average of 132</u> 5 nests	5-year average of 244 <u>29</u> 1 nests <u>20% increase over average number of nests</u> b achieved under short-term target	Long-term target equals the average number of nests that occurred in 1977-2004. Short-term target is the mid-point between recent average (2007-2010) and the long-term target. <u>Goals of North Carolina's Waterbird Program: to maintain breeding populations at or near 1977-1983 levels (NCWRC 2007), 2007 and 2008 Seashore colonial waterbird surveys</u>

Chapter 1: Purpose of and Need for Action

			(Cameron and Allen 2008; NPS 2009k)a
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^aShort-term target is to achieve the midway point between the long-term target and the recent average of the data points from the Seashore's 2007 - 2010~~09~~ counts.

^bExcept for least terns, the long-term target for the respective species is to achieve the average number of nests that occurred at the Seashore in 1977 – 2004~~1983~~ level of nesting at the Seashore. (average of 1977 and 1983 nest counts; there were no nest counts done in the years between 1977 and 1983). These years are consistent with the basis for statewide goals identified by the North Carolina Wildlife Resources Commission (NCWRC 2007). Least terns are currently nesting in greater numbers than the 1977-2004~~1977~~ and 1983 average nest counts; therefore, the long-term target is to maintain a 5-year average count equal to the 2009 peak count.

^aShort term means 10 years (two 5-year periodic review cycles after implementation of plan)

^bLong term means 20 years (four 5-year periodic review cycles after implementation of plan)

^cthree the Seashore^a The targets did not take into account data from any surveys conducted prior to 2007 due to the uncertainty associated with survey methods, survey timing, data management, and data compiled for each survey year. Short- and long-term targets would be based on consistent colonial waterbird surveys using standardized survey methods conducted during the peak nesting period for each individual species. By surveying during the peak nesting period window, survey data can be compared to surveys conducted by the state for similar species.

^bColonies will be surveyed during the peak nesting period for each species, which generally is during the last week of May and the first week of June, but could be later, especially for black skimmers. "Nests" may include birds in incubating posture.

^eThe three year average (2007 – 2009) for each species was used to calculate a baseline percentage of the Seashore's contribution towards the state's goal for each species. The state goals shown below were established by the North Carolina Wildlife Resources Commission. An increase of 5% in the Seashore's contribution towards the state goal was established as the short term target for each species.

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	Least Tern	Common Tern	Gull Billed Tern	Black Skimmer
State Goal	2,000	2,500	300	1,000
Cape Hatteras National Seashore 3-year average (number of nests)	334	60	2	25
% of state goal	16.70%	2.40%	0.66%	2.50%
Increase of 5% toward state goal	21.70%	7.40%	5.66%	7.50%
Short term target (number of nests)	434	185	17	75

1 **ADMINISTRATIVE BACKGROUND**

2 **HISTORY OF CAPE HATTERAS NATIONAL SEASHORE**

3 Officially authorized in 1937 along the Outer Banks of North Carolina, Cape Hatteras is the nation’s first
4 national seashore. Consisting of more than 30,000 acres distributed along approximately 68-67¹ miles of
5 shoreline, the Seashore is part of a dynamic barrier island system. The Outer Banks of North Carolina
6 formed as a result of changes in sea level, wave and wind action, and ocean currents. These factors
7 continue to influence the islands today through the processes of erosion and accretion of the shoreline;
8 overwash across the islands; and the formation, migration, and closure of the inlets (NPS 1979). Since the
9 1930s, these natural processes have been influenced by human actions such as building sand berms² to
10 protect roads and homes, dredging inlets, and filling inlets newly created by storms.

11 The story of the creation of Cape Hatteras National Seashore is documented in the Seashore’s
12 administrative history, *The Creation and Establishment of Cape Hatteras National Seashore* (NPS
13 2007f). No national park is suddenly brought into being except by a chain of milestones that lay the basis
14 for an act of Congress or a presidential proclamation (NPS 2007f).

Comment [dw1]: Ran out of different colors, so I highlighted my change in green (below).

*The enabling
legislation provides
that the
administration,
protection, and
development of the
national seashore
shall be exercised
under the direction of
the Secretary of the
Interior by the NPS,
subject to the
provisions of the*

¹ Due to the dynamic nature of the barrier island system, the mileage of shoreline in the Seashore is constantly changing. This mileage estimate includes ocean shoreline and interdunal roads managed for public recreation by the NPS. Actual on-the-ground mileage may vary, especially around the inlets and spits, due to the increased potential for erosion and accretion in these areas.

² 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 CCC and the Works Progress Administration. NPS actively maintained this dune ridge until the early 1970s when NPS ended the dune stabilization policy after scientists concluded that the man-made berms constructed since the 1930s had actually served to foreshorten the seashore’s beaches and dramatically altered both the ecological and the topographical characteristics of the Outer Banks (NPS 2007f). “Berm” includes the man-made dune or dune ridge constructed to protect state highway NC-12 and interior sections of the island from ocean flooding and overwash during storms.

Chapter 1: Purpose of and Need for Action

1 On June 23, 1936, President Roosevelt signed an “act to authorize a study of
 2 the park, parkway, and recreational area programs in the United States, and for
 3 other purposes” (49 Stat. 1894). The *Park, Parkway, and Recreational Area*
 4 *Study Act of 1936* significantly expanded the range and type of lands that could
 5 be preserved and managed by the NPS. The Act recommended specific
 6 additions to the national park system to provide recreational opportunities. The
 7 national recreation study led the NPS to establish four new types of parks in
 8 the park system: Recreational Demonstration Areas, national parkways,
 9 national recreation areas, and national seashores. Supporters of the park, parkway and recreation study,
 10 which included much focus upon the protection and use of coastal areas for recreational purposes, saw
 11 Cape Hatteras as the foremost example of a possible seashore recreational park. Concurrent congressional
 12 interest in erosion control, as demonstrated by the passage of the *Beach Improvement Act* in June 1936,
 13 also motivated interest in a national park in the Outer Banks. Undoubtedly, the recreational study and
 14 erosion control acts of 1936 spurred Congressman Lindsay C. Warren, who represented Dare County
 15 from 1925 to 1940, to begin work on “an act to provide for the establishment of the Cape Hatteras
 16 National Seashore” (NPS 2007f). Representative Warren introduced the legislation in May 1937. It was
 17 subsequently approved by the House on August 2 and the Senate on August 14, then signed (50 Stat. 669)
 18 by President Roosevelt on August 17, 1937 (NPS 2007f).

Organic Act.

19 In addition to articulating the recreation and preservation mission of the Seashore as stated in the
 20 “Purpose and Significance of Cape Hatteras National Seashore” section of this chapter, the enabling
 21 legislation provided that the administration, protection, and development of the national seashore shall be
 22 exercised under the direction of the Secretary of the Interior by the NPS, subject to the provisions of the
 23 *Organic Act*. It also provided that the legal residents of the villages shall have the right to earn a
 24 livelihood by fishing within the boundaries of the Seashore. The Act provided that the United States shall
 25 not use appropriated funds to purchase lands within the area, but such lands shall be secured by the
 26 United States only by public or private donation³. The Act authorized the Secretary to accept donations of
 27 land and funds to purchase lands, and to establish the national seashore contingent upon the acquisition of
 28 a minimum of ten thousand acres within the designated seashore area and provided that if such lands were
 29 not conveyed to the United States within ten years of the passage of the Act, the establishment of the
 30 national seashore may, at the discretion of the Secretary, be abandoned (NPS 2007f).

31 In March 1938, the NPS published the Prospectus of Cape Hatteras National Seashore in response to
 32 numerous requests for information concerning the area, which included the following recommendations
 33 for selection, use and development of the area (NPS 1938):

34 Inasmuch as the proposed Cape Hatteras National Seashore is the first area of its kind to
 35 be authorized by Congress, the National Park Service has adopted the following policy to
 36 be used in the selection, development and operation of this and other similar areas which
 37 may be acquired later.

38 Primarily a seashore is a recreation area. Therefore in its selection, the boundaries should
 39 be placed in such a manner that the maximum variety of recreation is provided. Thus
 40 while provision for bathing may be the first consideration of these areas, it must be kept in
 41 mind that a far greater number of people will be more interested in using a seashore area
 42 for other recreational purposes. It is desirable therefore to provide ample shoreline for all
 43 types of beach recreation. The Cape Hatteras National Seashore provides such an area in

³ In March 1939, the North Carolina General Assembly created the North Carolina Cape Hatteras Seashore Commission to acquire seashore lands for eventual transfer to the federal government (NPS 2007f).

1 that there is extensive shoreline for all forms of recreation both for immediate use and for
2 future development.

3 Secondly, the area should include adjacent lands which by reason of historical,
4 geological, forestry, wildlife, or other interests, have sufficient justification to be
5 preserved by the Federal Government. It is important therefore to reach back into the
6 hinterlands and acquire areas which will provide a variety of interests, scenic, scientific
7 and historic. This principle has been followed in determining the boundaries of Cape
8 Hatteras National Seashore.

9 Thirdly, it is important to include in the area, lands necessary for proper administration
10 and lands which serve principally as a protection for the recreational and other
11 developments which are the primary purpose of this area. Inasmuch as the Cape Hatteras
12 National Seashore area is composed of islands and peninsulas, the land area in most cases
13 is circumscribed by water, which fact in itself offers considerable protection. Inasmuch as
14 control of much of the water in the Sounds may be desirable for fish and bird life, the
15 boundaries of Cape Hatteras National Seashore area will embrace a substantial portion of
16 these waters.

17 The development and operation of the Seashore area shall follow the normal national park
18 standards with the understanding that recreational pursuits shall be emphasized to provide
19 activities in as broad a field as is consistent with the preservation of the area. It shall be
20 the policy of the Service to permit fishing, boating and other types of recreation under
21 proper regulations and in designated areas where such activities may not conflict with
22 other factors of greater importance. Where natural landing fields occur, the use of land
23 and sea planes may be permitted where not in conflict with the interests of wildlife or
24 inconsistent with proper development and use of the area.

25 At the time, the NPS had envisioned the Seashore to incorporate lands and waters including portions of
26 Currituck Sound, Nags Head, Roanoke Island, Bodie Island, Hatteras Island and Ocracoke Island. While
27 certain sites were targeted for development of recreational facilities, certain sections were identified to
28 remain undeveloped and preserved as the "primitive wilderness" that existed at that time. Such plans for
29 general development were as described in the prospectus (NPS 1938):

30 While further study and planning is required, it is expected that intensive development for
31 recreational purposes shall be undertaken on the Bodie section which is the portion of the
32 area between Oregon Inlet and the Whalebone Inn. In this connection, arterial and
33 subsidiary roads and facilities for bathing, fishing, boating, camping, and hiking probably
34 will be provided in this section.

35 Other development which will be of secondary priority will be in the Nags Head section
36 where provision may be made for a more appropriate and interesting entrance road and
37 where facilities for bathing on Roanoke Island and for hiking, picnicking, fishing and
38 boating may be made available. The Nags Head and Bodie sections are the most
39 accessible and offer opportunities for all varieties of recreation which should be adequate
40 to the needs of the public for many years.

41 The Currituck, Hatteras and Ocracoke sections will remain in their natural conditions with
42 no development other than for administrative purposes. It is possible some additional
43 accommodations will need to be provided for visitors to the Cape Hatteras Lighthouse and
44 that some alterations will be required in the plans for the area which is now a State park

Chapter 1: Purpose of and Need for Action

1 (*Cape Hatteras State Park*). It is definitely the desire of the National Park Service that the
2 section between Oregon Inlet and Hatteras Inlet remain in its natural condition without
3 any roads so that future generations may see this and other undeveloped sections as they
4 are in our day.

5 In the years after the enabling legislation was passed, a number of issues and local concerns arose that
6 ultimately changed the early NPS vision for the Seashore and which complicated and delayed land
7 acquisition and formal establishment. One such concern included whether or not hunting would be
8 allowed to continue once the national seashore was established. On June 29, 1940, Congress amended the
9 1937 authorizing legislation for Cape Hatteras National Seashore to permit hunting. The amendment
10 specifically referred to compliance with the MBTA. This provision would later be key in determining
11 how the NPS actually interpreted “hunting” within the Seashore, but perhaps for the first time in the
12 history of the NPS, legal hunting was now authorized within a national park. The same amendment also
13 changed the formal title of the park to “Cape Hatteras National Seashore Recreational Area.” The term
14 “recreational area” in the 1940 amendment was derived clearly from the Secretary’s justification to allow
15 hunting and by the Service’s desire to limit the setting of any precedent for more traditional types of
16 parks. However, the NPS had already defined a “national seashore” as a recreational area in its 1937
17 brochure explaining the *Park, Parkway, and Recreational Study Act* and the anticipated recreational
18 purposes of the park were established by Congress through Acting Secretary Chapman’s letter to the
19 House Committee on Public Lands. Thus, including the term “recreational area” in the title was
20 redundant. In 1954 the NPS authorized the original park name (“national seashore”) to be used for all
21 administrative purposes except for formal memoranda and documents requiring the full legal name.
22 Subsequently, the term “recreational area” fell from use in most official references to the park (NPS
23 2007f). In 1961, Congress authorized Cape Cod in Massachusetts as the second “national seashore” and
24 subsequently created eight more “national seashores” between 1962 and 1975 for a total of ten. All such
25 park units that followed Cape Hatteras were officially named “national seashores.” Since 1962, Cape
26 Hatteras has been referred to as “national seashore” in Congressional legislation and “national seashore”
27 has been the standard nomenclature for this type of park.

28 As envisioned in the 1930s, the NPS had hoped to preserve a far more natural environment than it was
29 forced by compromise to accept in the 1950s (NPS 2007f). In 1952, fifteen years after he submitted the
30 act to create Cape Hatteras National Seashore, former Congressman Lindsay C. Warren offered what may
31 be the purest surviving expression of his intent in doing so: “When I introduced the bill for the Cape
32 Hatteras National Seashore in 1937, I would have nothing to do with it unless the people were fully
33 protected forever in their hunting and fishing rights, and unless there was a guarantee of a hard-surface
34 road if the Government came into the picture, and unless all of the villages were exempt. At that time
35 there was very little prospect for a paved road, but I extracted a promise from the NPS that they would
36 favor such a road to be built, whenever possible, either through State or Federal Aid funds. Frankly, I
37 think that this Park will mean more to the people of Dare County than anything that could ever happen to
38 them. I do not say that because I was the author of the bill, but I say it because I had studied the history of
39 all Parks, before I came into the picture back in 1937” (NPS 2007f).

40 In September 1952, Director Wirth acted to address serious criticism of the NPS and its failure to provide
41 adequate information about the seashore project to inhabitants of the Outer Banks. At a meeting of the
42 North Carolina Cape Hatteras Seashore Commission, he announced plans to visit the area in early
43 October specifically to talk personally with anyone who was willing to do so, which included meeting
44 with the villagers of Hatteras and Ocracoke Islands (NPS 2007f). The concerns that were expressed at
45 those meetings included: (1) uncertainty about where the Seashore boundary would be drawn around the
46 villages and whether there would be enough room left for community expansion; (2) concern about the
47 rights of individuals to continue commercial and sport fishing; (3) concern as to whether present hunting

Administrative Background

1 rights would be affected; and (4) concern that once the Seashore is established, the local people would be
2 denied access to the ocean beach (NPS 2007f).

3 On October 31, 1952, at the request of Director Wirth, D. Victor Meekins, who had headed the Cape
4 Hatteras National Seashore Commission until 1945 and later became editor of *The Coastland Times*,
5 published a special edition of the newspaper showing NPS maps and statements and assured Wirth that
6 “every family within the project, whether a subscriber of the newspaper or not, got a copy.” In an open
7 letter from the Director addressing all those affected by the proposal to create Cape Hatteras National
8 Seashore, Wirth laid out the plans and intent of the NPS and made certain key promises (NPS 2007f).

9 Wirth outlined park boundaries that had been adjusted to address some of the concerns of residents that he
10 had heard during his three-day tour. Once again, the total size of the park was reduced, this time to 28,500
11 acres. The new boundary left more room for expansion of the villages toward the ocean, which had been a
12 major complaint, but left the beaches under NPS control. Wirth said the NPS would need “on the ocean
13 side of the towns, only those lands along the ocean which are necessary to protect and control the sand
14 dunes, to reestablish them where necessary, and hold them to protect the communities from the intrusion
15 of the ocean.” The boundaries were also closer to the Pamlico Sound shoreline. The new tighter
16 boundaries recognized that, under the basic legislation authorizing the Seashore, fishing and hunting
17 rights were reserved to the people. That being the case, there was no real need to include Pamlico Sound
18 waters in the Seashore since state and federal fishing and hunting laws and regulations would still apply
19 to waters both inside and outside the Seashore boundaries. Wirth simply set an arbitrary distance of 150
20 feet that would allow hunters and fishermen to clearly know when they were in or out of the park (NPS
21 2007f).

22 Residents had been concerned
23 with beach access, as well. On
24 this account, in the letter Wirth
25 plainly stated that the Seashore
26 would be a public park open to
27 all, including those of the
28 Banks and visitors. “However,”
29 he stated, “it will be necessary
30 to establish certain regulations,
31 such as to designate places for
32 vehicles to get to the beach, in
33 order to reduce sand dune
34 erosion to a minimum; to
35 manage ocean fishing where
36 large numbers of bathers are
37 using the beach; and to confine
38 bathing to certain areas. These



Surf Fishing, 1935

Credit: NPS

39 latter are safety measures, as it would be dangerous to permit surf fishing where there are large numbers
40 of people in bathing and, likewise, fishermen would not want bathers to interfere with their fishing.” For
41 the future, Wirth noted “the National Park Service proposes to resume the sand fixation work; to re-
42 establish the natural plant and wildlife within the area; and to provide access to the beach for everybody.”
43 Wirth’s “Letter to the People of the Outer Banks” effectively countered the disinformation campaign
44 waged by park opponents, laid out a clear vision of NPS management of the national seashore, and
45 created a key document that was later often solemnly referenced by local residents in discussion with NPS
46 officials on park matters (NPS 2007f).

Chapter 1: Purpose of and Need for Action

1 Late in 1952 agreement was reached on the final
 2 boundaries of the Seashore area and in December
 3 1952 the state-owned lands in the Seashore were
 4 transferred to the United States. In January 1953,
 5 Wirth recommended that Secretary of the Interior
 6 Oscar L. Chapman approve an order, consistent with
 7 Section 4 of the Act of August 17, 1937, directing
 8 that certain lands on the Outer Banks of North
 9 Carolina be “administered, protected, and developed
 10 by the National Park Service for national seashore
 11 recreational purposes for the benefit and enjoyment of
 12 the people.” This order, dated January 12, 1953,
 13 marked the formal establishment of the Seashore
 14 (NPS 2007f).



High Tide on Ocracoke, 1936

Credit: NPS

15 Federal land ownership extends from ocean to sound
 16 across three barrier islands—Ocracoke, Hatteras, and
 17 Bodie (figure 1). The eight villages are excluded from
 18 the Seashore boundaries. On the oceanside of the
 19 villages, federal ownership was established as a 500-foot strip measured landward from the mean low
 20 water at the time of acquisition. A larger area seaward of Buxton and Frisco includes portions of Buxton
 21 Woods. The 5,880-acre Pea Island National Wildlife Refuge, approximately 12 miles long and located at
 22 the northern end of Hatteras Island, lies within the Seashore boundary and is administered for refuge
 23 purposes by the USFWS in accordance with the *National Wildlife Refuge System Improvement Act of*
 24 *1997* (USFWS 2006b). ORV use is not allowed in the refuge, but the 12 miles of ocean shoreline are
 25 generally open to pedestrian use, except when localized closures are in effect to protect shorebird and sea
 26 turtle nesting areas. This plan/EIS does not include the area within the refuge.

27 Today the Seashore serves as a popular recreation destination with more than 2.1 million visitors in 2008
 28 (NPS 2008e), showing an 8-fold increase in visitation since 1955 (NPS 2007f). Seashore visitors
 29 participate in a variety of recreational activities, including beach recreation (sunbathing, swimming, shell
 30 collecting, etc.), fishing (surf and boat), hiking, hunting, motorized boating, non-motorized boating
 31 (sailing, kayaking, canoeing), nature study, photography, ORV use (beach driving), shellfishing,
 32 sightseeing, watersports (surfing, windsurfing, kiteboarding, etc.), and wildlife viewing. Seashore visitors
 33 use ORVs for traveling to and from swimming, fishing, and surfing areas, and for pleasure driving. Over
 34 the past five years (2004–2008), visitation to the Seashore has averaged approximately 2.2 million
 35 visitors per year (NPS 2008e).

36 Current management practices at the Seashore allow ORV users to drive on the beach seaward of the
 37 primary dune line. Drivers must use designated ramps to cross between paved roads (such as North
 38 Carolina Highway 12 [NC-12]) that run behind the primary dune line and the beach. In some areas,
 39 NC-12 provides a way around full beach closures or areas where the high tide line limits beachfront
 40 access. In addition to a multitude of visitor opportunities, the Seashore provides a variety of important
 41 habitats created by its dynamic environmental processes, including habitats for the federally listed piping
 42 plover; sea turtles; and one listed plant species, the seabeach amaranth. The Seashore contains
 43 ecologically important habitats such as marshes, tidal flats, and riparian areas, and hosts various species
 44 of concern such as American oystercatcher, Wilson’s plover, red knot, and colonial waterbirds, including
 45 the state-listed (as threatened) gull-billed tern.



Bodie Island Spit, Memorial Day Weekend 2007

Credit: NPS

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

3 The legislation creating Cape Hatteras National Seashore did not specifically mention motor vehicle use
 4 or beach driving; however, the administrative history (NPS 2007f) contains numerous references to ORV
 5 use and related issues and concerns. The Act did, however, clearly establish the mandate for NPS to
 6 administer and protect the Seashore consistent with the *Organic Act* and the purposes for which the
 7 Seashore was established.

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

20 In 1937, then NPS Assistant Director for Land Planning, Conrad L. Wirth, published an eloquent
 21 description of the primitive qualities of the Outer Banks at a time when much of the area could still not be
 22 reached by road. In fact, at the automobile service station at Whalebone, which was a small shack
 23 distinguished by the huge skeleton of a whale propped up nearby, the road south to Cape Hatteras simply
 24 ended. "Here," Wirth wrote, "the pavement swings to the right and leads into the village of Manteo about
 25 six miles to the west. Now you are at the point where the primitive begins. You drive off the road onto the
 26 sand, stop, and let about half of the air out of your tires, because the rest of the driving will be over the
 27 almost trackless beach" (NPS 2007f).

28 A similar description was written by Thomas W. Morse, Assistant in Charge of North Carolina State
 29 Parks. In the 1937 Master Plan Report for Cape Hatteras State Park, Morse stated, "...no major roads
 30 enter this area and it is reached by driving almost fifty miles over the sands from the Whale Bone Filling

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1 Station, south of Nags Head to the park. This trip involves crossing Oregon Inlet by ferry. While it is
2 agreed that this method of entry is of great aesthetic value, it should be pointed out that it also involves
3 considerable destruction of wildlife because of promiscuous driving” (NCDCCD 1937).

4 This was how things remained until the late 1940s, when paved roads were first built to connect some of
5 the villages on Hatteras Island. Later, NC-12 was completed south from Whalebone to the ferry at Oregon
6 Inlet, and in late 1952 a road was completed from there through Pea Island to the village of Hatteras. The
7 romantic trail Wirth had followed in 1937 was nothing but a memory, and “Whalebone Station,” sans the
8 bones and station, had become “Whalebone Junction.” If Wirth regretted this loss—as did at least a few
9 residents of the Outer Banks—he was willing, if not eager, to push the key improvements in public access
10 that facilitated the Seashore’s establishment, seeing that improved access reinforced the Seashore’s
11 success (NPS 2007f).

12 When Conrad L. Wirth became Director of the NPS in December 1951, he faced a park system severely
13 taxed by the postwar travel boom, fueled by increasing personal incomes, leisure time, and automobile
14 ownership. Visits to the national parklands mushroomed from 6 million in 1942 to 33 million in 1950 and
15 72 million in 1960. With few improvements since the Civilian Conservation Corps (CCC) era, the
16 deteriorating park roads, campgrounds, employee housing, sanitary systems, and other facilities were
17 overwhelmed. Director Wirth’s response to the increasing park problems was to initiate “Mission 66,” a
18 ten-year program to upgrade facilities, staffing, and resource management throughout the system by the
19 50th anniversary of the NPS in 1966 (NPS 1990).

20 In September 1953, Chief Park Ranger G. P. Hultman, in reviewing a field-operations manual, made
21 several cogent observations about security and conservation at the Seashore and how to further these
22 through interpretation. Many factors limited his recommendations, including that the land acquisition
23 program was far from complete and that wildlife and waterfowl protection, including hunting, was an
24 unsettled issue, and, therefore, “ultimate problems cannot be visualized.” Hultman was nevertheless
25 insightful in observing that commercial development over the previous decade had greatly reduced the
26 area available for public seashore recreation, that plant growth was far more extensive than during the era
27 of grazing, and that “the power and changing characteristics of sea and wind seem to be greatly under-
28 estimated.” Moreover, Hultman recognized that “driving conditions, including sand and water on the very
29 pavement serving as access to the area, are aggravated by unlimited access to the beach” and the ability of
30 park visitors to drive off-road at will were likely to become an increasing problem (NPS 2007f).

31 On March 8, 1954, Allyn F. Hanks arrived at Cape Hatteras to assume his duties as the first operational
32 superintendent of the Seashore (NPS 2007f). In April 1955, Superintendent Hanks submitted to Director
33 Wirth and his “Mission 66 Committee” a draft of the policies and practices that should guide the Mission-
34 66 program at Cape Hatteras National Seashore. Hanks thought increased visitation would eventually link
35 most, if not all, of the islands of the Seashore. North Carolina was making important transportation
36 improvements during the period of Mission 66 both around Pamlico Sound and along the Outer Banks,
37 including the construction of major roads and bridges. Hanks therefore predicted visitation at the
38 Seashore would reach two million by 1966, and as a result, he said, “it will become increasingly difficult
39 to preserve unimpaired primitive wilderness conditions.” While roads would fulfill the NPS promise to
40 provide public access and economic opportunities for local residents, roads would also put millions of
41 visitors within a day’s drive of the Seashore and give them easy access to its natural areas. Hanks worried
42 that motor vehicle use would conflict with recreational pursuits and preservation (NPS 2007f).



Beach fishing 1956

Credit: NPS

In the prospectus, Hanks laid out the Seashore's significance, as well as its needs in protection, interpretation, development, and operations. His plans encouraged park development near the villages for the convenience of the public, to promote village growth, and to concentrate development thus leaving miles of beach front undisturbed. In the end, Hanks' prospectus determined the location and layout of most major developments at the Seashore, including the fishing piers and camping sites. The Mission 66 prospectus also encouraged the development of a roadway along the entire length of the Seashore. Although the agency now acknowledged the popularity of roads, it sought to use them to channel traffic from

19 more sensitive areas in the Seashore. Wirth approved the Mission 66 prospectus for Cape Hatteras
 20 National Seashore on November 15, 1956 (NPS 2007f).

21 During Mission 66, the impact of driving on the beaches was a major concern. The Mission 66 prospectus
 22 stated, "The beach, as the area's most significant resource, and the narrow margin which is the locale for
 23 man's numerous activities, requires development planning that will promote use only by people on foot.
 24 Vehicular use must be rigidly controlled and permitted only under specified conditions" (NPS 1956).
 25 Superintendent Hanks declared, "driving along the ocean shore by the public must be controlled." To
 26 reduce its impact on the recreational purposes, the park was established to meet, specifically picnicking,
 27 swimming, and surf-casting, all of which "require assurance of non-intervention by shore driving." Hanks
 28 further noted, "such protection has long been recognized by the more developed areas north to Kitty
 29 Hawk." There, local property owners had restricted beach driving because of the damage it caused. Hanks
 30 thus planned to limit driving, even by NPS personnel, except for emergencies. In addition, during Mission
 31 66, the NPS was dedicated to maintaining its barrier dune system in the Outer Banks, and Hanks sought
 32 to limit "indiscriminate access over the dunes to the ocean where in the past has been a large contributing
 33 factor in deterioration of the original barrier dune. Such practice must be curtailed to obtain overall
 34 greater protection benefits." At the same time, Hanks acknowledged that minimum shoreline driving and
 35 limited access over the dunes "must be flexible to allow commercial fishing in general as provided for in
 36 the original Act." Because shoreline driving negatively affected recreational activities, the Superintendent
 37 told Director Wirth, "it may be necessary, however, to exclude commercial fishing from certain portions
 38 of the Seashore by Secretarial Order to protect those portions for recreational use." NPS policy was to
 39 protect the dunes from damage and to provide for recreational needs, which meant that vehicle use along
 40 some portions of the beach had to be entirely excluded. In other areas, access would have to be allowed
 41 for commercial fishing by local residents using, for example, "haul nets" that required motorized power
 42 (NPS 2007f).

43 Mission 66 brought much development to Cape Hatteras National Seashore, even if some stretches of
 44 beach were left undeveloped. As envisioned in the 1930s, the NPS had hoped to preserve a far more
 45 natural environment than it was forced by compromise to accept in the 1950s. By then, the practical
 46 necessity for fairly robust park development to meet the needs of large beach crowds and other visitors
 47 brought in on modern roads and bridges was greatly increased. The need to accommodate large crowds
 48 demanded infrastructure, a reality that few contested (NPS 2007f). In March 1957, Superintendent Hanks
 49 issued a summary of the Mission 66 prospectus that re-emphasized that most other facets of the park's

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1 development were “dependent upon success in the field of erosion control” (NPS 2007f). In September
2 1958, a major management review was conducted at the Seashore. The review was generally positive but
3 it recommended that a revised Mission 66 prospectus be completed after the final master plan and
4 interpretive development plan, both undergoing review, were completed. Among a number of findings,
5 the review also determined that the park urgently needed to place vehicular access ramps that would allow
6 commercial fishermen access to the beach and stop them from building their own makeshift access points
7 (NPS 2007f).

8 Between 1955 and 1958, the NPS completed major developments that established the Seashore’s basic
9 recreational infrastructure (NPS 2007f). The new facilities, along with the completion of NC-12 on
10 Hatteras Island in 1954 and on Ocracoke Island in 1957, contributed to more than doubling park visitation
11 between 1955 and 1961 (NPS 2007f). After the highway was completed, a major problem was the
12 bottleneck at Oregon Inlet where a fast-growing volume of visitors quickly overran the existing state ferry
13 operation. Eventually, congestion at the bottleneck of Oregon Inlet became so bad that a bridge was the
14 only solution. Because the traffic jams caused such a problem for the NPS, and because a bridge would
15 benefit other federal agencies working on the Outer Banks, Congress authorized the NPS to help fund the
16 needed bridge (NPS 2007f). On August 30, 1961, the NPS issued a press release discussing its support for
17 congressional legislation that would allow the agency to help the State of North Carolina build a bridge
18 across Oregon Inlet. The bill was submitted by Bonner on May 1, 1961, and sent to the whole House on
19 August 28, 1961 (HR 6729). Bonner’s motivation was simple—the congestion at Oregon Inlet could not
20 be alleviated by additional ferries. The NPS was interested in helping to pay for the bridge, which
21 reversed its early position, if for no other reason than the congestion generated frequent criticism both by
22 the public and in the press. Traffic congestion also put pressure on NPS facilities north of the inlet. Cape
23 Hatteras National Seashore was thought the only example of a park where the state maintained a road
24 within the NPS system. The NPS acknowledged that such a bridge was a long-sought goal of the state and
25 those living in the Outer Banks but was a cost beyond their means. NPS staff also realized the park and its
26 visitors would benefit from the elimination of the bottleneck at Oregon Inlet. There were some minor
27 complications, however, that may have been reminiscent of NPS sensitivity over the issue of wilderness
28 preservation in the 1930s, when the NPS had hoped to preserve a vast expanse of wild seashore on the
29 Outer Banks. Compromise was unavoidable, namely as a result of an NPS agreement to allow road
30 construction, which was necessary to secure local support for the Seashore (NPS 2007f).

31 On October 11, 1962, Congress authorized funds for construction of a bridge to cross Oregon Inlet within
32 Cape Hatteras National Seashore. The law (Public Law 87-79; 76 Stat. 909) allowed the Secretary of the
33 Interior to pay \$500,000 toward the cost of the bridge as long as this amount came only from funds
34 specifically designated for that purpose and the state agreed to pay for upkeep. The remainder of the costs
35 would be borne by the federal government. Construction of the bridge over Oregon Inlet took
36 approximately two years and made a huge impact on the village life of Hatteras Island and on the island’s
37 wild flora and fauna. Upon completion, the bridge brought in waves of tourists whose numbers increased
38 with each passing year, an indisputable and considerable economic benefit to all the villages on Hatteras
39 and Ocracoke islands. It was a windy day in early May 1964 when the new causeway linking Bodie and
40 Hatteras islands was duly dedicated as the Herbert C. Bonner Bridge (NPS 2007f).

41 In some ways, the Bonner Bridge had taken as long to create as the park itself. It might even be said that
42 neither would have been possible without the other, since to some extent, the existence of the park was
43 predicated upon the faith of Outer Banks residents in the NPS to protect and promote their interests,
44 which included both the preservation of an idyllic coastal recreation environment that attracted increased
45 tourism and the development of transportation links between the remote islands and the outside world.
46 Access was a key issue if the growing potential of a tourist-based economy was actually to be realized. In
47 the years ahead, this fundamental dilemma, common to many national park areas, would pose great
48 challenges to managers of Cape Hatteras National Seashore (NPS 2007f).

1 Well before the end of Mission 66, NPS officials understood that the beach management (i.e., dune
2 stabilization) situation was dire. The NPS was waging a fight against a fundamental force of nature, but
3 what was not crisply understood was the futile nature of that struggle and how a commitment to preserve
4 a “primitive wilderness” had been transformed into a commitment to protect human-made structures
5 using techniques that actually undermined the preservation of natural beaches. As the work continued to
6 stabilize dunes, vehicular access to the beaches became a more pressing issue. In March 1963, Director
7 Conrad Wirth and Rep. Herbert Bonner discussed the use of automobiles on beaches, specifically
8 regarding vehicle ramps. Bonner had received complaints from local residents who wanted ramps set near
9 their own property. By then, according to Wirth, eighteen ramps had been set up to allow commercial
10 fishermen beach access, which Wirth said was prescribed by the law creating the Seashore. While these
11 ramps had been set up to allow commercial fishermen to access the beach, Wirth said that the public
12 could use the ramps also to gain access to the shore. According to Wirth, “past history has shown that
13 each vehicular access is a vulnerable spot for the ocean to break through and cause extensive damage to
14 the barrier dune and natural features of the area.” “To provide more access would jeopardize NPS
15 stabilization efforts,” Wirth said, “while providing ramps near one private property owner would only
16 inspire others to ask for similar access” (NPS 2007f).

17 Automobile driving on the beach was an infrequent topic in NPS and congressional correspondence from
18 this period, but clearly the NPS viewed vehicular access to the beach as necessary to fulfill an obligation
19 to allow continued commercial fishing by legal residents of the villages. This position, however, was an
20 interpretation of the law authorizing the Seashore and its amendments, since neither made specific
21 reference to automobiles or how beach access would be provided. It only specified that commercial
22 fishing by legal residents was to be allowed. One practice in use by local residents was “haul fishing,” a
23 technique whereby fisherman used a jeep or similar vehicle to drag a net from the sea to the beach.
24 Vehicle use was integral to this practice and not merely a means for transportation. The NPS established
25 beach access ramps to enable commercial fishermen to continue to use vehicles to fish from shore while
26 mitigating damage to the barrier dunes by controlling the points of entry, but these ramps also allowed
27 general visitors motorized access to the beach (NPS 2007f).

28 Within a decade of completion of the Bonner Bridge, the NPS was facing serious public complaints on
29 two related fronts. The first concerned the presence of ORVs or “beach buggies,” especially at Cape Point
30 near the famous Cape Hatteras Lighthouse. Such vehicles, then mainly used by fishermen, concentrated
31 near the best fishing sites in groups of up to fifty or so, leaving piles of beach trash and making it difficult
32 for other visitors to enjoy the scenic vista. The problem may have existed for a while, but by 1972, as one
33 writer informed Director George B. Hartzog, Jr., a person “literally could not take a photograph of the
34 waves by themselves without two or three hip-booted intruders in the viewfinder.” This visitor did not
35 want a total ban on the buggies but did want some restrictions. He protested that the NPS mission was to
36 leave the land “unimpaired” and noted that if there were fifty buggies this year, when would it stop? “You
37 might as well call it the Hatteras Parking Lot,” he concluded (NPS 2007f).

38 The stock NPS response was that “in contrast to natural areas, the recreation area is supposed to serve
39 many needs.” Indeed, according to Deputy Assistant Director Joseph C. Rumberg, Jr., “a closure of the
40 cape to allow full aesthetic appreciation of the power and wonder of the ocean, at the expense of fishing
41 and beach buggy use, would be a matter fraught with controversy.” Nevertheless, Director Hartzog
42 directed the Southeast Regional Office in Atlanta to arrange with the Superintendent to study the
43 possibility of changes, limitations, or even the elimination of beach buggies. Hartzog hoped the study
44 would develop recommendations that might provide the park with a better means of controlling vehicle
45 use on the beach (NPS 2007f).

46 The problem was actually more serious than suggested by visitors annoyed over compromised scenic
47 views. The Bonner Bridge had also brought increasing numbers of fishermen who were not residents of

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1 the Outer Banks but were bent on using more sophisticated means to exploit commercial opportunities.
 2 The basic issue involved fishermen using dories loaded with nets that were pulled along the beach by
 3 truck until a school of fish was located. Then, a boat was launched and part or all of the school was
 4 surrounded by the net tied to the truck onshore, which hauled in the line. According to the account of a
 5 sport-fishing newsletter, an existing practice became an acute problem by 1972. During the 1930s, only a
 6 half-dozen local residents practiced this technique, some using nets that were up to 200 yards long.
 7 Between 1936 and the early 1960s, the number of fishermen had remained fairly constant, and with up to
 8 ten such fishermen working, their nets were still no longer than 400 yards (NPS 2007f).

9 After the Bonner Bridge opened in 1964, however, commercial fishermen from elsewhere began
 10 participating in the fish harvest, some from as far away as New York. Now as many as twenty
 11 commercial fishermen were using nets up to sixteen hundred yards in length. This activity was wiping out
 12 striped bass because such huge nets took in 20- to 50-pound fish in catches weighing up to 10,000
 13 pounds. Worse, non-commercial fish were merely left to die and rot on the beach. By 1972, the problem
 14 was acute, and local fishermen began to complain, noting that they brought in cash much needed by the
 15 villagers whereas outside commercial fishermen merely depleted the fishing stock. After several years of
 16 competition between these various groups of fishermen, the situation began to threaten violence, and calls
 17 for new legislation were voiced (NPS 2007f).

18 In the coming years, many heated
 19 debates were to erupt between
 20 commercial, sports, environmental, and
 21 park-access groups. It should be noted,
 22 however, that between the 1930s until
 23 well into the 1960s, the public lodged
 24 few complaints about fishing, beach
 25 driving, or conflicts between vehicle-
 26 users and other beach-goers. At first, the
 27 few Outer Banks residents with vehicles,
 28 and occasional visitors, did not relish the
 29 notion of beach driving and did so simply
 30 because there were almost no roads on
 31 which to drive. After World War II,
 32 improved automotive technologies
 33 allowed more villagers and visitors to
 34 drive along the seashore, but without
 35 roads this activity still entailed the
 36 onerous rituals of deflating and re-
 37 inflating tires, digging out from occasional sandpits, and risking getting stuck. Such experiences were
 38 unpleasant but whether they bothered the typical “Hatterasman” as writer Ben Dixon MacNeill phrased it,
 39 was another question (NPS 2007f).



Beach driving 1933

Credit: NPS

40 Outer Banks residents were by tradition and necessity a people of the sea and were adept at using it for
 41 transportation. They did not need roadways for their own transportation or lifestyle needs, rather an
 42 absence of roads limited economic growth. As their traditional life ways declined, Outer Banks residents
 43 increasingly sought the roads and bridges needed to sustain a tourist-based economy. A major reason the
 44 NPS began to reappraise its opposition to an island parkway was that random beach driving led to
 45 destruction of the artificial dunes and harmed native flora and fauna. Ironically, the very road that boosted
 46 tourism and was supposed to better protect the environment by eliminating the chore of beach driving was
 47 also what made commercial and recreational access to the beach ever more possible and brought those
 48 separate interests into conflict. However, some commercial fishermen used jeeps early on to operate

1 shore-based fishing nets while the NPS set up ramps to help channel sport fishermen away from the more
2 sensitive dune areas. These early ramps also gave access to increasing numbers of tourists. Still, such uses
3 did not begin to elicit great controversy until after the Bonner Bridge opened in 1964. With the bottleneck
4 at Oregon Inlet removed, there was no limit to the number of park visitors who in a day's span could
5 drive down the banks and out onto the beach. Completion of the Bonner Bridge, therefore, marks a key
6 demarcation point in the history of the first national seashore (NPS 2007f).

7 In brief, residents adopted the use of ORVs for commercial netting of fish, while sport fishermen used
8 ORVs to pursue migrating schools of game fish and reach more productive areas, such as Cape Point or
9 the inlets, often a mile or more from the nearest paved surface. Presently, ORVs are used to access the
10 beach for activities such as commercial and recreational fishing, sightseeing, travel to and from
11 swimming and surfing areas, and pleasure driving (NPS 2004b).

12 Today ORVs access the ocean beaches and sound shoreline via a system of "ramps" located off NC-12
13 and other paved roadways. The ramps began as an informal system of unimproved access points
14 connecting the roadway to the sounds and beaches. Over time, this system was formalized and the
15 oceanside ramps are now numbered, maintained, and identified on the Seashore's ORV route maps as
16 official vehicle access routes for beach access. In 1978 there were 28 identified ramps, 22 of which were
17 located on NPS lands. Although the NPS opened a new ramp to the public in 1998, the number of ramps
18 has decreased since 1978 as some were lost to erosion and others were closed to the public and are now
19 used for administrative vehicle access only (NPS 2004a). The NPS currently has 17 oceanside access
20 ramps available for public ORV use (NPS 2008g).

21 ORV use at the Seashore has historically been managed since the 1970s through various draft or proposed
22 plans, though none were ever finalized or published as a special regulation as required by Executive
23 Orders 11644 and 11989 and 36 CFR 4.10. In 1973, in response to Executive Order 11644, Use of Off-
24 Road Vehicles on the Public Lands (February 8, 1972), the Seashore developed a draft ORV management
25 plan (NPS 2004b) that included the following:

- 26 • Designation of 27 beach access routes or ramps.
- 27 • Identification of a permitted area for travel from the toe of the dune to the ocean.
- 28 • License requirements for vehicles and operators.
- 29 • Closure of one heavily eroded section of the beach near the Cape Hatteras Lighthouse year-round.
- 30 • Designation of seasonal closures in five areas heavily used by pedestrians between May 26 and
31 September 10.

32 This management plan was not finalized or published as a special regulation, as required by Executive
33 Order 11644 and 36 CFR 4.10.

34 A few years later, in response to Executive Order 11989, Off-Road Vehicles on Public Lands (May 24,
35 1977), the NPS began developing a draft ORV management plan for the Seashore. In response to the plan,
36 which was released in January 1978, the North Carolina Beach Buggy Association and the Outer Banks
37 Preservation Association each issued proposed alternative plans for ORV management at the Seashore.
38 These proposed plans were considered by the Seashore, along with public comment, and in November
39 1978 the Draft Interim Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore was
40 issued (NPS 1978a). It proposed guidelines for the management of ORV use at the Seashore while the
41 general management plan was under development. The draft interim ORV management plan identified
42 zones of use for ORVs, as well as described conditions under which vehicles would be allowed or
43 prohibited. The proposed zones of use were as follows:

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- 1 • Zone 1 – Ocean Beach: In this zone ORVs will be permitted landward from 150 feet of the
 2 existing tide line, but no closer than 20 feet to the toe of the dune or vegetation line. Portions of
 3 Zone 1 may be closed seasonally (May 15 through September 15), or closed temporarily to
 4 protect nesting birds or sea turtles, or when the distance between the existing tide and the toe of
 5 the dune or the vegetation line is reduced to less than 100 feet. Permits must be issued for
 6 vehicles that have less than four weight-bearing wheels and do not meet all vehicular licensing
 7 and inspection requirements of their state of origin.
- 8 • Zone 1(a) – Seasonally closed areas include those Zone 1 areas which, due to seasonal heavy
 9 pedestrian, swimming, wildlife or other uses, are deemed seasonally unsuitable for ORV use.
 10 Seasonally closed areas shall be identified by signs at both ends of the area, and shall be indicated
 11 on maps available for viewing at the offices of the Superintendent and of each District Ranger.
 12 Dates of seasonal closures shall be May 15 through September 15 of each year, except on Pea
 13 Island National Wildlife Refuge, where the Refuge Manager shall post such closures as he may
 14 find necessary to implement the regulations of the USFWS.
 15 Seasonally closed areas shall consist of, but not be limited to, the following areas: Bodie Island,
 16 milepost 0 to milepost 3; beach areas fronting the villages of Rodanthe, Waves, Salvo, and Avon;
 17 northern boundary of Buxton to one mile south of the Cape Hatteras Lighthouse; beach fronting
 18 the villages of Frisco and Hatteras; milepost 49 to milepost 54; and Ocracoke Island milepost 65
 19 to 70.
- 20 • Zone 1(b) – Temporarily closed sections include:
 21 Those narrow beach sections of Zone 1 that have decreased in width to the point where the
 22 average distance from the existing tide to the toe of the dune or vegetation line is less than 100
 23 feet (30 meters). These sections shall be marked at each end by signs reading “Beach Temporarily
 24 Closed to Vehicle Traffic” and shall be indicated on maps available for viewing at the offices of
 25 the Superintendent and each District Ranger.
 26 Bird Nesting Areas – Portions of high beach and inlet flats where significant bird nesting is
 27 occurring. These areas shall be temporarily closed to all visitor use and shall be marked by posts
 28 and “Bird Nesting Area” signs.
 29 Sea Turtle Nests – Locations on the beach where a sea turtle nest is discovered. A rectangular
 30 section of beach that includes the nest with 300 feet (92 meters) of tide line seaward of the nest
 31 shall be temporarily closed to ORV use from dune to existing tide line. Closures shall be marked
 32 at both ends by posting with signs indicating “no ORVs – temporary turtle nest.” The period of
 33 closure shall begin on posting, 50 days after the turtle lays, and shall end 25 days later on official
 34 removal of the signs. The purpose of the closure is to protect hatchling loggerhead turtles, listed
 35 as “threatened” under the ESA.
- 36 • Zone 2 – Soundside: Marsh and flat land west and northwest of NC-12. Vehicular traffic shall be
 37 confined to marked trails, posted as open. No permit shall be required.
- 38 • Zone 3 – Buxton Woods, Open Ponds: The area of grassed dunes and forest lands lying between
 39 Headquarters, Cape Hatteras Group Coast Guard, and Frisco Campground. The area is roughly
 40 bounded on the south by the ocean dunes; on the east by a northeast-southwest trending line lying
 41 west of the Cape Point Campground, Coast Guard Group Headquarters, and NPS residence-
 42 maintenance area complex; on the north by the NPS boundary through Buxton Woods; and on the
 43 west by a south-north trending line lying east of the Frisco campground. In this zone, limited
 44 vehicular access on ORV routes posted as open shall be permitted only upon application in
 45 person to the Hatteras District Ranger (or designee) and there shall be no more than 30 total

1 ORVs in this zone at any one time. Limited access permits for vehicular entry shall not exceed 24
 2 hours in duration and shall not be issued more than 7 days in advance. Permits are renewable
 3 upon request except when vehicular capacity has been reached.

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

8 The 1978 draft interim ORV management plan also called for a posted speed limit of 25 miles per hour
 9 and for ORV operators to possess a current driver's license from their state of origin. The permitting
 10 portion of the 1978 draft plan was controversial and was removed before release of the 1978 Draft Interim
 11 Management Plan: Off-Road Vehicle Use, Cape Hatteras National Seashore (NPS 1978a). Except for
 12 Zone 1, the 1978 draft plan stated that no vehicle would enter any unpaved dirt or sand trail or path, or
 13 follow any vehicular tracks not posted as an ORV trail. Though the draft plan was not finalized or
 14 published as a special regulation as required by Executive Orders 11644 and 11989 and 36 CFR 4.10, the
 15 Seashore implemented the following plan components:

- 16 • Consolidating and clearly marking entrance and exit points to soundside areas;
- 17 • Establishing sea turtle and bird nesting protection zones;
- 18 • Increasing efforts to provide signage and other information concerning beach conditions and open
 19 and closed areas; and
- 20 • Providing better maintenance of access routes and ramps.

21 In 1980, the North District Ranger prepared the ORV Plan North District Cape Hatteras National
 22 Seashore (NPS 1980). During development of this draft plan, the North District Ranger asked concerned
 23 individuals for comments and suggestions regarding ORV use at the Seashore. Based on these comments
 24 and suggestions, the plan included recommendations for improvements and a general description and
 25 project status of each soundside and oceanside access point from Bodie Island to Hatteras Inlet. The plan
 26 recommended that the general management plan consider additional parking needs on the soundside and
 27 oceanside and at comfort station locations. It also recommended that the general management plan
 28 consider impacts of traffic flow changes as a result of corridor and road closures (NPS 1980). The 1984
 29 general management plan would address these concerns by incorporating additional parking lots and
 30 parking turnouts along NC-12 (NPS 1984); however, the 1980 draft ORV plan was not finalized or
 31 published as a special regulation, as required by Executive Orders 11644 and 11989 and 36 CFR 4.10.

32 The 1984 General Management Plan / Development Concept Plan / Environmental Assessment: Cape
 33 Hatteras National Seashore (NPS 1984) addressed direct and indirect threats to the Seashore, with ORV
 34 use cited as one such threat. The General Management Plan specified five visitor experience zones. ORV
 35 use was listed as an appropriate activity in three of these five zones: ocean/beach, interior dunes/maritime
 36 forests, and marsh/sound. The General Management Plan called for ORV use to be regulated by the 1978
 37 draft interim ORV management plan (NPS 1978a) ~~and which~~ was drafted after consideration of public
 38 comment to the 1978 draft plan (NPS 1978b). The General Management Plan called for additional
 39 planning and research on ORV use and for monitoring impacts of ORVs, but did not set forth an ORV
 40 management plan or special regulation, as required by Executive Orders 11644 and 11989 and 36 CFR
 41 4.10.

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1 ORV use was managed by the above planning documents during the 1980s and 1990s. On December 9,
2 1999, a petition for rulemaking was submitted to the NPS that requested a ban on the use of all-terrain
3 vehicles (ATVs), dune buggies, sand buggies, and other four-wheel drive vehicles on all off-road areas in
4 the national park system, which included the Seashore. This petition was followed-up by a second petition
5 in 2004. The second petition, specific to the Seashore, was submitted on June 7, 2004, and requested
6 Rulemaking Governing Off-Road Vehicle Use in the Cape Hatteras National Seashore. Petitioners
7 claimed the Seashore's informal authorization of ORV use violated the ESA, executive orders and federal
8 regulations regarding ORV use in the national parks, the *Organic Act*, the *General Authorities Act of*
9 *1970*, the Cape Hatteras National Seashore enabling legislation, and various NPS management policies.
10 Both of these petitions are part of the reason for developing this ORV plan/EIS.

11 Following the submission of the two petitions, in 2004 the Seashore issued Superintendent's Order 7,
12 ORV Management, to resolve ORV issues created by Hurricane Isabel, which flattened sand berms and
13 exposed areas of the Seashore to ORV use that the berms once protected from such use (NPS 2004c).
14 After reviewing the 1984 General Management Plan, the Superintendent decided that parts of the 1978
15 draft interim ORV management plan (permitting sections excluded) would be used as Seashore guidance
16 pending development of a long-term ORV management plan and special regulation.

17 To provide guidance for the proper management of protected species and to comply with the ESA, while
18 providing for use of the Seashore's recreational resources until an ORV plan/EIS and special regulation
19 could be completed, the Seashore began development of the Interim Strategy in late 2004. The species
20 addressed in the Interim Strategy are those specifically affected by recreational and ORV use within the
21 Seashore that are listed either federally or by the state as threatened, endangered, or species of special
22 concern, or are of special concern to the Seashore.

23 While the Interim Strategy was being prepared, Defenders of Wildlife issued a notice of intent (NOI) to
24 sue the NPS for alleged violations of the ESA at the Seashore in May 2005. After this NOI was issued,
25 the Seashore continued to develop the Interim Strategy, which was published for public comment in
26 January 2006.

27 In December 2006, after the first season that NPS had operated under the Interim Strategy and after the
28 USFWS had issued the Biological Opinion, Defenders of Wildlife issued another NOI to sue NPS and
29 USFWS (collectively referred to as Federal Defendants), alleging that the Biological Opinion did not
30 meet the requirements of the ESA and re-asserting the previously stated claims against NPS from the
31 earlier NOI to sue. NPS issued a Finding of No Significant Impact (FONSI) on the Interim Strategy in
32 July 2007 (NPS 2007a).

33 Alternative D, as modified in the Interim Strategy FONSI, was identified as the selected alternative.
34 Alternative D outlines a multifaceted strategy (including a program of increased monitoring, recreational
35 and ORV closures, education and enforcement) for minimizing impacts to wildlife, including threatened
36 and endangered species and other protected species, from visitor uses including ORV use. The USFWS
37 Raleigh Field Office prepared a Biological Opinion associated with the Interim Strategy in response to
38 their review of the Cape Hatteras National Seashore's biological assessment (NPS 2006b, January 6,
39 2006), the Interim Strategy (NPS 2006a, January 18, 2006), and other sources of published and
40 unpublished biological information. The Biological Opinion evaluated the proposed action of the Interim
41 Strategy and its potential impact to protected species at the Seashore. The USFWS concluded that
42 incidental take of protected species would occur from management actions under the Interim Strategy, but
43 the level of anticipated take during the limited period the Interim Strategy would be in effect is not likely
44 to result in jeopardy to the species or destruction or adverse modification of designated or proposed
45 critical habitat (USFWS 2006a). In March 2007 and December 2007, the NPS requested reinitiation of
46 consultation with the USFWS. These consultations concluded with the USFWS issuing amendments to its

Summary of Scientific Literature on Off-Road Vehicle Use

1 original Biological Opinion in April 2007 and March 2008, respectively. Both amendments addressed
2 performance measures for piping plover and loggerhead, green, and leatherback sea turtles.

3 In October 2007, Defenders of Wildlife and the National Audubon Society, represented by the Southern
4 Environmental Law Center (collectively referred to as Plaintiffs), filed a lawsuit claiming the Interim
5 Strategy violated the ESA and other laws, failed to protect species at Cape Hatteras National Seashore,
6 and failed to comply with the requirements of the ORV executive orders and NPS regulations on ORV
7 use. In December 2007, Dare County, Hyde County, and the Cape Hatteras Access Preservation Alliance,
8 a coalition of ORV/access and fishing groups, were granted Intervenor-Defendant status in the lawsuit.

9 In April 2008, the Plaintiffs, Federal Defendants, and Intervenor-Defendants jointly submitted to the court
10 a consent decree that would be signed by a U.S. District Court Judge on April 30, 2008, to settle the
11 lawsuit. The consent decree, which is enforceable by the court, provides for specific species protection
12 measures and requires the NPS to complete the ORV management plan/EIS and required special
13 regulation by December 31, 2010, and April 14, 2011, respectively. Consent decree modifications of the
14 Interim Strategy included changes in the size of buffers provided for various species at the Seashore, as
15 well as added restrictions related to night driving.

16 **SUMMARY OF SCIENTIFIC LITERATURE ON OFF-ROAD VEHICLE** 17 **USE**

18 A literature review was prepared to support the development of an ORV management plan at Cape
19 Hatteras National Seashore. The literature review (appendix A) provides a summary of available scientific
20 information related to the potential effects of ORV use on natural and cultural resources similar to those
21 found at the Seashore or in geographic locations with similar environmental conditions.

22 **SCOPING PROCESS AND PUBLIC PARTICIPATION**

23 An NOI to prepare an Environmental Impact Statement was published in the Federal Register on
24 December 11, 2006, to announce the beginning of the ORV planning process. To determine the scope of
25 issues to be analyzed in depth in this plan/EIS, meetings were conducted in February and March of 2007
26 with Seashore staff, other parties associated with preparing this document, and members of the public.
27 Additional public meetings were held in January 2008 and a public comment period was held in January –
28 February 2008 to examine the range of alternatives and provide input on alternative elements. In response
29 to public input and issues raised during the scoping process, the interdisciplinary planning team reworked
30 the preliminary alternatives to those analyzed in this plan/EIS except for alternative F, which was
31 developed after the negotiated rulemaking process concluded. [A notice of availability for the draft
32 plan/EIS was published in the Federal Register on March 12, 2010. Following the release of the draft
33 plan/EIS, a 60-day public comment period was open between March 12, 2010, and May 11, 2010.](#)
34 Chapter 5 of this plan/EIS provides more details about agency and public scoping activities that were an
35 integral part of the planning process for this plan/EIS.

36 **NEGOTIATED RULEMAKING PROCESS**

*The NPS used a
negotiated
rulemaking process
in an effort to*

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1 The *Negotiated Rulemaking Act of 1990* (5 United States Code [USC] 561-570)
 2 establishes a statutory framework for agency use of negotiated rulemaking to
 3 reach a consensus with stakeholders on a proposed regulation. Concurrent with
 4 the *National Environmental Policy Act* (NEPA) process, the NPS used a
 5 negotiated rulemaking process in an effort to develop a proposed rule for long-
 6 term ORV management at the Seashore. Because negotiated rulemaking allows
 7 interested, affected parties more direct input into the development of the proposed
 8 regulation, the NPS had hoped that the negotiated rulemaking process would result in a rule that is
 9 sensitive to the needs and limitations of both the parties and the agency.

*develop a proposed
 rule for long-term
 ORV management
 at the Seashore.*

10 In December 2007, the Department of the Interior established a negotiated rulemaking advisory
 11 committee (Committee) to assist the NPS in the development of an ORV regulation for the Seashore. The
 12 Committee met 11 times from January 2007 through February 2009, and conducted numerous
 13 subcommittee and work group meetings and conference calls. The Committee discussed and explored
 14 options for the full spectrum of ORV management issues covered in this plan/EIS. As a result of these
 15 discussions, the NPS considered a variety of concepts and measures that either originated from
 16 Committee members or were discussed during Committee, subcommittee, or work group sessions.
 17 Although the Committee as a whole did not reach a consensus on a recommended alternative, in creating
 18 the alternatives in this plan/EIS, the NPS has made a management judgment as to which combination of
 19 concepts and measures would make an effective overall ORV management strategy.

20 ~~In December 2007, the Negotiated Rulemaking Advisory Committee (Committee) was formally~~
 21 ~~established and its first meeting was held in January 2008, when Committee members began to work~~
 22 ~~toward a consensus recommendation. Although the Committee did not reach a consensus on a complete~~
 23 ~~alternative, management elements suggested by the Committee members were reviewed and incorporated~~
 24 ~~into the range of alternatives in this plan/EIS, primarily in alternative F.~~

25 ISSUES AND IMPACT TOPICS

26 Issues associated with implementing an ORV management plan at Cape Hatteras National Seashore were
 27 initially identified by Seashore staff during internal scoping and were further refined through the public
 28 scoping and negotiated rulemaking processes. The following text discusses the issues that formed the
 29 basis for the impact topics discussed in chapters 3 and 4 of this plan/EIS.

30 FLOODPLAINS AND WETLANDS

31 Although the entire ocean shoreline of the Seashore is classified as a marine or intertidal wetland
 32 (Cowardin et al. 1979), these areas are not measurably impacted by vehicle use due to the dynamic nature
 33 of the beach environment and the ability of the intertidal areas to “restore” themselves, since ruts from
 34 vehicle tires are filled in by wave action and moving sands. A study by Leatherman and Godfrey (1979)
 35 indicated that the intertidal ocean beach (sand beach area) is the most resistant to long-term vehicle
 36 impacts. While no definite conclusions were drawn from the study, they did indicate that natural changes
 37 to the beach appeared to overwhelm vehicle effects in this particular study. Given these studies, these
 38 types of wetlands were not analyzed in detail in this plan/EIS. However, vegetated wetlands along the
 39 soundside and interior of the islands are susceptible to direct damage from ORV use, and are discussed
 40 further under the “Wetlands” impact topic.

41 Estuarine wetlands are often denuded of vegetation when ORVs are driven and parked along the
 42 soundside shoreline. Also, many of the interior or interdunal roads are located near wetland areas that are
 43 often not noticeable to visitors. When standing water is present along these ORV routes, visitors often
 44 drive over adjacent vegetated areas in an attempt to avoid the standing water. This results in wider roads,

1 new vehicle routes, and crushed or dead vegetation. Construction of new parking areas is also of concern
2 for wetlands that may be located nearby.

3 Nearly all of the Seashore is located within the 100-year floodplain, with the exception of a small area at
4 the Navy tower site on Bodie Island and larger areas around Buxton. In this plan/EIS, the issue of
5 floodplains is considered under any alternative that includes development, such as constructing new
6 parking lots or expanding existing parking lots, because these actions have the potential to impact the
7 function and value of the floodplain. However, it is recognized that the barrier island floodplain systems
8 function quite differently than inland floodplains, which primarily function by providing lowland areas
9 for floodwater storage and conveyance. In contrast, floodplains at the Seashore are subject to coastal
10 flooding caused by storm systems that can raise water levels substantially via storm surge.

11 **WILDLIFE AND WILDLIFE HABITAT**

12 Cape Hatteras National Seashore provides important habitats and plays a vital role in the survival of many
13 wildlife species. Whether for nesting, resting, foraging, or feeding, the Seashore provides for a diverse
14 assemblage of birds. Rich, varied habitats and the Seashore’s location along the Atlantic Flyway attract
15 birds. In 1999, the American Bird Conservancy designated Cape Hatteras National Seashore as a Globally
16 Important Bird Area in recognition of the Seashore’s value in bird migration, breeding, and wintering
17 (American Bird Conservancy 2005). This diverse ecosystem includes both prey species that sensitive
18 species rely on for survival, and predators of sensitive species. ORV use along the Seashore can disrupt
19 habitat or cause a loss of habitat in high use areas. Habitat loss due to ORV use could also occur
20 indirectly as a result of the noise and disturbance from this activity.

21 Invertebrates are impacted by ORV use. A recent study at the Seashore researched the ghost crab
22 (*Ocyopode quadrata*) as an indicator of ecosystem health, since it may show the impacts of ORVs and
23 other recreational uses (Hobbs et al. 2008). The study considered the impacts of ORVs on ghost crab
24 population densities and recovery rates in relation to ORV use and usage regulations. Data to determine
25 the impacts of ORVs on crab populations were collected in several areas in the Seashore. Closures of the
26 beaches to vehicles were initiated to study short-term effects and recovery rates. It was found that ORVs
27 had a detrimental impact on ghost crab populations at the Seashore and that areas subject to vehicle use
28 had significantly fewer ghost crab burrows than those areas without vehicles. As shown by Steiner and
29 Leatherman (1981), ghost crabs can be killed or mortally injured by ORVs driving over them, or by
30 altering their environment. This study concluded that high-energy weather events change the dynamics of
31 the population, allowing more ghost crabs to inhabit the area, but ORVs reduce the ability for ghost crabs
32 to inhabit the area (Hobbs et al. 2008).

33 ~~RARE, UNIQUE, FEDERALLY LISTED THREATENED, AND OR~~ **ENDANGERED SPECIES**

34 **Federally Listed Threatened ~~and or~~ Endangered Species**

35 ORV use at the Seashore could impact federally threatened or endangered
36 species and their habitats on the Seashore’s soundside and ocean beaches.
37 Conflicts between listed species and recreational use (including ORV use) could
38 create direct or indirect losses to a listed species. The Seashore is home to
39 federally threatened ~~and or~~ endangered species year-round. Increased year-round
40 visitation results in a greater potential for conflicts between visitor use and listed
41 species. The Seashore is used by both the endangered Great Lakes population of
42 piping plover (considered threatened on wintering grounds, which include the
43 Seashore) and the threatened Atlantic Coast population (for breeding and
44 wintering, with breeding occurring at the Seashore). Seabeach amaranth, a federally listed threatened

*The Seashore is
home to federally
threatened ~~and or~~
endangered species
year-round.*

Comment [seh2]: This change is consistent with the change to the heading in CH 4

Comment [seh3]: Don’t think we need this subheading if the above heading is changed

Comment [seh4]: Consistent with the change made in heading

Comment [seh5]: Consistent with change made in heading

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1 plant species, has been found in limited numbers at the Seashore in the recent past. However, no plants
 2 have been documented since 2005. According to the USFWS, seabeach amaranth has been eliminated
 3 from two-thirds of its historic range and ORVs are considered one of the more serious threats to its
 4 continued existence.

5 Nesting sea turtles at the Seashore include the loggerhead, green, and leatherback turtles. Kemp's ridley
 6 and hawksbill turtles are known to occur only on the beaches of the Seashore through strandings. Threats
 7 to listed sea turtles, their nesting sites, and young include storm events, predation, artificial lighting,
 8 campfires, and recreational beach equipment; disturbance by pedestrians and pets; and direct and indirect
 9 impacts of ORVs. In May 2008, the red knot was identified by the USFWS as a candidate for the
 10 endangered or threatened species list. This species is a migrant and occasional winter resident at the
 11 Seashore.

12 Current and possible future management alternatives for ORV and other recreational uses would take into
 13 consideration the needs of federally listed threatened and endangered species in determining management
 14 measures.

15 STATE-LISTED AND SPECIAL STATUS SPECIES

16 Habitat for state-listed and special status species, such as the American oystercatcher and several species
 17 of colonial waterbirds, may be vulnerable to disturbances caused by recreational uses, including ORV
 18 use. As of May 2008, the American oystercatcher, Wilson's plover, least tern, common tern, and black
 19 skimmer were listed by the North Carolina Wildlife Resources Commission (NCWRC) as species of
 20 special concern ([15A NCAC 101.0105-Subchapter 101-15A](#)). The NCWRC also lists the gull-billed tern
 21 as a state-threatened species. The American oystercatcher is listed as a species of concern by the
 22 Southeastern Shorebird Conservation Plan, and both the American oystercatcher and the Wilson's plover
 23 are identified in the U.S. Shorebird Conservation Plan as "Species of High Concern" ([Schulte et al 2007](#);
 24 [Brown et al. 2001](#)). All these state-listed or special status species have had historically low reproductive
 25 rates. The lack of large undisturbed areas for successful breeding contributes to these low rates at the
 26 Seashore. Frequent human disturbance can cause the abandonment of nest sites as well as direct loss of
 27 eggs and chicks. In addition to these breeding species, the Seashore is also home to migratory species
 28 such as the red knot, that use habitat at the Seashore during the winter or during migration. The red knot is
 29 currently a candidate for ESA protection (74 FR 57804).

30 All of the bird species that are described under the "State-Listed and Species Status Species" sections of
 31 the plan/EIS are listed in 50 CFR § 10.13, which indicates species that are subject to the protections of the
 32 MBTA. These species are also designated as Birds of Conservation Concern (USFWS 2008b) and/or
 33 Migratory Nongame Birds of Management Concern in the United States (USFWS 1995) which qualifies
 34 them as species of concern according to Executive Order 13186, Responsibilities of Federal Agencies to
 35 Protect Migratory Birds. The Birds of Conservation Concern designation includes migratory and non-
 36 migratory species that are of concern due to population declines, naturally or human-caused small ranges
 37 or population sizes, threats to habitat, or other factors. The USFWS 1995 list of Migratory Nongame
 38 Birds of Management Concern in the United States lists species that are of concern because of
 39 (1) documented or apparent population declines, (2) small or restricted populations, or (3) dependence on
 40 restricted or vulnerable habitats. Therefore, the NPS is required to protect these species according to the
 41 provisions of both the executive order and the MBTA.

42 In April 2010, the NPS signed a Memorandum of Understanding (MOU) with the USFWS to strengthen
 43 coordination for migratory bird conservation. The MOU helps identify and implement strategies to
 44 complement and support existing efforts, and facilitate new collaborative migratory bird conservation

1 [partnerships and comprehensive planning strategies for migratory birds under the MBTA. The Seashore](#)
2 [has consulted with the USFWS on this plan/EIS, as provided for under the MOU.](#)

3 **SOUNDSCAPES**

4 Impacts related to soundscapes could occur wherever ORVs are allowed on the oceanside or the
5 soundside. Vehicular noise has the potential to impact other recreational uses, such as bird watching or
6 enjoying the solitude and natural soundscape of the Seashore. In addition to impacting soundscapes in
7 relation to visitor enjoyment, vehicular noise could create unsuitable habitat for Seashore wildlife.

8 **VISITOR USE AND EXPERIENCE**

9 ORV use at the Seashore is an integral component of the experience for some visitors and may be
10 impacted by ORV management activities. Other Seashore visitors who are not using ORVs may be
11 impacted by ORV use. Currently, the mix of recreational users at the Seashore includes a variety of users
12 such as ORV users, day-users without ORVs, swimmers, anglers, bird watchers, water sports enthusiasts,
13 and other users. Although some visitors want to use an ORV to access the Seashore, other visitors wish to
14 engage in recreational activities on foot and away from the presence of motorized vehicles. Restricting
15 ORVs from areas of the Seashore could enhance the recreational experience for some and diminish the
16 experience for others. Visitor experience could be affected by conflicts between motorized and non-
17 motorized recreation users. A further component of visitor experience is providing for the safety of all
18 visitors at the Seashore.

19 Other issues related to visitor use and experience include viewsheds, aesthetics, and night skies. While the
20 sight of ORVs can destroy the viewshed and aesthetics for some visitors, they also change the viewshed
21 by altering the natural landscape. Some visual signs of ORVs include tire ruts and markings and trash left
22 behind. ORV use impedes or destroys coastal features like wave or wind ripples in the sand, tide wrack
23 lines, overwash deposits, wind sorted sediments, dune formation, etc. As an example, the burrows of
24 ghost crabs, the most common beach inhabitants, are nearly absent from beaches where ORVs are
25 allowed. Installing posts around closure areas for protected species from ORVs could also impact the
26 views and aesthetics of the area for those who want a natural view without evidence of man-made
27 materials.

28 Headlights and other artificial lights associated with nighttime ORV use may affect visitors' opportunities
29 to enjoy night skies at the Seashore. Conversely, lack of artificial lights may make it more difficult to see,
30 posing hazards to ORV users and pedestrians. Issues related to night skies include night driving,
31 headlights, campfires, and all other light uses associated with human activity after dusk. The Seashore is
32 one of the few places on the Atlantic Coast where visitors can experience the magnificence of a dark night
33 sky. The Seashore has been ranked, along with Cape Lookout National Seashore, as the 9th best place to
34 view the night sky by the NPS Night Sky Program. ORV use at night has the potential to affect visitor
35 experience of the "brilliance" of the night sky. In addition to visitors, animals are also impacted by lights
36 at night. The stars, planets, and moon are visible during clear nights and influence many species of
37 animals, such as birds that navigate by the stars or prey animals that reduce their activities during moonlit
38 nights. Additionally, the phosphorescence of waves on dark nights helps sea turtle hatchlings orient to the
39 ocean. Excessive artificial light has the potential to disorient turtle hatchlings and disrupt their crawl to
40 the ocean. Pursuant to NPS Management Policy 4.10 (NPS 2006c), to prevent the loss of natural night
41 skies, the NPS should minimize light that emanates from park facilities, and also seek the cooperation of
42 park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial
43 light into the night scene of the ecosystems of parks. Furthermore, the NPS will not use artificial lighting
44 in areas such as sea turtle nesting locations where the presence of the artificial lighting could disrupt a
45 park's dark-dependent natural resource components (NPS 2006c). Impacts of artificial light sources on

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1 animals will be discussed in chapters 3 and 4 under the threatened and endangered species, state-listed
2 and sensitive species, and wildlife and wildlife habitat impact topics.

3 **SOCIOECONOMICS**

4 Management or regulation of ORV use at the Seashore could impact the local economy by changing the
5 demand for goods and services from ORV users in these communities. The eight villages located within
6 the Seashore boundaries serve as access points to the Seashore for visitors, including ORV users. These
7 villages receive economic benefit from the ORV users who take advantage of the goods and services
8 these communities offer. The communities are concerned that if a permit system or other ORV
9 restrictions are implemented that make it harder for ORV users to use the area, fewer tourists may come
10 to the villages, resulting in impacts to the local economy.

11 Commercial fishermen currently have ORV access to areas that are closed to other ORV users because of
12 safety reasons (i.e., narrow beach conditions), but they do not have access to areas closed for resource
13 protection. On Ocracoke Island, two soundside access points have been identified for commercial use.
14 Limits placed on ORV use at the Seashore may limit the activities of local commercial fishermen.
15 Disrupting the ability of commercial fishermen to conduct business at the Seashore could negatively
16 impact them.

17 **SEASHORE MANAGEMENT AND OPERATIONS**

18 Accommodating recreational uses while protecting sensitive species requires a sufficient number of
19 personnel and an adequate level of funding. Past anecdotal evidence suggested that the Seashore did not
20 have enough personnel to properly enforce existing ORV management decisions. If operational
21 requirements increase under the new ORV management plan, it would require an increased commitment
22 of limited NPS resources (staff, money, time, and equipment).

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

24 The following issues were dismissed from further analysis.

25 **Geologic Resources:** ORV use may also impact the ocean beach at Cape Hatteras National Seashore by
26 disturbing sand, compacting sand, creating ruts, and changing local topography. Studies have also shown
27 that heavy ORV use could result in increased beach erosion (see the literature review in appendix A).
28 However, the Seashore is part of a dynamic coastal barrier ecosystem, and visual effects of ORVs on
29 ocean beaches can no longer be visible in a matter of hours due to daily tidal action, winds, rain,
30 hurricanes, and other storm events. Although ORV use could impact geologic resources if ORVs are
31 driven through dunes where there is no designated ramp, the use of ramps is strictly enforced and ORVs
32 illegally cutting through dunes are rare occurrences at the Seashore, resulting in impacts that would be
33 minor or less. ORV use can cause the collapse of beach escarpments and potentially affect sea turtle
34 habitat. Ruts from ORV tires can also impact the behavior of piping plovers, and compaction of sand can
35 impact invertebrate populations that are a food source for many of the shorebird species at the Seashore.
36 However, these secondary impacts are addressed under the other impact topics in the plan/EIS including
37 of threatened and/or endangered species, state-listed and special status species, and wildlife and wildlife
38 habitat. Therefore, the issue of geologic resources was not retained as an impact topic.

39 **Geohazards:** There are no known geohazards in the Seashore that would be affected by the
40 implementation of an ORV management plan.

Issues Considered But Dismissed from Further Analysis

1 **Vegetation:** Numerous scientific studies have documented the impacts of ORV use on vegetation.
 2 However, because vegetation that exists near ORV use areas at the Seashore is almost exclusively
 3 wetland vegetation, impacts to vegetation were analyzed under the wetlands section in this plan/EIS.
 4 Potential impacts to the federally listed seabeach amaranth are addressed under the threatened and
 5 endangered species analysis in this document. Other vegetation that could be impacted from ORV use
 6 includes vegetation near the dunes, which functions to trap sand and facilitate natural dune building
 7 processes. All of the alternatives considered in this plan/EIS would include prohibitions from driving on
 8 the dunes, as well as mechanisms for establishing the ORV corridor so that any impacts to dune
 9 vegetation would be minimized. In addition, the plan/EIS would also include consultation and compliance
 10 under the *North Carolina Coastal Area Management Act (CAMA)*, which includes provisions for
 11 minimization of impacts to natural dunes. Given the alternative elements that minimize dune impacts, as
 12 well as the alternatives compliance with the CAMA, impacts to vegetation associated with dune processes
 13 would be expected to be negligible to minor and were not carried forward for detailed analysis in this
 14 document.

15 **Unique Ecosystems, Biosphere Reserves, World Heritage Sites:** There are no known biosphere
 16 reserves, World Heritage sites, or unique ecosystems listed in the Seashore; therefore, implementation of
 17 an ORV management plan would have no effect. The Seashore is classified as a Globally Important Bird
 18 Area and potential impacts to bird species are included for discussion in this document.

19 **Water Quality / Marine and Estuarine Resources:** ORV use has the potential to impact water quality at
 20 the Seashore due to fluids leaking from submerged vehicles or tire ruts altering natural drainage patterns.
 21 However, water quality impacts from submerged vehicles would not rise above the level of negligible as
 22 long as the vehicle was removed from the water in a timely fashion. Also, due to the ephemeral
 23 (temporary) nature of tire ruts in beach sand, they would not result in impacts to water quality. Therefore,
 24 this impact topic was dismissed from further analysis.

25 **Wildlife and Wildlife Habitat – Fish, Marine Mammals, and Mammals:** Essential fish habitat at the
 26 Seashore is located on the soundside in areas of submerged vegetation. As previously discussed, water
 27 quality impacts from ORV use would be negligible at most and would be associated primarily with
 28 vehicle use on the ocean side. Therefore, there would be no impacts to essential fish habitat and it is not
 29 addressed as an impact topic in this plan/EIS. Mammalian species at the Seashore include red fox (*Vulpes*
 30 *vulpes*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), Virginia
 31 opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), deer mice (*Peromyscus* spp.),
 32 white-tailed deer (*Odocoileus virginianus*), muskrat (*Ondatra zibethica*), nutria (*Myocastor coypus*), otter
 33 (*Lutra* spp.), mink (*Neovison vison*), and others. Impacts to mammals from ORV use and management
 34 would be expected to be negligible as most of these species do not use ORV routes and areas as habitat.
 35 The alternatives discussed in this ORV management plan do not involve the removal of mammalian
 36 predators. Any impacts to the potential for an increase of mammalian predators due to increased human
 37 activity are discussed as an indirect impact to wildlife species in chapter 4 of this document. Impacts
 38 associated with predator control efforts will be discussed in the Seashore's forthcoming Predator Control
 39 Program for Protected Species Management / Environmental Assessment and as a cumulative impact in
 40 chapter 4 of this document. Although harassment of resting or stranded marine mammals on the beach
 41 could occur from various park users, including those using ORVs, the plan will include measures to
 42 educate all visitors about marine mammal protection, resulting in negligible to minor impacts. For the
 43 reasons mentioned above, impacts to terrestrial and marine mammals were dismissed from further
 44 analysis in this document.

45 **Air Quality:** Currently, Cape Hatteras National Seashore is located in an area classified by the U.S.
 46 Environmental Protection Agency (EPA) as being in attainment for all six criteria air pollutants.
 47 Activities associated with ORV use (such as driving or idling engines) result in the emission of criteria air

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1 pollutants; the pollutants of most concern for this project include nitrogen oxides (NO_x), volatile organic
 2 compounds (VOCs), and particulate matter (PM). For this reason, the NPS completed a modeling analysis
 3 to quantify the magnitude of annual emissions associated with ORV activities at Cape Hatteras National
 4 Seashore, and utilized these results to determine whether additional air quality modeling was necessary to
 5 estimate downwind pollutant concentrations and associated impacts.

6 Emission factor estimates were computed using the current EPA recommended model for mobile source
 7 emissions, the EPA-developed Mobile Source Emissions Model (MOBILE6), and ORV data specific to
 8 the Seashore. The results of this analysis show that for the current average vehicle use patterns on the
 9 Seashore, emissions of VOCs, NO_x and PM are all individually below 5 tons per year (TPY). Emissions
 10 for these pollutants associated with the upper bound estimates for ORV use patterns (i.e., the highest
 11 estimates of observed ORV use anticipated to occur park-wide on an annual basis under any of the
 12 alternatives) are just above 5 TPY, but all below 7 TPY. Given these low annual emission levels, daily
 13 pollutant concentrations resulting from ORV use are anticipated to be extremely low. Accordingly, it was
 14 determined that implementation of the ORV management plan would result in negligible air quality
 15 impacts, and air quality was dismissed from further analysis and discussion. The MOBILE6 modeling
 16 results and report are available on the plan/EIS project website at <http://parkplanning.nps.gov/CAHA>.

17 **Prime Farmlands:** There are no designated prime farmland soils in the Seashore.

18 **Streamflow Characteristics:** Actions related to ORV management would not have an effect on
 19 streamflow characteristics. The proposed actions would not occur in any area that would impact
 20 streamflow.

21 **Introduce or Promote Non-Native Species:** While the potential for vehicles to bring non-native species
 22 to the Seashore occurs, only a small number of non-native species can live in the salt and wind of the
 23 seashore environment. Additionally, ORVs are prohibited from driving on vegetation at the Seashore.
 24 Therefore, the potential for spreading plants from one area of the Seashore to another by driving on
 25 Seashore vegetation is also very low. Phragmites (*Phragmites australis*), a non-native plant species, is
 26 present at the Seashore, but is not likely to be transported by ORVs because its primary method of
 27 colonization is by rhizomes (underground root extensions) and not by seeds, which are prone to spreading
 28 by vehicle tires (Wisconsin DNR 2007). Therefore, because of the low potential for ORVs to promote
 29 non-native species in such a dynamic, salty environment, this topic was not carried forward for analysis in
 30 this EIS.

31 **Archeological Resources:** Archeological resources are the remains of past human activity and records
 32 documenting the scientific analysis of these remains. Archeological features are typically buried but may
 33 extend above ground; they are commonly associated with prehistoric peoples but may be products of
 34 more contemporary society (NPS 1998). Cape Hatteras National Seashore is rich in prehistoric and
 35 historic culture. The Outer Banks are rich with history of humankind's attempt to survive at the edge of
 36 the sea, and with accounts of dangerous storms, shipwrecks, and valiant rescue efforts. As of fiscal year
 37 2007, the NPS Archeological Sites Management Information System listed 28 archeological sites within
 38 the Seashore, ranging from a single projectile point (spear, dart, or arrow tip), to cemeteries, to the Cape
 39 Hatteras Lighthouse Complex, as well as shipwrecks. The condition of almost all of the extant resources
 40 was listed as good (NPS 2007d).

41 None of the archeological remains associated with structures, such as lighthouse complexes, are in
 42 immediate danger of damage from ORV users because those areas are not frequented by ORV
 43 users/riders. Other archeological sites, such as cemeteries, are on the soundside of the island and are also
 44 not in areas frequented by ORV users. Therefore, the impact to these types of sites is considered
 45 negligible.

Issues Considered But Dismissed from Further Analysis

1 Thousands of shipwrecks have occurred along the coast. As a result of the ongoing research, the North
2 Carolina Office of State Archaeology (OSA) Underwater Archaeology Branch catalog lists 63 historic
3 shipwreck remains on beaches at the Seashore as of January 2008 (OSA 2008). At this time, none of the
4 shipwrecks within the boundaries of the Seashore are listed in the National Register of Historic Places
5 (National Register). One shipwreck, the Laura A. Barnes on Bodie Island Beach, was considered eligible
6 for the National Register until its recent destruction by beach erosion during Hurricane Isabel (Stover
7 pers. comm. 2009).

8 Shipwrecks on the beach are the resources of most concern because many of these shipwreck sites are
9 ephemeral; in other words, they are uncovered and covered by storms, winds, and tides. This makes it
10 difficult for NPS to manage them. If visible, the location of the resource is marked and protected, but
11 many times the sand will move again before this is possible. Once resources are covered, or partially
12 covered, it is possible that they could be run over or hit by ORV users who are unable to see them under
13 the sand. In addition to unintentional impacts on the Seashore's cultural resources, some resources have
14 been knowingly disturbed and even destroyed. ORV access also allows visitors to reach a shipwreck and
15 take portions of the shipwreck that would normally be too large or heavy to remove if on foot (Stover
16 pers. comm. 2009). During inventories of the condition of known shipwreck locations over the past seven
17 years, NPS has found that an average of 25 to 30 of the 63 known shipwrecks are constantly being
18 damaged by natural and human forces (Stover pers. comm. 2008).

19 The impact from unintentional ORV damage or intentional vandalism may be measurable or perceptible,
20 but it is localized within a relatively small area of the site. Therefore, impacts on shipwrecks are
21 considered minor. In general, impacts do not affect the character-defining features of any listed or eligible
22 National Register archeological site at the Seashore. Therefore, this topic was not carried forward for
23 further analysis.

24 **Cultural Landscapes:** The NPS defines cultural landscapes as settings that humans have created in the
25 natural world. They reveal fundamental ties between people and the land. They are special places:
26 expressions of human manipulation and adaptation of the land. Although only one Cultural Landscape
27 Report has been prepared for the Cape Hatteras Light Station (NPS 2003a), there are five cultural
28 landscapes within the Seashore's official database: Bodie Island Light Station, Little Kinnakeet Life
29 Saving Station, Cape Hatteras Light Station, Hatteras Weather Bureau Station, and Ocracoke Light
30 Station (NPS 1997; Stover pers. comm. 2008). None of these cultural landscapes is in the areas of routine
31 ORV use under any of the proposed action alternatives, and none should be impacted by the
32 implementation of an ORV management plan. In addition, because the oceanside ORV use areas under all
33 alternatives are close to one mile from the Cape Hatteras Light Station, there should be no cultural
34 landscape viewshed impacts from the base or the top of the lighthouse resulting from ORV use (Stover
35 pers. comm. 2008).

36 **Historic Structures and Districts:** According to Director's Order 28, structures are defined as material
37 assemblies that extend the limits of human capability. In plain language, this means a constructed work,
38 usually immovable by nature or design, consciously created to serve some human activity. Examples are
39 buildings, monuments, dams, roads, railroad tracks, canals, millraces, bridges, tunnels, locomotives,
40 nautical vessels, stockades, forts and associated earthworks, Indian mounds, ruins, fences, and outdoor
41 sculpture. The Seashore contains 36 historic structures, 20 of which are in good condition (NPS 2007b).
42 Structures at the Seashore range from cemeteries to entire complexes. For example, three historic U.S.
43 Life Saving Service stations still stand at Chicamacomico, Little Kinnakeet, and Bodie Island. The
44 Hatteras Weather Bureau Station and Ocracoke Light Station are listed in the National Register. The
45 Bodie Island Light Station, Bodie Island Lifesaving/Coast Guard Station, and Cape Hatteras Light Station
46 are listed in the National Register as historic districts. In general, ORV use does not occur in the areas
47 surrounding standing structures, because structures are located off the beach in the dunes or on the

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1 soundside of the Seashore. There are two tower concrete pad foundations (not standing structures). One is
2 at Cape Point and the other is near Frisco Bath House. Only the foundation at Cape Point is in an area of
3 ORV use but it is often buried and only becomes visible when the sands shift. Neither of these
4 foundations is in danger of impact from ORVs.

5 **Ethnographic Resources:** An ethnographic study for the Seashore was completed in late 2005 (Impact
6 Assessment, Inc. 2005). The study looked at the eight villages in the Seashore that reflect the nearly
7 300-year history and culture of the Outer Banks to support the Seashore in interpretation of its cultural
8 resources, stewardship of ethnographic resources, and community relations with the villages.
9 Archival/documentary research and ethnographic fieldwork was completed as part of the study to further
10 socio-cultural understanding of the villages adjoining the Seashore. The villages contain a mix of
11 populations that have evolved from the original British settlers, European seafarers, farmers, and other
12 more recent migrants to the Outer Banks. No discrete, continuous ethnic groups or traditionally associated
13 peoples (NPS *Management Policies 2006*, chapter 5) are documented for the Seashore; therefore, no
14 ethnographic resources (NPS *Management Policies 2006*) would be impacted by the implementation of
15 an ORV management plan.

16 In 2008, the Cape Hatteras Preservation Alliance submitted a request to the North Carolina Department of
17 Cultural Resources (NCDCCR) for Bodie Island Spit and adjoining beaches, Cape Point and adjoining
18 beaches, Hatteras Inlet and adjoining beaches, and South Point Ocracoke and adjoining beaches to be
19 recognized as Traditional Cultural Properties (TCPs), eligible for inclusion in the National Register. The
20 NCDCCR responded to this request in a letter dated June 2, 2009, stating that a significance ascribed to a
21 property in only the last 50 years cannot be considered traditional, and that the application focused on the
22 past 50 years. The NCDCCR also stated that in order to make the case that the sites qualify as TCPs worthy
23 of preservation, documentation must be presented to substantiate the community's historically rooted
24 beliefs, customs, and practices as they relate to recreational fishing and identify the "living community of
25 people" who have established a pattern of land use reflected in the cultural traditions valued by its long-
26 term residents. Further, documentation must show that the four sites are the specific places that played a
27 significant role in the community's historically rooted beliefs, customs, and practices and that those
28 beliefs, customs, and practices are integral to the community's cultural identity. The letter pointed out that
29 most of the application's text appeared to focus on the past 50 years when recreational fishing at the sites
30 has almost completely supplanted commercial fishing, a long-established practice (although not
31 necessarily a traditional cultural practice as interpreted by the NPS) and the application provided no
32 historical documentation to establish that recreational fishing practices of the past 50 years have a direct
33 relationship and continuity with the traditional beliefs, customs, or practices associated with historical
34 commercial fishing patterns on the Outer Banks. The NCDCCR concluded that, based on the limited
35 information in the application, there appears to be little if any justification that the properties qualify as
36 TCPs.

37 The NPS concurs with this analysis, and has not found or been presented either with sufficient evidence
38 that Outer Banks communities have cultural practices and beliefs associated with specific beaches or with
39 a sufficient demonstration of an association with cultural practices and beliefs that are integral to the
40 continuing cultural identity of any community. On October 21, 2009, the NPS further replied to this
41 request stating that there is not sufficient evidence as to whether there are Outer Banks communities that
42 have cultural practices and beliefs associated with specific beaches or sufficient information
43 demonstrating an association between any community's cultural practices and beliefs that are integral to
44 the continuing cultural identity of that community. Because no TCPs were found to exist at the Seashore,
45 this topic was not carried forward for analysis.

46 **[Note: Will be updated before Camera Ready Draft]**

Issues Considered But Dismissed from Further Analysis

1 **Museum Collections:** Museum objects are manifestations and records of behavior and ideas that span the
 2 breadth of human experience and depth of natural history. The Seashore has collections of artifacts on
 3 display at the Cape Hatteras Lighthouse and at each visitor center. The official Seashore archives and
 4 artifact collections are housed at Fort Raleigh National Historic Site at Manteo. These various collections
 5 are not located on the ocean or soundside beaches and would not be impacted by implementation of an
 6 ORV management plan. Therefore this topic was not carried forward for further analysis.

7 Indian Trust Resources. The federal Indian trust responsibility is a legally enforceable fiduciary
 8 obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights. No
 9 Indian trust resources have been identified for Cape Hatteras National Seashore. Therefore, this impact
 10 topic is eliminated from further consideration.

11 Sacred Sites. Of the federally acknowledged tribes recognized pursuant to Public Law 103-454, 108
 12 Statute 4791, the Tuscarora Nation is the only tribe affiliated with the Seashore. NPS is not aware of any
 13 historic properties that may be of religious and cultural significance to the Tuscarora Nation that would
 14 potentially be affected by the management alternatives described in the draft plan/EIS. The Seashore has
 15 consulted with the Tuscarora Nation about the ORV management draft plan/EIS, and the Tuscarora
 16 Nation has not informed the Seashore of sacred sites or other historic properties of religious or cultural
 17 significance to them which would be potentially affected. Therefore, the topic of sacred sites has been
 18 dismissed from further consideration.

19 **Environmental Justice:** On February 11, 1994, the President of the United States issued Executive Order
 20 12898: Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. The
 21 executive order is designed to focus the attention of federal agencies on the human health and
 22 environmental conditions in minority communities and low-income communities. Environmental justice
 23 analyses are performed to identify the disproportionate placement effects of high and adverse
 24 environmental or health impacts from proposed federal actions on minority or low-income populations,
 25 and to identify alternatives that could mitigate these impacts.

26 Data from the U.S. Department of Commerce 2000 Census of Population and Housing (U.S. Census
 27 Bureau 2008) identify minority populations as Black or African American; American Indian and Alaska
 28 Native; Asian; Native Hawaiian and other Pacific Islander; of some other race; of two or more races; and
 29 Hispanic or Latino. Poverty status, used in this plan/EIS to define low-income status, is reported as the
 30 number of persons with income below poverty level. The 2000 Census defines the poverty level as an
 31 annual income of \$8,794, or less, for an individual and an annual income of \$17,603, or less, for a family
 32 of four.

33 Dare and Hyde counties in North Carolina had a population of 35,793 in the year 2000, of whom 4,185
 34 people (12%) were minorities and 3,271 (9%) were living below poverty level. People of Hispanic or
 35 Latino origin composed 787 (2%) of the total population; 2,854 (8%) were Black or African American;
 36 107 (0.3%) were American Indian or Alaskan Native; 143 (0.4%) were Asian; 0 were Native Hawaiian or
 37 other Pacific Islander; 317 (0.8%) were of some other race; and 347 (0.9%) were of two or more races. It
 38 should be noted that persons of Hispanic or Latino origin may be of any race. The only village at the
 39 Seashore that is a Census Designated Place is Ocracoke Village. Ocracoke had a population of 769 in the
 40 year 2000, of whom 30 (3.9%) were minorities and 68 (9.3%) were living below poverty level.

41 The census block group containing the villages of Rodanthe, Waves, Salvo, and Avon had a population of
 42 1,600 in the year 2000, of whom 55 people (3%) were minorities and approximately 11% were living
 43 below the poverty level. The census block group containing Hatteras Village had a population of 709 in
 44 the year 2000, of whom four people were minorities and approximately 3% were living below the poverty

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1 level. The census block group containing the villages of Buxton and Frisco had a population of 1,692 in
2 the year 2000, of whom 24 were minorities and approximately 5% were living below the poverty level.

3 The data for the counties and the areas containing the villages indicate poverty rates that are lower than
4 the national and state average of 12% in the year 2000. None of the minority populations in the area of the
5 Seashore were above the state or national averages for those populations (U.S. Census Bureau 2008).
6 Therefore, based on the definitions provided in the executive order for minority or low-income
7 populations, there are no such populations that would be disproportionately impacted by the
8 implementation of this plan/EIS.

9 **Energy Resources:** This topic involves assessing energy requirements and the potential for energy
10 conservation associated with the various alternatives, but is most relevant to facility construction projects.
11 The majority of ORV use at the Seashore involves gaining access to fishing areas, where vehicles are then
12 turned off once the desired fishing spot is reached. Because vehicular access to the beach would be
13 maintained under this plan/EIS at current or reduced levels, there would only be negligible impacts on
14 energy resources, as public fuel consumption would not change to a large degree as a result of the
15 implementation of this plan. However, due to differences in management intensity among the alternatives,
16 there would be differences in energy (fuel) consumption from implementation of the ORV management
17 plan. The Seashore would continue to operate under the wise energy use guidelines and requirements
18 stated in the NPS 2006 Management Policies, Executive Order 13123 (Greening the Government
19 Through Effective Energy Management), Executive Order 13031 (Federal Alternative Fueled Vehicle
20 Leadership), Executive Order 13149 (Greening the Government Through Federal Fleet and
21 Transportation Efficiency), and the 1993 NPS Guiding Principles of Sustainable Design.

22 **Green House Gas Emissions and Climate Change:** There is strong evidence linking global climate
23 change to human activities, especially greenhouse gas emissions associated with the burning of fossil
24 fuels (IPCC 2007). Some of the activities associated with ORV management and use would result in
25 fossil fuel consumption, for example, vehicular trips by Seashore personnel conducting monitoring and
26 management activities such as erecting, moving, or removing species closures; marking ORV corridors;
27 and law enforcement patrol and response in ORV areas would consume fossil fuels. Equipment used to
28 construct and maintain ramps, interdunal roads, and parking areas would also consume fossil fuels.
29 Additionally visitors driving ORVs on the Seashore beaches would result in fossil fuel consumption and
30 release of greenhouse gas emissions. However, greenhouse gas emissions associated with the plan would
31 be negligible in comparison to local, regional, and national greenhouse gas emissions. Therefore, the issue
32 of the contribution of ORV management and use activities to climate change through greenhouse gas
33 emissions was dismissed from further analysis.

34 **Urban Quality, Gateway Communities:** A gateway community is defined by the NPS *Management*
35 *Policies 2006* as a community that exists in close proximity to a unit of the national park system whose
36 residents and elected officials are often affected by the decisions made in the course of managing the
37 park. Because of this, there are shared interests and concerns regarding decisions. Gateway communities
38 usually offer food, lodging, and other services to park visitors. They also provide opportunities for
39 employee housing and a convenient location to purchase goods and services essential to park
40 administration. The communities within and adjacent to the Seashore would fall under this definition, and
41 the issues and interests that would be impacted by this plan are addressed under the Socioeconomics
42 impact topic.

43 **Paleontological Resources:** No paleontological resources are located within the Seashore that would be
44 impacted by ORV use; therefore, paleontological resources would not be impacted by implementation of
45 an ORV management plan.

Federal Laws, Policies, Regulations and Plans Directly Related to Off-Road Vehicle Management

1 **Health and Safety:** Large numbers of vehicles and pedestrians use many of the same Seashore beaches at
 2 the same time, increasing the potential for visitor use conflicts and safety issues. Health and safety issues
 3 related to ORV use are discussed under the Visitor Use topic.

4 **Topography and Soils:** Issues related to topography and soils include impacts to the sand and beach
 5 environment, which are discussed above under geologic resources. Since no other impacts would occur to
 6 soils or topographic conditions, these were not included as separate impact topics.

7 **FEDERAL LAWS, POLICIES, REGULATIONS AND PLANS DIRECTLY** 8 **RELATED TO OFF-ROAD VEHICLE MANAGEMENT**

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

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

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

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

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

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

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

36 This CFR section states, “operating a motor vehicle is prohibited except on park roads, in parking areas
 37 and on routes and areas designated for off-road motor vehicle use.” Additionally, routes and areas
 38 designated for ORV use shall be promulgated as special regulations, with designations complying with

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1 | Executive Order 11644 [and 36 CFR 4.10](#). Routes and areas may be designated only in national recreation
 2 | areas, national seashores, national lakeshores, and national preserves. As a result of the plan/EIS and
 3 | special regulation, the Seashore will be in compliance with this regulation.

4 | **OTHER APPLICABLE FEDERAL LAWS, POLICIES, REGULATIONS** 5 | **AND PLANS**

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

10 | **Code of Federal Regulations, Title 36**

11 | Title 36, chapter 1, provides the regulations “for the proper use, management, government, and protection
 12 | of persons, property, and natural and cultural resources within areas under the jurisdiction of the National
 13 | Park Service.” These regulations are utilized to fulfill the statutory purposes of the units of the national
 14 | park system: to conserve scenery, natural and historical objects, and wildlife, and to provide for the
 15 | enjoyment of those resources in a manner that will leave them unimpaired for the enjoyment of future
 16 | generations. Part 2 of these regulations establishes resource protection, public use, and recreation
 17 | regulations applicable to public use of units of the national park system. Part 4 of these regulations
 18 | establishes vehicle and traffic safety regulations applicable to areas within a park that are open to public
 19 | traffic, which under this plan/EIS will include designated ORV routes.

20 | **Coastal Zone Management Act, 1966**

21 | The *Coastal Zone Management Act* (CZMA) (16 USC 1451 et seq.) seeks to
 22 | preserve and protect coastal resources. Through the CZMA, states are
 23 | encouraged to develop coastal zone management programs (CZMPs) to allow
 24 | economic growth that is compatible with the protection of natural resources, the
 25 | reduction of coastal hazards, the improvement of water quality, and sensible
 26 | coastal development. The CZMA provides financial and technical incentives for
 27 | coastal states to manage their coastal zones in a manner consistent with CZMA
 28 | standards and goals. CZMA Section 307 states, “Each Federal agency activity
 29 | within or outside the coastal zone that affects any land or water use or natural
 30 | resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent
 31 | practicable with the enforceable policies of approved State management programs.”

*The Coastal Zone
 Management Act
 (CZMA) seeks to
 preserve and protect
 coastal resources.*

32 | The CAMA (G.S. 113A) established the state’s cooperative program of coastal area management,
 33 | including unified policies, criteria, standards, methods, and processes for dealing with land and water use
 34 | decisions of more than local significance. This Act established the Coastal Resources Advisory Council
 35 | and North Carolina Coastal Resources Commission, under the state’s Department of Environment and
 36 | Natural Resources (NCDENR). The NCDENR Division of Coastal Management uses the rules and
 37 | policies of the North Carolina Coastal Resources Commission to protect, conserve, and manage North
 38 | Carolina’s coastal resources through an integrated program of planning, permitting, education, and
 39 | research. These activities are carried out through the state’s responsibilities under the CAMA, the North
 40 | Carolina Dredge and Fill Law (G.S. 113-229), and the federal CZMA in the 20 coastal counties. The
 41 | CAMA program was federally approved in 1978 and is the state’s CZMP under the CZMA. Localities are
 42 | responsible for planning while the state establishes areas of environmental concern. A project must obtain
 43 | a CAMA permit if it:

Other Applicable Federal Laws, Policies, Regulations and Plans

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

5 As a part of this program, the Coastal Resources Commission designated “areas of environmental
6 concern” in the 20 coastal counties and set rules for managing development in these areas. An AEC is an
7 area of natural importance that may be easily destroyed by erosion or flooding or that may have
8 environmental, social, economic, or aesthetic values that make it valuable to North Carolina. At least 90
9 days prior to taking action, NPS would provide a consistency determination stating how the plan/EIS is,
10 to the maximum extent practicable, consistent with the enforceable policies of the CAMA.

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

12 The 1973 ESA provides for the conservation of ecosystems upon which threatened and endangered
13 species of fish, wildlife, and plants depend. Section 7 of this Act requires all federal agencies to consult
14 with the Secretary of the Interior on all projects and proposals with the potential to impact federally
15 endangered or threatened plants and animals. It also requires federal agencies to use their authorities in
16 furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and
17 threatened species. Federal agencies are also responsible for ensuring that any action authorized, funded,
18 or carried out by the agency is not likely to jeopardize the continued existence of any endangered species
19 or threatened species or result in the destruction or adverse modification of designated critical habitat.
20 Section 9 of the Act makes it unlawful for a person to “take” a listed animal without a permit. The term
21 “take” is defined in the Act as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect
22 or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act
23 which actually kills or injures wildlife. Such an Act may include significant habitat modification or
24 degradation where it actually kills or injures wildlife by significantly impairing essential behavioral
25 patterns, including breeding, feeding, or sheltering.” Listed plants are not protected from take, although it
26 is illegal to collect or maliciously harm them on federal land. The Act also imposes civil and criminal
27 penalties for violations of any provisions of the Act.

28 **Critical Habitat Designation for Piping Plovers**

29 Under the authority of Section 4 of the ESA, the USFWS must, to the maximum extent prudent and
30 determinable, designate critical habitat for protected species. “Critical habitat” refers to (1) specific
31 geographic areas occupied by the species at the time it is listed as threatened or endangered that contain
32 features essential for the conservation of a threatened or endangered the species and that may require
33 special management or protection; and (2) areas outside the areas occupied by the species at the time it is
34 listed that are nonetheless determined to be essential to the conservation of the species. On October 21,
35 2008 (73 FR 62816), the USFWS published a revised designation for the following areas as critical
36 habitat for the wintering population of the piping plover in the Seashore: (1) Unit NC–1, Oregon Inlet; (2)
37 Unit NC–2, Cape Hatteras Point; (3) Unit NC–4, Hatteras Inlet; and (4) Unit NC–5, Ocracoke Island.
38 Unit NC–1 is approximately 5 miles long, and consists of about 485 acres of sandy beach and inlet spit
39 habitat on Bodie Island and Pea Island. Unit NC–2 comprises 646 acres and extends south approximately
40 2.8 miles from the ocean groin near the old location of the Cape Hatteras Lighthouse to the point of Cape
41 Hatteras, and then extends west 4.7 miles along South Beach to the edge of ramp 49 near the Frisco
42 campground. Unit NC–4 is approximately 5 miles long and consists of 410 acres of sandy beach and inlet
43 spit habitat on the western end of Hatteras Island and the eastern end of Ocracoke Island. Unit NC-5
44 consists of 502 acres on the western portion of Ocracoke Island beginning at the beach access point at the

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1 edge of ramp 72 (South Point Road), extending west approximately 2.1 miles to Ocracoke Inlet, and then
 2 back east on the Pamlico Sound side. On February 6, 2009, Cape Hatteras Access Preservation Alliance
 3 and Dare and Hyde Counties, North Carolina filed a legal challenge to the revised designation. On August
 4 18, 2010, a U.S. District Court granted the government's motion for summary judgment and dismissed
 5 the case with prejudice, and the critical habitat designation for these four units remains in effect. Under
 6 Section 7(a)(2) of the ESA, if a federal action may affect a listed species or its critical habitat, the
 7 responsible federal agency must enter into consultation with the USFWS to ensure that the affected
 8 critical habitat would remain functional to serve its intended conservation role for the species.

9 **Antideficiency Act**

10 The *Antideficiency Act* is a series of statutes (originating from 16 Stat. 251 in 1870) that prohibit federal
 11 managers from making or authorizing expenditures in excess of the amount available to them from
 12 appropriations or other funds, unless authorized by law. Based on this, the plan/EIS created must be able
 13 to be implemented through expected funding sources.

14 **Marine Mammal Protection Act, 1972**

15 The *Marine Mammal Protection Act* (MMPA) prohibits, with certain exceptions, the taking of marine
 16 mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals
 17 and marine mammal products into the United States. The MMPA defines "take" as "to harass, hunt,
 18 capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." It defines harassment as
 19 "any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine
 20 mammal stock in the wild; or has the potential to disturb a marine mammal or marine mammal stock in
 21 the wild by causing disruption of behavioral patterns, including but not limited to, migration, breathing,
 22 nursing, breeding, feeding, or sheltering." The MMPA recognizes that some marine mammal species or
 23 stocks may be in danger of extinction or depletion as a result of human activities, and that these species or
 24 stocks must not be permitted to be depleted. The MMPA, as amended in 1994, provides for certain
 25 exceptions to the take prohibitions, such as Alaska Native subsistence and permits and authorizations for
 26 scientific research; a program to authorize and control the taking of marine mammals incidental to
 27 commercial fishing operations; preparation of stock assessments for all marine mammal stocks in waters
 28 under U.S. jurisdiction; and studies of pinniped-fishery interactions.

29 This Act is relevant to this plan/EIS in two ways. ORVs are often used to respond to stranded marine
 30 mammals, and can be essential for quick and humane response. These actions are coordinated by the
 31 National Oceanic and Atmospheric Administration (NOAA) and/or the Seashore with government
 32 vehicles, and are considered beneficial for the protection and management of marine mammals on the
 33 Seashore. ORVs also have the potential to impact resting or stranded marine mammals due to the fact that
 34 ORVs facilitate access to and increase visitor presence in relatively remote sections of the beach, which
 35 could bring people and vehicles into direct, short-term contact with resting or stranded marine mammals.
 36 This increases the potential for resting or stranded marine mammals to be disturbed or harassed. For
 37 example, harassment of resting seals has been documented numerous times on the Seashore, and ORVs
 38 would most likely continue to contribute to this as the area's winter seal population continues to increase.

39 **Migratory Bird Treaty Act of 1918 and Executive Order 13186: Responsibilities of Federal** 40 **Agencies to Protect Migratory Birds**

41 Migratory birds are of great ecological and economic value to this country and to other countries. They
 42 contribute to biological diversity and bring tremendous enjoyment to millions of people who study,
 43 watch, feed, or hunt these birds throughout the United States and other countries. The United States has
 44 recognized the critical importance of this shared resource by ratifying international, bilateral conventions

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1 for the conservation of migratory birds. These migratory bird conventions impose substantive obligations
 2 on the United States for the conservation of migratory birds and their habitats, and through the MBTA,
 3 the United States has implemented these migratory bird conventions with respect to the United States.
 4 Executive Order 13186 directs executive departments and agencies to take certain actions to further
 5 implement the MBTA. The MBTA implements various treaties and conventions between the United
 6 States and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds.
 7 Under this Act, it is prohibited, unless permitted by regulations, to “pursue, hunt, take, capture, kill,
 8 attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for
 9 shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or
 10 cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at
 11 any time, or in any manner, any migratory bird, included in the terms of this Convention...for the
 12 protection of migratory birds...or any part, nest, or egg of any such bird” (16 USC 703). Subject to
 13 limitations in the Act, the Secretary of the Interior may adopt regulations determining the extent to which,
 14 if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or
 15 exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones,
 16 distribution, abundance, economic value, breeding habits and migratory flight patterns.

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

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

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

26 Section 106 of this Act requires federal agencies to consider the effects of their
 27 undertakings on properties listed or potentially eligible for listing on the National
 28 Register of Historic Places. All actions affecting the Seashore’s historic,
 29 archaeological, and cultural resources must comply with this legislation. For this
 30 plan/EIS, compliance with Section 106 is being combined with NEPA
 31 compliance.

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

33 Both the *National Parks Omnibus Management Act of 1998* (NPOMA) (16 USC
 34 5901 et seq.) and NEPA are fundamental to NPS park management decisions. Both acts provide direction
 35 for articulating and connecting the ultimate resource management decision to the analysis of impacts,
 36 using appropriate technical and scientific information. Both also recognize that such data may not be
 37 readily available and provide options for resource impact analysis in this case.

38 **NPS Organic Act, as Amended**

39 By enacting the *Organic Act of 1916*, Congress directed the U.S. Department of the Interior and NPS to
 40 manage units of the national park system “to conserve the scenery and the natural and historic objects and
 41 the wild life therein and to provide for the enjoyment of the same in such manner and by such means as
 42 will leave them unimpaired for the enjoyment of future generations” (16 USC 1). The 1978 *Redwood*
 43 *Amendment* reiterates this mandate by stating that the NPS must conduct its actions in a manner that will

Section 102(2) (C)
of the National
Environmental
Policy Act requires
that an EIS be
prepared for
proposed major
federal actions that
may significantly
affect the quality of
the human
environment.

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1 ensure no “derogation of the values and purposes for which these various areas have been established,
 2 except as may have been or shall be directly and specifically provided by Congress” (16 USC 1 a-1).
 3 Congress intended the language of the *Redwood Amendment* to reiterate the provisions of the *Organic*
 4 *Act*, not to create a substantively different management standard. The House Committee report described
 5 the *Redwood Amendment* as a “declaration by Congress” that the promotion and regulation of the national
 6 park system is to be consistent with the *Organic Act*. The Senate Committee report stated that under the
 7 *Redwood Amendment*, “The Secretary has an absolute duty, which is not to be compromised, to fulfill the
 8 mandate of the 1916 Act to take whatever actions and seek whatever relief as will safeguard the units of
 9 the national park system.” Although the *Organic Act* and the *Redwood Amendment* use different wording
 10 (“unimpaired” and “derogation”) to describe what the NPS must avoid, both acts define a single standard
 11 for the management of the national park system—not two different standards. For simplicity, NPS
 12 *Management Policies 2006* uses “impairment,” not both statutory phrases, to refer to that single standard.

13 Despite these mandates, the *Organic Act* and its amendments afford the NPS latitude when making
 14 resource decisions to allow appropriate visitor use while preserving resources. By these acts Congress
 15 “empowered [the NPS] with the authority to determine what uses of park resources are proper and what
 16 proportion of the park’s resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*,
 17 82 F.3d 1445, 1453 [9th Cir. 1996]).

18 Courts consistently interpret the *Organic Act* and its amendments to elevate resource conservation above
 19 visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991) states:
 20 “Congress placed specific emphasis on conservation.” The court in *National Rifle Association of America*
 21 *v. Potter*, says “in the *Organic Act* Congress speaks of but a single purpose, namely, conservation.” The
 22 NPS *Management Policies 2006* also recognize that resource conservation takes precedence over visitor
 23 recreation. The policy dictates: “when there is a conflict between conserving resources and values and
 24 providing for enjoyment of them, conservation is to be predominant” (NPS 2006c, sec. 1.4.3, 10). This
 25 policy has been further reiterated in a recent court ruling on the Yellowstone Winter Use Plan/EIS
 26 (*National Parks Conservation Association v. National Park Service* – No. 07-2112) that states,

27 The *Organic Act* charges the NPS with the duty to provide for the enjoyment: of the
 28 parks’ resources and values in “such manner and by such means as will leave them
 29 unimpaired for the enjoyment of future generations” 16 U.S.C. Section 1. This is not
 30 blanket permission to have fun in the parks in any way the NPS sees fit. As Plaintiffs
 31 articulated at the hearing, the “enjoyment” referenced in the *Organic Act* is not enjoyment
 32 for its own sake, or even enjoyment of the parks generally, but rather the enjoyment of
 33 “the scenery and natural and historic objects and the wild life” in the parks in a manner
 34 that will allow future generations to enjoy them as well.

35 Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on
 36 park resources and values. Yet, the NPS has discretion to allow negative impacts when necessary (NPS
 37 2006c, sec. 1.4.3, 10). While some actions and activities cause impacts, the NPS cannot allow an adverse
 38 impact that constitutes resource impairment (NPS 2006c, sec. 1.4.3, 10). Specifically, NPS *Management*
 39 *Policies 2006*, section 1.4.3.1 states: “In the administration of authorized uses, park managers have the
 40 discretionary authority to allow and manage the use, provided that the use will not cause impairment or
 41 unacceptable impacts.” The *Organic Act* prohibits actions that permanently impair park resources unless a
 42 law directly and specifically allows for the action (16 USC 1a-1). An action constitutes “an impairment”
 43 when its impacts “harm the integrity of park resources or values, including the opportunities that
 44 otherwise would be present for the enjoyment of those resources or values” (NPS 2006c, sec. 1.4.5, 11).
 45 To determine impairment, the NPS must evaluate “the particular resources and values that would be
 46 affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and
 47 the cumulative effects of the impact in question and other impacts” (NPS 2006c, sec. 1.4.5, 11).

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1 Park managers must also not allow uses that would cause unacceptable impacts (NPS 2006c, sec. 1.4.7,
2 12) These are impacts that fall short of impairment, but are still not acceptable within a particular park's
3 environment. For the purposes of these policies, unacceptable impacts are impacts that, individually or
4 cumulatively, would

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

17 Because park units vary based on their enabling legislation, natural resources, cultural resources, and
18 missions, management activities appropriate for each unit, and for areas in each unit, vary as well. An
19 action appropriate in one unit could impair or cause unacceptable impacts to resources in another unit.
20 ~~Thus, this EIS analyzes the context, duration, and intensity of impacts related to the implementation of the~~
21 ~~alternatives for an ORV management plan at Cape Hatteras National Seashore. The DEIS also provides~~
22 ~~an analysis and determination of, as well as the potential for resource impairment or unacceptable~~
23 ~~impacts, as required by Director's Order 12: Conservation Planning, Environmental Impact Analysis and~~
24 ~~Decision-making (NPS 2001a). Since publication of the DEIS in March 2010, the NPS has issued Interim~~
25 ~~Guidance for Impairment Determination in NPS NEPA documents (NPS 2010h). Consistent with the~~
26 ~~Interim Guidance, a draft written impairment determination only for the preferred alternative is included~~
27 ~~in appendix E of this FEIS, and the impact analysis for the no-action alternative A in the FEIS discusses~~
28 ~~the potential of alternative A to result in impairment to sea turtles, common tern, gull-billed tern, and~~
29 ~~black skimmer.~~

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

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

34 **Executive Order 11988: Floodplain Management**

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

1 **NPS Management Policies 2006**

2 NPS *Management Policies 2006* address management of ORVs in section 8.2.3.1, Off-Road Vehicle Use.
3 This section states (NPS 2006c):

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

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

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

27 Management policies relating to resource protection also were considered in developing this plan/EIS. For
28 example, NPS *Management Policies 2006* instructs park units to maintain, as parts of the natural
29 ecosystems of parks, all plants and animals native to park ecosystems, in part by minimizing human
30 impacts on native plants, animals, populations, communities, and ecosystems, and the processes that
31 sustain them (NPS 2006c, sec. 4.4.1).

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

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

- 41 • Cooperate with both the USFWS and the National Marine Fisheries Service (NMFS) to
42 ensure that NPS actions comply with both the written requirements and the spirit of the
43 *Endangered Species Act*. This cooperation should include the full range of activities

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1 associated with the *Endangered Species Act*, including consultation, conferencing, informal
2 discussions, and securing of all necessary scientific and/or recovery permits.

- 3 • Undertake active management programs to inventory, monitor, restore, and maintain listed
4 species' habitats; control detrimental non-native species; control detrimental visitor access;
5 and re-establish extirpated populations as necessary to maintain the species and the habitats
6 upon which they depend.
- 7 • Manage designated critical habitat, essential habitat, and recovery areas to maintain and
8 enhance their value for the recovery of threatened and endangered species.
- 9 • Cooperate with other agencies to ensure that the delineation of critical habitat, essential
10 habitat, and/or recovery areas on park-managed lands provides needed conservation benefits
11 to the total recovery efforts being conducted by all the participating agencies.
- 12 • Participate in the recovery planning process, including the provision of members on recovery
13 teams and recovery implementation teams where appropriate.
- 14 • Cooperate with other agencies, states, and private entities to promote candidate conservation
15 agreements aimed at precluding the need to list species.
- 16 • Conduct actions and allocate funding to address endangered, threatened, proposed, and
17 candidate species.

18 Section 4.4.2.3 of the NPS *Management Policies 2006* also states, "NPS will inventory, monitor, and
19 manage state and locally listed species in a manner similar to its treatment of federally listed species, to
20 the greatest extent possible. In addition, the Service will inventory other native species that are of special
21 management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and
22 will manage them to maintain their natural distribution and abundance" (NPS 2006c, sec. 4.4.2.3).

23 **Cape Hatteras National Seashore Enabling Legislation, 1937**

24 This legislation was an act of Congress that provided for the authorization of the Cape Hatteras National
25 Seashore. Section 3 of the Seashore's enabling legislation (the Act) states, "the administration, protection,
26 and development of the aforesaid national seashore shall be exercised under the direction of the Secretary
27 of the Interior by the National Park Service, subject to the provisions of the Act of August 25, 1916
28 (39 Stat. 535)," which is more commonly known as the *Organic Act*. Section 3 continues by stating, "that
29 the legal residents of villages...shall have a right to earn a livelihood by fishing within the boundaries to
30 be designated by the Secretary of the Interior, subject to such rules and regulations as the said Secretary
31 may deem necessary in order to protect the area for recreational use as provided for in this Act." Section 4
32 of this legislation states, "Except for certain portions of the area, deemed to be especially adaptable for
33 recreational uses, particularly swimming, boating, sailing, fishing, and other recreational activities of
34 similar nature, which shall be developed for such uses as needed, the said areas shall be permanently
35 reserved as a primitive wilderness and no development of the project or plan for the convenience of
36 visitors shall be undertaken which would be incompatible with the preservation of the unique flora and
37 fauna or the physiographic conditions now prevailing in this area."

38 **Code of Federal Regulations Title 36, Section 7.58, Commercial Fishing**

39 Section 7.58 contains the regulations governing commercial fishing at the Seashore. This section includes
40 details on the requirements for commercial fishing permits, sport fishing zones, beach sanitation, and
41 conservation of aquatic life.

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1 **Code of Federal Regulations Title 36, Section 2.2, Wildlife Protection**

2 Section 2.2 address the protection of wildlife at the Seashore and prohibits the following: the taking of
3 wildlife, except by authorized hunting and trapping activities conducted in accordance with paragraph (b)
4 of Section 2.2; the feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting,
5 breeding or other activities; and possessing unlawfully taken wildlife or portions thereof.

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

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

11 Director's Order 12 requires that impacts to park resources be analyzed in terms of their context, duration,
12 and intensity. It is crucial for the public and decision makers to understand the implications of those
13 impacts in the short and long term, cumulatively, and within context, based on an understanding and
14 interpretation by resource professionals and specialists. ~~Director's Order 12 also requires that an analysis
15 of impairment to park resources and values be made as part of the NEPA document. Since publication of
16 the DEIS in March 2010, the NPS has issued Interim Guidance for Impairment Determinations In NPS
17 NEPA Documents (Interim Guidance) (NPS 2010h). Consistent with the Interim Guidance, a draft
18 written impairment determination only for the preferred alternative is included in appendix E of this FEIS,
19 and the impact analysis for the no action alternative A in the FEIS discusses the potential of alternative A
20 to result in impairment to sea turtles, common tern, gull billed tern, and black skimmer.~~

21 **NPS Director's Order 28: Cultural Resource Management**

22 Director's Order 28 sets forth the guidelines for management of cultural resources, including cultural
23 landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic
24 resources. This order calls for the NPS to protect and manage cultural resources in its custody through
25 effective research, planning, and stewardship in accordance with the policies and principles contained in
26 the *NPS Management Policies 2006*.

27 **NPS Director's Order 77: Natural Resource Protection**

28 Director's Order 77 addresses natural resource protection, with specific guidance provided in Reference
29 Manual 77: Natural Resource Management. Natural Resource Management Reference Manual 77 offers
30 comprehensive guidance to NPS employees responsible for managing, conserving, and protecting the
31 natural resources found in National Park System units. The Reference Manual serves as the primary
32 guidance on natural resource management in units of the National Park System. Reference Manual
33 chapters that are particularly relevant to this plan/EIS include endangered, threatened, and rare species
34 management; geologic resources management; native animal management; shoreline management;
35 vegetation management; special use permitting; wetland protection (Director's Order 77-1); and
36 floodplain management (Director's Order 77-2).

37 **RELATIONSHIP TO OTHER CAPE HATTERAS NATIONAL SEASHORE PLANNING DOCUMENTS,**
38 **POLICIES AND ACTIONS**

39 The following plans, policies, and actions occurring at the Seashore were considered during the
40 development of this plan/EIS.

Comment [seh6]: We just explained about impairment and the interim guidance three pages ago under the Organic Act . We're separating NEPA and the Organic Act to the extent feasible per the Interim Guidance, so I think it's better to delete this. Confirmed 010810 with SOL that it's OK to delete these sentences.

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1 Past Off-Road Vehicle Planning Efforts

2 As described under “Summary of Off-Road Vehicle Use and Management at Cape Hatteras National
3 Seashore” earlier in this chapter, the Seashore has engaged in various ORV management activities since it
4 was established. All of these past planning efforts were taken into consideration during the development
5 of this plan/EIS.

6 General Management Plan

7 The 1984 General Management Plan / Development Concept Plan / Environmental Assessment for Cape
8 Hatteras National Seashore was developed to guide the preservation, use, development, and operation of
9 the Seashore for a 5- to 10-year period. The relationship of the General Management Plan to ORV use at
10 the Seashore is described in greater detail under “Summary of Off-Road Vehicle Use and Management at
11 Cape Hatteras National Seashore” earlier in this chapter.

12 Resource Management Plan

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

18 Visitor Services Project Report

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

26 Long-Range Interpretation Plan

27 A long-range interpretation plan for the Seashore was completed in September 2007. The Long-Range
28 Interpretation Plan recommends actions to be taken over the next five to seven years to improve the
29 Seashore’s personal services program and interpretive media, and provides an achievable implementation
30 strategy (NPS 2007d). Because the plan addresses exhibits, interpretive information, outreach, and
31 education, it was considered in the development of this plan/EIS.

32 RELATIONSHIP TO OTHER FEDERAL PLANNING DOCUMENTS AND ACTIONS

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

36 Piping Plover Atlantic Coast Population Recovery Plan

37 ORV management activities described in this plan/EIS considered the 1996 USFWS Piping Plover
38 Atlantic Coast Population Recovery Plan (USFWS 1996a). This population of piping plovers was listed

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1 as threatened in 1986 and has increased from approximately 800 pairs to almost 1,350 pairs in 1995.
 2 However, pressure on Atlantic Coast beach habitat from development and human disturbance is pervasive
 3 and unrelenting, and the species is sparsely distributed. Increased human activity in Atlantic Coast parks,
 4 which includes increased ORV use, is cited as one of the many reasons the piping plover was listed.

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

6 This plan/EIS considered the USFWS Recovery Plan for the Great Lakes Piping Plover. The Great Lakes
 7 population, members of which are believed to overwinter at the Seashore, was listed as endangered under
 8 provisions of the ESA on January 10, 1986. The Great Lakes population had declined from a historic size
 9 of several hundred breeding pairs to 17 at the time of listing. From 1986 through 2002, the population
 10 fluctuated between 12 and 51 breeding pairs, with breeding areas remaining largely confined to Michigan.
 11 The restricted breeding range of this population creates a gap in the distribution of piping plovers across
 12 North America, with the Great Lakes population isolated from the two other breeding populations
 13 (Atlantic and Northern Great Plains) (USFWS 2003).

14 **Atlantic Green, Hawksbill, Leatherback, Kemp's Ridley, and Loggerhead Turtle Recovery Plans**

15 The USFWS and the NMFS recovery plans for the U.S. population of Atlantic green, hawksbill,
 16 leatherback, Kemp's ridley, and loggerhead sea turtles were considered when developing this plan/EIS.
 17 Each of these species is federally listed and the Seashore considered the individual recovery plans (NMFS
 18 and USFWS 1991, 1992a, 1992b, 1993, 2008).

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

20 This plan/EIS considered the Marine Mammal Recovery Efforts of the NMFS. The NMFS Office of
 21 Protected Resources is charged with implementing the MMPA and the ESA with respect to marine
 22 mammal species under the NOAA Fisheries jurisdiction which includes whales, dolphins, porpoises,
 23 seals, and sea lions. These efforts are relevant to this plan/EIS because ORVs are often used to respond to
 24 stranded marine mammals, and can be essential for quick and humane response. These actions are
 25 coordinated by NOAA and/or the Seashore with government vehicles, and are considered beneficial for
 26 the protection and management of marine mammals on the Seashore. ORVs also have the potential to
 27 impact resting or stranded marine mammals due to the fact that ORVs facilitate access to and increase
 28 visitor presence in relatively remote sections of the beach, which could bring people and vehicles into
 29 direct, short-term contact with resting or stranded marine mammals. This increases the potential for
 30 resting or stranded marine mammals to be disturbed or harassed. For example, harassment of resting seals
 31 has been documented numerous times on the Seashore, and ORVs will most likely continue to contribute
 32 to this as the area's winter seal population continues to increase.

33 **Cape Lookout National Seashore Interim Protected Species Management Plan / Environmental** 34 **Assessment and Off-Road Vehicle Management Plan / Environmental Impact Statement**

35 Located south of Ocracoke Inlet, Cape Lookout National Seashore also developed an interim protected
 36 species management plan / environmental assessment. The Cape Lookout National Seashore Interim
 37 Protected Species Management Plan / Environmental Assessment will guide management practices for
 38 the protection of special status species occurring at Cape Lookout National Seashore until a long-term
 39 ORV management plan/EIS and regulation is developed. Prior to the implementation of the interim
 40 protected species management plan in 2007, Cape Lookout conducted a range of species management
 41 activities that were less protective, but still provided a level of protection to the Seashore's federally listed
 42 species, state-listed species, and species of special concern through species monitoring and management
 43 and protective buffers. Cape Lookout National Seashore is developing a long-term ORV management

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1 plan/EIS. The Cape Lookout National Seashore ORV Management Plan/EIS is being developed during
 2 the same timeframe as the Cape Hatteras National Seashore ORV management plan/EIS, and will cover
 3 similar issues.

4 **RELATIONSHIP TO OTHER STATE AND LOCAL PLANNING DOCUMENTS, POLICIES, ACTIONS,**
 5 **LAWS, AND REGULATIONS**

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

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

9 Recreational fishing at the Seashore is guided by the North Carolina Division of Marine Fisheries
 10 regulations. The North Carolina Division of Marine Fisheries manages all marine and estuarine resources
 11 in the state. As part of this function, the division publishes an annual recreational fishing guide that sets
 12 minimum lengths and bag limits for various species. Beginning January 1, 2007, the State of North
 13 Carolina required recreational anglers to have a license for saltwater fishing.

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

15 The Nongame and Endangered Wildlife Program, established in North Carolina in 1983, aims to prevent
 16 species from becoming endangered through maintaining viable, self-sustaining populations of all native
 17 wildlife, with an emphasis on species in decline. The NCWRC has a Comprehensive Wildlife Strategy to
 18 protect state-listed species. This strategy includes securing funding for state fish and wildlife agencies to
 19 take preventative actions that help keep rare species from becoming endangered, and keep common
 20 species common (NCWRC 2005). Species listed through this program as state threatened, endangered, or
 21 of special concern were taken into consideration during the development of this plan/EIS. Endangered
 22 and threatened wildlife and wildlife species of special concern are protected under Article 25 of chapter
 23 113 of the *North Carolina General Statutes*.

24 **North Carolina Wildlife Resource Commission Handbook for Sea Turtle Volunteers in**
 25 **North Carolina**

26 The NCWRC published the Handbook for Sea Turtle Volunteers in North Carolina (NCWRC 2006). The
 27 handbook provides guidance to volunteers in conducting biologically sound management projects to
 28 benefit sea turtles and to help ensure compliance with laws pertaining to rare and endangered species at
 29 all levels of government. An annual permit is issued to the Seashore by the NCWRC under the authority
 30 of the USFWS. This handbook was considered in the development of this plan/EIS because turtle
 31 management is guided by this document.

32 **North Carolina Natural Heritage Program**

33 Among other responsibilities, the North Carolina Natural Heritage Program (NCNHP) identifies the most
 34 important places for the conservation of rare species and high quality natural communities in the state. As
 35 of January 2008, the NCNHP had identified more than 2,400 of these places, officially referred to as
 36 Significant Natural Heritage Areas (SNHAs). If a natural area cannot be purchased by NCNHP, its
 37 ecological significance can be recognized through a registry agreement, which is a voluntary agreement
 38 with the landowner that provides limited protection but recognizes the owner's commitment to
 39 conservation of the area. There are 10 SNHAs located within the boundaries of the Seashore. The NPS
 40 signed two agreements with NCNHP for the formal protection of nine of these areas. The Buxton Woods
 41 SNHA was registered in 1979 and eight other SNHAs were registered in the 1987 agreement. The

Chapter 1: Purpose of and Need for Action

1 purpose of the agreements was to “express the sincere intentions of the National Park Service to refrain
 2 from making or permitting changes that negatively affect the natural values for which this area was
 3 registered within the boundaries outlined.” It specifically stated, “Vehicular traffic on beach locations will
 4 be regulated to prevent damage to nesting colonies of water birds.” The registered SNHAs potentially
 5 relevant to this plan/EIS are Turtle Pond and Cape Hatteras Lighthouse Pond, Cape Hatteras Point,
 6 Hatteras Sand Flats, Ocracoke Island - Eastern End, and Ocracoke Island - Western End Sand Flats. The
 7 unregistered Hatteras Island - Middle Section SNHAs is also in the Seashore. The significance of these
 8 SNHAs is primarily the habitat that they provide for shorebirds such as piping plover, American
 9 oystercatchers, and several species of colonial waterbirds, although several sensitive plant communities
 10 are also identified as part of these ecological communities. All of the action alternatives in this EIS
 11 provide increased levels of shorebird protection than what was occurring at the time the NPS and NCNHP
 12 signed the agreement to register and protect these natural areas. However, at this time, the exact on-the-
 13 ground location of any proposed improvements is not known, although general locations have been
 14 identified for each alternative in chapter 2 of this document. The NPS will consult with NCNHP when the
 15 Seashore begins the process to identify exact locations for constructing or relocating ramps, interdunal
 16 roads, or parking lots that are in an SNHA to ensure that the construction avoids impacts to any sensitive
 17 species.

18 **North Carolina Department of Transportation**

19 The North Carolina Department of Transportation (NCDOT) has various projects related to NC-12 and
 20 other Outer Banks access issues. The NCDOT is considering some long-term projects in response to the
 21 changing physical landscape of the area such as a bridge from Avon to Buxton, which is a possible area
 22 for a future inlet. The Outer Banks Task Force has developed a long-term management plan for NC-12
 23 that was considered during the development of this plan/EIS. NC-12 connects the communities located
 24 within Cape Hatteras National Seashore to the mainland of North Carolina. Island residents depend on the
 25 roadway for off-island community services, such as hospitals, emergency response, and waste collection.
 26 NC-12 is also the primary evacuation route for all permanent and temporary residents on the island when
 27 severe weather is approaching. Storms frequently cause the ocean to overwash NC-12 and deposit large
 28 quantities of sand over portions of the roadway. The storms sometimes damage NC-12, which interrupts
 29 access and services to the island and causes hardships for island residents. NC-12 must be continually
 30 repaired and maintained to prevent permanent loss of access on Hatteras Island. To address these issues a
 31 task force was formed comprising the NCDOT, NPS, U.S. Army Corps of Engineers (Corps), USFWS,
 32 NMFS, Federal Highway Administration (FHWA), Dare and Hyde counties, and the NCDENR. The
 33 mission of this task force is to develop a long-range protection and maintenance plan for the
 34 transportation system on the Outer Banks. As part of this task force, hot spots for erosion have been
 35 identified and include Northern Pea Island, Sandbag area, Rodanthe “S” curves, Buxton / Canadian Hole,
 36 Hatteras Village, and Ocracoke (OBTF 2009).

37 The NCDOT is proposing to build a new bridge to replace the existing Herbert C. Bonner Bridge,
 38 originally built in the 1960s, over Oregon Inlet before the end of the bridge’s reasonable service life. The
 39 NCDOT and the FHWA released a supplemental draft EIS regarding this replacement, and a supplement
 40 to the EIS was released in 2007 (OBTF 2007; FHWA 2007). In September 2008, NCDOT announced its
 41 preferred alternative, known as the Parallel Bridge with Phased Approach / Rodanthe Bridge Alternative.
 42 This alternative includes constructing a new Oregon Inlet bridge (Phase I) west of the existing structure,
 43 and later elevating NC-12 onto a series of bridges during Phases II-IV. Replacement of the Oregon Inlet
 44 bridge is expected to be complete in 2014 (NCDOT 2008).

1 **North Carolina Coastal Area Management Act**

2 Details regarding the CAMA were presented earlier in this document under the CZMA description on
3 page 42.

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4 **Dare and Hyde County Planning Documents**

5 The development and implementation of this plan/EIS considered the planning efforts of Dare and Hyde
6 counties, primarily with respect to the cumulative impacts analysis and consistency determination. Since
7 1974, when the North Carolina General Assembly ratified the CAMA, each of the local governments in
8 the twenty-county coastal region have been developing and updating land use plans. These land use plans
9 have directed development in these areas and are responsible for the pattern of development we see today
10 in Dare and Hyde counties. Both of these plans recognize the development that has occurred and the
11 corresponding need for an increase in services as a result. These past patterns of land use development
12 have influenced the amount of land available for habitat throughout the county, including portions of the
13 counties located within the Seashore.

14 In Dare County, the County Planning Board serves as an advisory board to the Dare County Board of
15 Commissioners. In compliance with the CAMA, Dare County prepared guidance and policies for land use
16 development, known as the Land Use Plan (Dare County 2003), which provides local elected officials
17 with a set of guidelines for development patterns and other land use issues that are important to the
18 community. The Land Use Plan includes policies on various topics and implementation activities such as
19 policies on water quality, residential and commercial development patterns, beach access, oceanfront and
20 estuarine development, stormwater management, wastewater, and transportation. The latest version of the
21 Dare County Land Use Plan was certified by the North Carolina Coastal Resources Commission in July
22 2003, and must be updated every five years. The 2008 plan update was submitted to the state for review
23 in mid-January 2009 and as of February 1, 2010, was still under review (Owens pers. comm. 2010). The
24 Land Use Plan applies to the unincorporated portions of Dare County, while each of the municipalities in
25 Dare County adopts its own plans for its respective planning jurisdiction. The Dare County Land Use
26 Plan works in conjunction with the zoning ordinance, as well as the CAMA. Except for the mainland
27 villages and Wanchese, the remainder of unincorporated Dare County is zoned. Detailed zoning maps
28 have been adopted for the villages of Duck, Collington, Roanoke Island, Avon, Buxton, and Hatteras. The
29 villages of Rodanthe, Waves, Salvo, and Frisco are zoned S-1, which is a minimal zoning district that
30 allows all uses but does establish some building setbacks and height limitations. In addition, the county
31 adopted a Special Environmental District (SED-1) for the Buxton Woods maritime forest. This zoning
32 district establishes special standards for land clearing and vegetation removal that are intended to protect
33 the vegetative canopy of the Buxton Woods forest (Dare County 2003).

34 The Hyde County Land Use Plan, written in 1986, was updated in 1992, 1997, and 2006. Hyde County
35 Land Use Plan, in compliance with the CAMA, analyzes land development in the area to plan for future
36 uses. The plan sets forth the following vision for the Island of Ocracoke (Hyde County 2006).

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

- 41 • Efforts to maintain the historic village assets.
- 42 • Efforts to preserve traditional native occupations and crafts including hunting and commercial
43 fishing.

Chapter 1: Purpose of and Need for Action

- 1 • Efforts to enhance the Island shopping opportunities with small locally owned shops and
- 2 businesses.
- 3 • Efforts to provide affordable housing.
- 4 • Cooperative efforts with the community, NPS, and DOT to maintain access to the Island and
- 5 provide necessary amenities. Ocracoke and Mainland should emphasis access.
- 6 • Support village craftsmen.

7 **Outer Banks Scenic Byway**

8 In the early 1990s, the NCDOT declared the Outer Banks corridor a state scenic byway. In September
 9 2003, NCDOT completed an Outer Banks Scenic Byway Corridor Management Plan in preparation for
 10 seeking National Scenic Byway status. The Corridor Management Plan, updated in 2008, explored the
 11 “six intrinsic qualities” of the byway – scenic, natural, cultural, historic, archaeological, and recreational.
 12 The corridor management plan recognized the Seashore as one of the important natural components of the
 13 byway. The 2008 plan included recommendations for stewardship of the natural and cultural resources at
 14 the Seashore. Based on these planning efforts, the Outer Banks road corridor was officially designated as
 15 a National Scenic Byway on October 16, 2009.

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

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

- 20 • ORV users are requested to observe a suggested speed limit of 15 miles per hour;
- 21 • ORVs users must enter and leave the beach only at designated ramps (never between ramps or on
- 22 the dunes);
- 23 • ORVs should be driven only on the portion of beach that lies between the foot of the dunes and
- 24 the ocean;
- 25 • ORV users are requested to proceed with caution and consideration of other beach visitors;
- 26 • ORVs must have a state road registration and valid license plate; and
- 27 • ORV operators must have a current driver’s license.

28 In addition to these general guidelines, the surrounding municipalities have individual ORV regulations,
 29 as shown in table 6.

30 **TABLE 6. ORV REGULATIONS FOR OUTER BANKS MUNICIPALITIES**

Regulation/Guideline	Duck	Kill Devil Hills	Nags Head	Kitty Hawk and Southern Shores ^a
Observe 15 miles-per-hour (mph) speed limit	X	X	X	
Use designated ramps to enter/exit the beach	X	X	X	
Drive only between foot of dunes and ocean	X	X	X	
Be cautious/considerate of other visitors	X	X	X	

Other Applicable Federal Laws, Policies, Regulations and Plans

Vehicle must be registered with valid license plate	X	X	X	
Operator must have current license	X	X	X	
No permit is required between October 1 and April 30	X	X		
Vehicle must have 4-wheel drive		X		
Night driving is permitted		X		
Government, law enforcement, emergency, rescue services exempt	X	X	X	X
Commercial fishermen exempt				X
ORV must be permitted by regulations governing ORVs			X	

^aNo motorized vehicles are allowed on beaches at Kitty Hawk and Southern Shores except for commercial fishermen and government/emergency vehicles.

8/9/2010 draft

CHAPTER 2: ALTERNATIVES

NEPA requires federal agencies to explore a range of reasonable alternatives that address the purpose of and need for the action. The alternatives under consideration must include the “no-action” alternative as prescribed by 40 CFR 1502.14. Two no-action alternatives are included for analysis in this plan/EIS, because management changed partway through the planning process in May 2008, after the consent decree was signed (see chapter 1 of this document for more information). Action alternatives may originate from the proponent agency, local government officials, or members of the public at public meetings or during the early stages of project development. Alternatives may also be developed in response to comments from coordinating or cooperating agencies.

The alternatives analyzed in this document, in accordance with NEPA, are the result of internal scoping, public scoping meetings, and information developed during the negotiated rulemaking process. Public and agency comments on the draft plan/EIS were analyzed and considered. As a response to these comments, NPS has made changes to the alternatives, where appropriate, which are reflected in this final plan/EIS. A copy of the original draft plan/EIS showing all additions, deletions, and other changes that have been made in the preparation of this final plan/EIS, including changes to the alternatives, is available electronically at <http://parkplanning.gov/caha>.

These alternatives meet the management objectives of the Seashore, while also meeting the overall purpose of and need for proposed action. Alternative elements that were considered but were not technically or economically feasible, did not meet the purpose of and need for the project, created unnecessary or excessive adverse impacts to resources, and/or conflicted with the overall management of the Seashore or its resources were dismissed from further analysis.

Comment [seh1]: Should this say “The action alternatives” instead of “These alternatives”?

The NPS explored and evaluated six alternatives in this plan/EIS, as follows:

- **Alternative A: No Action—Continuation of Management under the Interim Protected Species Management Strategy.** Under this no-action alternative, management of ORV use and access at the Seashore would be a continuation of management based on the 2007 Cape Hatteras National Seashore Interim Protected Species Management Strategy/EA and the Superintendent’s Compendium 2007, as well as elements from the 1978 draft interim ORV management plan that were incorporated in Superintendent’s Order 7.
- **Alternative B: No Action—Continuation of Terms of Consent Decree Signed April 30, 2008, and amended June 4, 2009.** Under alternative B, management of ORV use would follow the terms described under alternative A, except as modified by the provisions of the consent decree, as amended. Modifications in the consent decree include changes to resource protection buffers and closures for various species at the Seashore and added restrictions related to night driving.
- **Alternative C: Seasonal Management.** Alternative C would provide visitors to the Seashore with a degree of predictability regarding areas available for ORV use, as well as vehicle-free areas, based largely on the seasonal resource and visitor use characteristics of various areas in the Seashore.
- **Alternative D: Increased Predictability and Simplified Management.** Under alternative D, visitors to the Seashore would have the maximum amount of predictability regarding areas available for ORV use and vehicle-free areas for pedestrian use. Restrictions would be applied to larger areas over longer periods of time to minimize changes in designated ORV and ~~non-~~ ORV-vehicle-free areas over the course of the year.

Chapter 2: Alternatives

- 1 • **Alternative E: Variable Access and Maximum Management.** Alternative E would provide use
2 areas for all types of visitors to the Seashore with a wide variety of access for both ORV and
3 pedestrian users, but often with controls or restrictions in place to limit impacts on sensitive
4 resources. Interdunal road and ramp access would be improved, and more pedestrian access
5 would be provided through substantial additions to parking capacity at various key locations that
6 lend themselves to walking on the beach.
- 7 • **Alternative F: ~~The NPS Preferred Alternative Management Based on Advisory Committee~~**
8 **Input.** The NPS considered a variety of concepts and measures that either originated during the
9 negotiated rulemaking process from members of the negotiated rulemaking advisory committee
10 (Committee) or were discussed during Committee, subcommittee, or work group sessions.
11 Although the Committee as a whole did not reach a consensus on a recommended alternative, in
12 creating this action alternative the NPS- made management judgments as to which combination of
13 concepts and measures would make an effective overall ORV management strategy. This used the
14 Committee's input to create this action alternative, which is designed to provide visitors to the
15 Seashore with a wide variety of access opportunities for both ORV and pedestrian users.
16 Alternative F would provide a reasonably balanced approach for visitor use when designating
17 ORV routes and vehicle free areas and providing for the protection of park resources distribution
18 of beach miles designated as ORV routes and vehicle-free areas, while providing for the
19 protection of park resources, open some areas to ORV use earlier and for a longer time than the
20 other action alternatives. To support access to both vehicle-free areas and designated ORV
21 routes, This alternative F would involve the construction of new parking areas, a pedestrian
22 access trails, ORV ramps, and improvements and additions to the interdunal road system. Based
23 in part on public and agency comments on the draft plan/EIS, this alternative has been modified
24 within the range of alternatives described in the draft plan/EIS.

25 **ELEMENTS COMMON TO ALL ALTERNATIVES**

26 The following describes elements of the alternatives that are common to all alternatives, including the no-
27 action alternatives.

28 **Vehicle/Operator Requirements**

- 29 • **Vehicle Requirements.** All vehicles operating in any area of the Seashore must comply with the
30 following:
- 31 – Meet all requirements to operate legally on state highways where the vehicle is registered,
32 including any required vehicle equipment.
 - 33 – Have a valid vehicle registration, insurance, and license plate.
- 34 • **Operator Requirements.** Any person operating a vehicle in any area of the Seashore must
35 comply with the following:
- 36 – Observe any law applicable to vehicle use on a paved road in the state of North Carolina.
 - 37 – Hold a current driver's license (Superintendent's Compendium, Section 4.2(a)).
 - 38 – Use a seatbelt.
- 39 • **Operator and Passenger Requirements.** Any vehicle operator and/or passenger in a vehicle
40 operating in any area of the Seashore must comply with the following:
- 41 – Open containers of any type of alcoholic beverage are prohibited in vehicles.

Elements Common to all Alternatives

- 1 - ORV drivers and/or passengers are prohibited from sitting on the tailgate or roof or hanging
2 outside of moving vehicles. Those in truck beds must be seated on the floor with the tailgate
3 closed; children in truck beds must be accompanied by an adult.

- 4 • **Right-of-Way Requirements.** ~~Vehicle~~ right-of-way between vehicles is not defined by the
5 Seashore, and the standard driving rules must be followed.

6 Ramp Configuration

- 7 • If Bonner Bridge construction closes ramp 4, a new ramp 3 would be constructed north of the
8 Oregon Inlet campground and day-use parking would be provided.

9 Boat Access

- 10 • Launch sites, as designated under 36 CFR 3.8(a)(2), are identified in the Superintendent's
11 Compendium. Launching or recovery of vessels is prohibited within resource closures.

12 National Park Service Regulations

13 Title 36: Parks, Forests, and Public Properties of the U.S. Code of Federal Regulations is applicable in all
14 national parks, including Cape Hatteras National Seashore. These regulations include those in Title 36
15 applicable to the operation of ORVs in the Seashore and those applicable to individuals recreating at the
16 Seashore. Of particular note are the provisions of 36 CFR 1.5 and 1.6, which state that the superintendent
17 may impose public use limits, or close all or a portion of a park area to all public use or to a specific use
18 or activity; designate areas for a specific use or activity; or impose conditions or restrictions on a use or
19 activity, and may establish a permit, registration, or reservation system.

20 Enforcement

21 Violations could result in fines or mandatory court appearances as defined in the Collateral Schedule,
22 Eastern District of North Carolina, National Park Service.

23 Areas of Vehicle Operation

24 During the shorebird and turtle breeding seasons, standard resource protection buffers would apply, which
25 could restrict ORV access to certain areas of the Seashore. Refer to table 37-2 on page xxx284 of this
26 document for a description of access closures that occurred during the 2007-2010~~09~~ seasons.

27 Visitors accessing the Seashore by ORV must drive only on marked ORV routes, comply with posted
28 restrictions, and adhere to the following:

- 29 • Driving or parking outside of marked and maintained ORV routes is prohibited.
30 • Operating a vehicle of any type within safety or resource closures is prohibited.
31 • Accessing the beach and designated ORV routes is allowed only via designated beach access
32 ramps and soundside access roads.
33 • Reckless driving—for example, cutting circles or defacing the beach—is prohibited.
34 • Observing pedestrian right-of-way is required.

Comment [mbm2]: Table was updated to include 2010 data

Chapter 2: Alternatives

1 **Commercial Fishing / Permitted Uses**

- 2 • Commercial fishing permit holders with ORVs would be allowed to enter administrative and
3 safety closures, but not resource closures or lifeguarded beaches. Two designated commercial
4 fishing access points exist on the soundside of Ocracoke Island, where only vehicular access for
5 commercial fishing is allowed.
- 6 • Kite flying, kiteboards, and ball and Frisbee tossing are prohibited within or above all bird
7 closures.

8 **Protected Species Management**

- 9 • In general, because of the dynamic nature of the Seashore beaches and inlets, protected species
10 management could change by location and time; new sites (bars, islands) could require additional
11 management, or management actions may become inapplicable for certain sites (e.g., habitat
12 changes with vegetation growth, new overwash areas).
- 13 • Areas with symbolic fencing (string between posts) would be closed to recreational access.
- 14 • Data collection would continue to document breeding and nest locations.
- 15 • Essential vehicles could enter restricted areas subject to the guidelines in the Essential Vehicles
16 section of the USFWS Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised
17 Recovery Plan (USFWS 1996a). Due to the soft sand conditions of the Seashore, essential
18 vehicles would be allowed to travel up to 10 mph.

19 **Accessibility for ~~the~~ Visitors with Disabilities**

20 The Seashore would provide access to ~~disabled~~ visitors with disabilities as follows:

- 21 • Beach access points and boardwalks ~~compliant with the Americans with Disabilities Act~~
22 ~~requirements~~ would be provided at Coquina Beach, the Frisco Boathouse, the Ocracoke Pony
23 Pen, and the Ocracoke day use area.
- 24 • Beach access would be provided through the issuance of special use permits for areas in front of
25 the villages to allow ORVs to transport ~~disabled~~ visitors with disabilities to the beach and then
26 return the vehicle back to the street.
- 27 • Beach wheelchairs could be checked out at each District on a first-come, first-served basis.

28 **Infrastructure**

- 29 • The Seashore has four campgrounds at Oregon Inlet, Frisco, Cape Point, and Ocracoke. The
30 campgrounds would be open seasonally. Dates the campgrounds open or close would be subject
31 to change.
- 32 • Fishing piers are located near Frisco and at Avon and Rodanthe on Cape Hatteras Island, and a
33 marina is located at Oregon Inlet on Bodie Island. These would continue to be available to the
34 public.¹

¹ The Frisco pier was closed for public safety reasons, due to deteriorating conditions, and then f. Further damaged by Hurricane Earl occurred in September 2010. The future of this pier is not known at this time.

1 Education and Outreach

2 Under all alternatives, the Seashore would continue to

- 3 • Post signage in the Seashore so information on beach closures and Seashore resources is readily
4 available and presented in a clear manner to the public.
- 5 • Post signs regarding applicable ORV regulations at ORV access ramps, beach routes, and
6 soundside areas.
- 7 • Notify the public of species management closures and beach access status through weekly
8 resource and beach access reports, press releases, email updates, and postings at the Seashore
9 visitor centers and other NPS visitor facilities and on the Seashore website.
- 10 • Provide education and outreach materials regarding protected species (including seabeach
11 amaranth) and measures taken by the Seashore to protect nesting birds and sea turtles at Seashore
12 visitor centers and other NPS visitor facilities, on ORV access ramp bulletin boards, in the
13 Seashore newspaper, and on the Seashore website. These materials include regulations regarding
14 trash disposal, wildlife feeding, fireworks, and pets, and the impacts of such activities on sensitive
15 Seashore species.
- 16 • Provide education and outreach materials regarding visitor safety at Seashore’s visitor centers and
17 other NPS visitor facilities, on ORV access ramp bulletin boards, in the Seashore newspaper, and
18 on the Seashore website.
- 19 • Provide education and outreach materials regarding ORV-driving requirements at Seashore
20 visitor centers and other NPS visitor facilities, on ORV access ramp bulletin boards, in the
21 Seashore newspaper, and on the Seashore website.
- 22 • Solicit input from interested parties regarding how to convey information about the species
23 management program.
- 24 • Conduct educational programs during the bird and sea turtle hatching season, such as having
25 public school students participate in post-hatching sea turtle nest examinations in order to learn
26 about sea turtles.
- 27 • Publish annual protected species reports on the Seashore website regarding the previous breeding
28 season.

29 NO-ACTION ALTERNATIVES

30 The no-action alternative is developed for two reasons. First, a no-action alternative may represent the
31 agency’s past and current actions or inaction on an issue continued into the future, which may represent a
32 viable alternative for meeting the agency’s purpose and need. Second, a no-action alternative may serve
33 to set a baseline of existing impacts continued into the future against which to compare the impacts of
34 action alternatives. For most agency decisions, one no-action alternative can serve both of these purposes.
35 Here, however, the situation is more complex.

36 As stated in chapter 1, “in order to provide continued visitor access through the use of ORVs, NPS must
37 promulgate a special regulation authorizing ORV use at the Seashore,” and the purpose of this plan is to
38 develop such a regulation. Without a special regulation, continued ORV use would conflict with NPS
39 regulations (36 CFR 4.10). The consent decree recognizes this and sets a deadline of April 1, 2011, for the
40 promulgation of a final special regulation. As the district court has recognized in another case, absent an
41 ORV plan and regulation, as a legal matter ORV use is “prohibited.” [The NPS acknowledges that if it](#)

Chapter 2: Alternatives

1 does not promulgate a special regulation to authorize ORV use, then ORV use would, in fact, be
 2 prohibited at the Seashore. If NPS does not promulgate a regulation, continuing its past inaction, this legal
 3 prohibition would remain, and the result could be that the district court would expressly ban ORV driving
 4 on the Seashore.

5 “No ORV use” thus could represent a result of NPS past inaction continued into the future, and thus
 6 might satisfy the first purpose of a no-action alternative. It is not, however, a viable alternative for
 7 meeting the purpose and need for this action. It was considered but dismissed in the broader range of
 8 alternatives that were identified. See page xx82 for a discussion of the reasons that, for this plan/EIS,
 9 “Prohibit the Use of Off-Road Vehicles” is not considered a reasonable alternative.

10 NPS also does not believe that a “no ORV use” alternative would fully serve the function of a no-action
 11 alternative, because it would not satisfy the second purpose. It would not serve as an environmental
 12 baseline of existing impacts continued into the future against which to compare the impacts of action
 13 alternatives. ORV use has occurred continuously before and since the Seashore was authorized and
 14 established. Given this history, a complete ORV prohibition cannot be considered as the “current
 15 management direction or level of management intensity” or as “continuing with the present course of
 16 action,” which is how CEQ describes this role of the “no-action” alternative under NEPA.

17 Because there is no history of prohibition at the Seashore, there is also no Seashore monitoring data for an
 18 analysis of its effects. Extrapolation from other sites that prohibit ORV use, and from experience with
 19 resource closures in limited locations and limited times at the Seashore, indicates that prohibition would
 20 likely benefit the Seashore’s wildlife more than the other alternatives, though benefits could be similar to
 21 those from alternative D. Prohibition would be easier for the Seashore to administer than the other
 22 alternatives, though it might increase the need for additional parking areas, with their attendant costs and
 23 effects. It would detract from the experience of those visitors who prefer ORVs for access, while
 24 enhancing the experience of other visitors who prefer beaches without the presence of vehicles.
 25 Prohibition would adversely affect the economies of the villages in the Seashore more than the other
 26 alternatives because ORV users would not have the opportunity to shift their visits to different areas of
 27 the Seashore or to different dates or times of day when driving would be allowed. These conclusions,
 28 however, are largely speculative and cannot substitute for a baseline of existing impacts.

29 Similarly, using the management measures -enforced in 2004 (which were adopted from the 1978 draft
 30 plan) as a no-action alternative would fail to meet the agency’s purpose and need to regulate ORVs in a
 31 manner that is consistent with applicable law, and would not appropriately address resource protection
 32 (including protected, threatened, and endangered species), potential conflicts among the various Seashore
 33 users, and visitor safety. In addition, it would neither bring the Seashore into compliance with the criteria
 34 of Executive Orders 11644 and 11989 for designation of ORV routes nor meet the second purpose of a
 35 “no-action” alternative to serve as a baseline of existing impacts continued into the future against which
 36 to compare the impacts of action alternatives.

37 For this plan/EIS the range of alternatives includes two no-action alternatives. Alternative A represents
 38 continuing management as described in the Interim Strategy. This management strategy was challenged in
 39 court and subsequently modified by the consent decree that was signed on April 30, 2008. Alternative B
 40 represents continuing management as described in the consent decree. These two no-action alternatives
 41 are analyzed to capture the full range of management actions that occurred and are currently occurring
 42 during the planning process for this plan/EIS. Tables 7 and 8 at the end of this chapter compare the
 43 actions that would be taken under each alternative, and figure 2 includes the maps of all alternatives.

1 **ALTERNATIVE A: NO ACTION—CONTINUATION OF MANAGEMENT UNDER THE INTERIM**
 2 **PROTECTED SPECIES MANAGEMENT STRATEGY**

3 Under this no-action alternative, management of ORV use and access at the Seashore would be a
 4 continuation of management based on the selected alternative identified in the July 2007 FONSI for the
 5 2006 Interim Strategy and the 2007 Superintendent's Compendium, as well as elements from the 1978
 6 draft interim ORV management plan that were incorporated in Superintendent's Order 7, as amended in
 7 2006. These actions would include providing ORV access throughout the Seashore, except in areas of
 8 temporary resource, safety, or administrative closures. Under alternative A, all the entire Seashore-ocean
 9 and inlet shoreline and existing soundside routes would be designated as a route or area and would be
 10 open 24 hours a day year-round, but subject to temporary resource closures, seasonal ORV closures in
 11 front of the villages, and temporary ORV safety closures. As described in the FONSI, the Interim Strategy
 12 provides for the use, if feasible and if alternative routes are not available, of short-term bypasses when
 13 resource closures for shorebirds block the ORV corridor at Cape Point and the spits, and when a turtle
 14 nest hatching could lead to the blocking of access to the spits, Cape Point or South Beach. The FONSI
 15 describes the following criteria for bypasses:

- 16 a. The bypass area will be routed around dunes and vegetation if possible. If necessary, ground
 17 leveling, consistent with the state coastal management program, may be considered if dune fields
 18 do not exceed 36 inches in height. Leveling will be done by hand (no machinery will be used).
 19 b. The bypass will take advantage of natural terrain (e.g., blowouts) to minimize ground
 20 altering disturbance to the natural areas and avoid impacts to wetlands.
 21 c. The bypass will be at a minimum wide enough to allow one ORV to safely pass, and a
 22 maximum of two lanes if "line of sight" vision is compromised.
 23 d. Natural area disturbance to accommodate avoidance of turtle or bird nesting will not exceed
 24 6,000 square feet.
 25 e. Minimal vegetation impact will be allowed.
 26 — Federal or state-listed plants or plants falling under the category of special concern
 27 (e.g., seabeach amaranth, dune blue curls) will not be compromised.
 28 — Vegetation in altered areas will be expected to recover within the following growing
 29 season. If vegetation does not recover within one growing season, or by other natural
 30 process (such as overwash creating habitat), the Seashore will initiate restoration of
 31 vegetation.
 32 — Any vegetation removal will be performed with hand tools (no machinery will be
 33 used).

34 Areas will be restored if predicted recovery period exceeds one season. Bypass routes will not infringe
 35 upon or fragment an adjacent resource/safety closure. Bypass routes will not disturb or impact any
 36 cultural resource (i.e., shipwrecks).
 37

38 Vehicles would be allowed on the beach overnight only if someone associated with the vehicle is actively
 39 fishing. The ORV corridor would be marked by posts placed approximately 150 feet landward from the
 40 average, normal high tide line, or if less than 150 feet of space is available, at the vegetation or the toe of
 41 the remnant dune line, except during breeding season in protected species areas. Existing ORV safety
 42 closures would be maintained and new closures established as needed to address safety conditions such as
 43 debris on the beach or narrow beaches. Narrow beaches would be reopened as the beach widens. The
 44 beach in front of Cape Hatteras Lighthouse and Buxton Woods Road would remain closed to ORV access
 45 for administrative purposes. Suitable interior habitats for piping plovers at spits and at Cape Point would
 46 be closed year-round to all recreational users to provide for resting and foraging for all species.
 47 This no-action alternative would not require vehicles to have permits and would not involve any carrying-
 48 capacity restrictions. The speed limit would be 25 mph (unless otherwise posted) on Seashore beaches for
 49 public and private vehicles, although the speed limit in front of villages from September 16 to May 14

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1 would be 10 mph. There would be no increase in parking facilities associated with this alternative. Under
 2 this no-action alternative, all the entire Seashore-ocean and inlet shoreline and existing soundside routes
 3 would, for purposes of the rulemaking process, be a designated route or area, subject to temporary
 4 closures. Alternative A is analyzed as a baseline for comparison with the other alternatives in the plan/EIS
 5 following the requirements in 40 CFR 1502.14(d). Details of the management actions under this
 6 alternative are described in tables 8 and 9.

7 **ALTERNATIVE B: NO ACTION—CONTINUATION OF TERMS OF THE CONSENT DECREE SIGNED**
 8 **APRIL 30, 2008, AND AMENDED JUNE 4, 2009**

9 A consent decree was signed on April 30, 2008, in U.S. District Court, whereby the parties involved in
 10 the lawsuit challenging NPS's management of beach driving under the Interim Strategy along Cape
 11 Hatteras National Seashore agreed to a settlement of the case. Terms of the consent decree required the
 12 NPS to complete an ORV Management Plan for the Seashore by December 31, 2010, complete and
 13 promulgate the final Special Regulation by April 11, 2011, and provide details of specific species-
 14 protection measures to take place until the plan was completed. Under alternative B, management of ORV
 15 use and access at the Seashore would be based on the management under alternative A, but modified by
 16 specific species-protection measures from the consent decree, ~~which provide for large prenesting closures~~
 17 ~~and other access restriction. These modifications that~~ are required until the ORV plan and final Special
 18 Regulation are completed. These management modifications included increasing the size of the buffers
 19 provided to various species at the Seashore, as well as adding restrictions related to night driving. On June
 20 4, 2009, the following changes were made to the consent decree, as approved by the courts and agreed to
 21 by the parties involved in the lawsuit and settlement:

- 22 • Commercial fishermen would be granted access to beaches at 5:00 a.m. instead of 6:00 a.m.,
 23 provided certain conditions from the modified consent decree are met.
- 24 • After September 15, all unhatched turtle nests would only require full beach closures from sunset
 25 until 6:00 a.m., instead of 24 hours a day.
- 26 • The NPS would not be required to expand a buffer for vandalism if the violator is apprehended. If
 27 the buffer has been expanded and then the violator is caught, the NPS can retract the expansion.

28 All other provisions in the consent decree remain the same. Under alternative B, beaches would be closed
 29 to all ORV use between the hours of 10:00 p.m. and 6:00 a.m. from May 1 to September 15, and open to
 30 ORV use from 10:00 p.m. to 6:00 a.m. with a permit from September 16 to November 15. This permit
 31 could be obtained online or at NPS offices or local tackle shops. From March 15 to November 30, an
 32 ORV-free zone at least 10 meters wide would be located in the ocean backshore wherever there is
 33 sufficient beach width to allow an ORV corridor at least 20 meters wide above the mean high tide line.
 34 Under alternative B, buffers for protected species would be larger than those identified in alternative A,
 35 and would include a required 1,000-meter buffer for unfledged piping plover chicks. In addition to ORV
 36 use, this 1,000-meter buffer would also apply to pets, as well as to kite flying, Frisbee throwing, and
 37 similar activities. Under this alternative, beach fires would be prohibited within 100 yards of turtle nest
 38 protection areas, as specified in the Superintendent's compendium. As in alternative A, suitable interior
 39 habitats for piping plovers at spits and at Cape Point would be closed year-round to all recreational users
 40 to provide for resting and foraging for all species. In case of a conflict between the Interim Strategy and
 41 the measures described in the consent decree, the consent decree would prevail. Details of the
 42 management actions under this alternative are described in tables 8 and 9.

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2 The action alternatives would establish areas that allow ORV use and vehicle-free ~~(or non-ORV)~~ areas
3 where ORV use is prohibited. Although ORV areas are specifically identified, these areas do not prohibit
4 other uses, in effect making both ORV and ~~non-ORV~~vehicle-free areas multi-use recreation areas.

5 ELEMENTS COMMON TO ~~A~~ALL ACTION ALTERNATIVES

6 The action alternatives, alternatives C, D, E, and F, provide a range of reasonable alternatives. The
7 following describes elements of the management actions common to all the action alternatives.

8 Ramp Configuration

- 9 • ~~A New~~ ramps would be constructed at mile 32.5, 62, and 64.
- 10 • Ramp 2 would be relocated approximately 0.5 mile south of Coquina Beach.

11 Off Road Vehicle Access and Routes

12 The following would apply:

- 13 • Visitors accessing the Seashore by ORV must use only designated beach access ramps and
14 soundside access routes to enter designated ORV routes and areas.
- 15 • ORV operators must drive only on designated and marked ORV routes and must comply with
16 posted restrictions.

17 Seashore Management and Operations

- 18 • Based on experience with implementing ORV management since 2007, staffing at the Seashore
19 would need to increase under any action alternative to address basic functions of implementing an
20 ORV management program. Staff would be hired to accomplish the following functions:
21 coordination/management of the ORV program, coordination of science and adaptive
22 management and resource education, and assistance with public information.

23 Education and Outreach

24 The Seashore would

- 25 • Improve signage related to beach closures and Seashore resources so that it is more readily
26 available and presented in a clear manner to the public.
- 27 • Work with local organizations and businesses, including real estate rental agencies and
28 hotels/motels, to ensure wider distribution of ORV and resource protection educational
29 information. This would include encouraging these businesses to provide information about
30 removal of beach equipment from the beaches at night.
- 31 • Provide information about and encourage the use of turtle friendly lighting.
- 32 • Encourage the Visitors Bureau and local tackle shops to link their websites to the Seashore's
33 website to ensure that different segments of the visiting public have up-to-date information on
34 beach closures and, if an ORV permitting system is developed, ORV permitting information.

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- 1 • Develop a user-friendly ORV educational program (e.g., video ~~or~~ DVD, ~~or~~ online) that could be
 2 self-administered as part of the ORV permitting process at a variety of outlets such as tackle
 3 shops, welcome centers, and NPS offices.
- 4 • Implement more educational programs in local schools and expand the Junior Ranger program to
 5 include more web-based options to interest youth in Seashore resources and stewardship.

6 **Vehicle Requirements**

7 The following requirements would apply:

- 8 • Four-wheel drive would be recommended, although two-wheel-drive vehicles would be allowed.
- 9 • When driving on designated routes, operators would be required to lower tire pressure sufficiently
 10 to maintain adequate traction within the posted speed limit (20 pounds per square inch (psi) is
 11 recommended for most vehicles).
- 12 • Motorcycles would be prohibited on the ocean beachfront.
- 13 • There would be a limit on the number of axles allowed for vehicles and trailers ~~three-axle~~
 14 ~~maximum for all vehicles.~~
- 15 ~~• Trailers would be limited to no more than two axles.~~
- 16 ~~• Maximum vehicle length would be 30 feet.~~
- 17 • Only U.S. Department of Transportation listed and/or approved tires would be allowed.

18 **Equipment Requirements**

- 19 • Vehicles would be equipped with a jack, jack support, shovel, and low-pressure tire gauge.

20 **Speed Limits**

- 21 • The speed limit would be 15 mph, unless otherwise posted. Emergency vehicles would be exempt
 22 when responding to a call.

23 **Parking Areas for Pedestrian ~~Non-ORV~~ Access**

- 24 • Any new parking areas would be located near vehicle-free ~~non-ORV~~ areas and away from eroding
 25 areas or potential inlet areas.
- 26 • New parking areas would implement environmentally appropriate design standards to minimize
 27 stormwater runoff.
- 28 • New or expanded parking areas for ocean-side locations are identified in table 7 and table 7-1.

29 **Beach Fires**

- 30 • Beach fires would be prohibited year-round during hours specified for each alternative in table
 31 8 from midnight to 6:00 a.m. year-round. A permit would be required for all beach fires to ensure
 32 that users are informed of basic safety and resource protection measures. Where fires are
 33 permitted, they would be prohibited within 100 yards of turtle nest protection areas.

1 **Nighttime Beach Use**

- 2 • Camping, as defined in 36 CFR 1.4, would be prohibited on Seashore beaches.
- 3 • Unattended beach equipment (chairs, canopies, volleyball nets, watersport gear, etc.) would be
- 4 prohibited on the Seashore at night. Turtle patrol and law enforcement would tag equipment
- 5 found at night. Owners would have 24 hours to remove equipment before it is removed by NPS
- 6 staff.

7 **Commercial Fishing Vehicles**

- 8 • ~~Vehicles authorized to operate on the beach under a commercial fishing permit issued by the~~
- 9 ~~superintendent would be authorized to enter areas not designated for ORV use. Commercial~~
- 10 ~~fishing vehicles would be authorized by permit to enter all ORV and pedestrian areas that are not~~
- 11 ~~closed for resource protection, and may be authorized by special use permit to access vehicle-~~
- 12 ~~free non-ORV areas and night driving restricted areas if there is no resource conflict.~~

13 **Temporary Emergency Beach Closures**

- 14 • A temporary emergency beach closure may be implemented if any of the following conditions are
- 15 observed:
- 16 – ORV traffic backing up on the beach access ramps, either on- or off-beach bound, which
- 17 threatens to impede traffic flow.
- 18 – ORV traffic on the beach is parked in such a way that two-way traffic is impeded.
- 19 – Multiple incidents of disorderly behavior are observed or reported.

20 **Accessibility for ~~the Disabled~~ Visitors with Disabilities**

- 21 • ~~Some e~~Existing boardwalks would be retrofitted with accessible ramps to the extent that funding
- 22 allows to allow provide for more opportunities for so visitors with disabilities can have more
- 23 opportunities disabled persons to access or view the beach. When new parking areas are
- 24 developed, additional handicap parking spaces would be included, as appropriate.

25 **Construction Measures**

- 26 • Prior to any construction under the action alternatives, wetland delineations would occur and
- 27 wetland habitats would be avoided.

28 **Species Management**

- 29 • Management of protected shorebirds would be accomplished through the implementation of the
- 30 species management measures described in tables 10 and 10-1 at the end of this chapter.
- 31 • Management activities during the breeding season would focus on beach-nesting bird species
- 32 such as the piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-
- 33 billed tern, and black skimmer; however, there would be ongoing evaluation of the breeding
- 34 shorebird species addressed by this plan as part of the periodic review process.
- 35 ~~• Focal beach nesting bird species for management activities during the breeding season include~~
- 36 ~~piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-billed tern.~~

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~~and black skimmer; however, there would be ongoing evaluation of the breeding shorebird species addressed by this plan, as part of the periodic review process.~~

- ~~Prenesting areas for piping plover, American oystercatcher, and Wilson's plover, and colonial waterbirds would be established~~ establishment of Species Management Areas (SMAs). SMAs would be defined as in areas of suitable habitat that have had concentrated and recurring use by multiple individuals and/or multiple species of protected shorebirds during the breeding season ~~or nonbreeding season, or concentrations of seabeach amaranth specimens, in two or more than 1 (i.e., 2 or more) of the past five 5 years. These areas would be and are managed to reduce or minimize human disturbance. These areas SMAs would be re-evaluated and re-designated every 5 years, or after major hurricanes, as part of the periodic review process as described in tables 10 and 10-1.~~

- ~~Areas of suitable nonbreeding habitat would be that has had concentrated foraging by migrating/wintering shorebirds in more than 1 (i.e., 2 or more) of the past 5 years and is managed to reduce human disturbance during the nonbreeding season. This may include portions of prenesting areas breeding SMAs that provide suitable nonbreeding habitat during periods of overlap between the breeding and migrating season; and designated vehicle-free non-ORV areas that are set aside to provide pedestrians with the opportunity for a natural beach experience; and resource closures at some points and spits, based on an annual nonbreeding habitat assessment conducted after the breeding season.~~

- Management and monitoring protocols are ~~also~~ provided for turtles and seabeach amaranth. Details of all species management strategies can be found in tables 10 and 10-1 at the end of this chapter.

- Incorporation of the Piping Plover Recovery Plan, Appendix G: Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the ESA. Appendix G of the Piping Plover Recovery Plan was used as a basis for determining appropriate management measures under all of the action alternatives. This document provides guidance to beach managers and property owners seeking to avoid potential violations of Section 9 of the ESA (16 USC 1538) and its implementing regulations (50 CFR 17) that could occur as the result of recreational activities on beaches used by breeding piping plovers along the Atlantic Coast. These guidelines were developed by the Northeast Region, USFWS (or Service), with assistance from the U.S. Atlantic Coast Piping Plover Recovery Team. The guidelines are advisory, and failure to implement them does not, of itself, constitute a violation of the law. Rather, they represent the USFWS best professional advice to beach managers and landowners regarding the management options that will prevent direct mortality, harm, or harassment of piping plovers and their eggs due to recreational activities. Appendix G makes the following recommendations:

Management of Non-Motorized Recreational Use – On beaches where pedestrians, joggers, sun-bathers, picnickers, fishermen, boaters, horseback riders, or other recreational users are present in numbers that could harm or disturb incubating plovers, their eggs, or chicks, areas of at least 50 meter-radius around nests above the high tide line should be delineated with warning signs and symbolic fencing. Only persons engaged in rare species monitoring, management, or research activities should enter posted areas. These areas should remain fenced as long as viable eggs or unfledged chicks are present. Fencing is intended to prevent accidental crushing of nests and repeated flushing of incubating adults, and to provide an area where chicks can rest and seek shelter when large numbers of people are on the beach.

Available data indicate that a 50 meter buffer distance around nests will be adequate to prevent harassment of the majority of incubating piping plovers. However, fencing around nests should be expanded in cases where the standard 50 meter-radius is inadequate to protect incubating adults or

Comment [mbm3]: Both Tables 10 and 10-1 provide for CWB "pre-nesting areas", though the nature of the pre-nesting closure varies between the two tables: In Table 10, the SMAs would be closed as the pre-nesting areas(). In Table 10-1, the CWB prenesting areas would allow ORV use (on the lower beach) until nesting activity occurred, which means the upper beach would be the prenesting area, similar to how South Beach has been handled I recent years.

Comment [seh4]: Where does the info in Mike's comment above appear in the FEIS?

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1 unfledged chicks from harm or disturbance. Data from various sites distributed across the plover's
 2 Atlantic Coast range indicates that larger buffers may be needed in some locations. This may
 3 include situations where plovers are especially intolerant of human presence, or where a 50 meter-
 4 radius area provides insufficient escape cover or alternative foraging opportunities for plover
 5 chicks. In cases where the nest is located less than 50 meters above the high tide line, fencing
 6 should be situated at the high tide line, and a qualified biologist should monitor responses of the
 7 birds to passersby, documenting his/her observations in clearly recorded field notes. Providing that
 8 birds are not exhibiting signs of disturbance, this smaller buffer may be maintained in such cases.
 9 On portions of beaches that receive heavy human use, areas where territorial plovers are observed
 10 should be symbolically fenced to prevent disruption of territorial displays and courtship. Since
 11 nests can be difficult to locate, especially during egg-laying, this will also prevent accidental
 12 crushing of undetected nests. If nests are discovered outside fenced areas, fencing should be
 13 extended to create a sufficient buffer to prevent disturbance to incubating adults, eggs, or
 14 unfledged chicks. Pets should be leashed and under control of their owners at all times from April
 15 1 to August 31 on beaches where piping plovers are present or have traditionally nested. Pets
 16 should be prohibited on these beaches from April 1 through August 31 if, based on observations
 17 and experience, pet owners fail to keep pets leashed and under control. Kite flying should be
 18 prohibited within 200 meters of nesting or territorial adult or unfledged juvenile piping plovers
 19 between April 1 and August 31. Fireworks should be prohibited on beaches where plovers nest
 20 from April 1 until all chicks are fledged.

21 *Motor Vehicle Management* – The Fish and Wildlife Service recommends the following minimum
 22 protection measures to prevent direct mortality or harassment of piping plovers, their eggs, and
 23 chicks on beaches where vehicles are permitted. Since restrictions to protect unfledged chicks
 24 often impede vehicle access along a barrier spit, a number of management options affecting the
 25 timing and size of vehicle closures are presented here. Some of these options are contingent on
 26 implementation of intensive plover monitoring and management plans by qualified biologists. It is
 27 recommended that landowners seek concurrence with such monitoring plans from either the
 28 Service or the State wildlife agency.

29 *Protection of Nests* – All suitable piping plover nesting habitat should be identified by a qualified
 30 biologist and delineated with posts and warning signs or symbolic fencing on or before April 1
 31 each year. All vehicular access into or through posted nesting habitat should be prohibited.
 32 However, prior to hatching, vehicles may pass by such areas along designated vehicle corridors
 33 established along the outside edge of plover nesting habitat. Vehicles may also park outside
 34 delineated nesting habitat, if beach width and configuration and tidal conditions allow. Vehicle
 35 corridors or parking areas should be moved, constricted, or temporarily closed if territorial,
 36 courting, or nesting plovers are disturbed by passing or parked vehicles, or if disturbance is
 37 anticipated because of unusual tides or expected increases in vehicle use during weekends,
 38 holidays, or special events.

39 If data from several years of plover monitoring suggests that significantly more habitat is available
 40 than the local plover population can occupy, some suitable habitat may be left unposted if the
 41 following conditions are met:

- 42 1. The Service OR a State wildlife agency that is party to an agreement under Section 6 of
 43 the ESA provides written concurrence with a plan that:
 - 44 A. Estimates the number of pairs likely to nest on the site based on the past monitoring
 45 and regional population trends.
 - 46 AND
 - 47 B. Delineates the habitat that will be posted or fenced prior to April 1 to assure a high
 48 probability that territorial plovers will select protected areas in which to court and
 49 nest. Sites where nesting or courting plovers were observed during the last three
 50 seasons as well as other habitat deemed most likely to be pioneered by plovers should
 51 be included in the posted and/or fenced area.

52 AND

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- 1 C. Provides for monitoring of piping plovers on the beach by a qualified biologist(s).
 2 Generally, the frequency of monitoring should be not less than twice per week prior to
 3 May 1 and not less than three times per week thereafter. Monitoring should occur
 4 daily whenever moderate to large numbers of vehicles are on the beach. Monitors
 5 should document locations of territorial or courting plovers, nest locations, and
 6 observations of any reactions of incubating birds to pedestrian or vehicular
 7 disturbance.

8 AND

- 9 2. All unposted sites are posted immediately upon detection of territorial plovers.

10 *Protection of Chicks* – Sections of beaches where unfledged piping plover chicks are present
 11 should be temporarily closed to all vehicles not deemed essential. (See the provisions for essential
 12 vehicles below.) Areas where vehicles are prohibited should include all dune, beach, and intertidal
 13 habitat within the chicks' foraging range, to be determined by either of the following methods:

- 14 1. The vehicle free area should extend 1,000 meters on each side of a line drawn through the
 15 nest site and perpendicular to the long axis of the beach. The resulting 2000 meter-wide
 16 area of protected habitat for plover chicks should extend from the ocean-side low water
 17 line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side
 18 intertidal habitat exists. However, vehicles may be allowed to pass through portions of the
 19 protected area that are considered inaccessible to plover chicks because of steep
 20 topography, dense vegetation, or other naturally-occurring obstacles.

21 OR

- 22 2. The Service OR a State wildlife agency that is party to an agreement under Section 6 of
 23 the ESA provides written concurrence with a plan that:

- 24 A. Provides for monitoring of all broods during the chick-rearing phase of the breeding
 25 season and specifies the frequency of monitoring.

26 AND

- 27 B. Specifies the minimum size of vehicle-free areas to be established in the vicinity of
 28 unfledged broods based on the mobility of broods observed on the site in past years
 29 and on the frequency of monitoring. Unless substantial data from past years show that
 30 broods on a site stay very close to their nest locations, vehicle-free areas should
 31 extend at least 200 meters on each side of the nest site during the first week following
 32 hatching. The size and location of the protected area should be adjusted in response to
 33 the observed mobility of the brood, but in no case should it be reduced to less than
 34 100 meters on each side of the brood. In some cases, highly mobile broods may
 35 require protected areas up to 1000 meters, even where they are intensively monitored.
 36 Protected areas should extend from the ocean-side low water line to the bay-side low
 37 water line or to the farthest extent of dune habitat if no bay-side intertidal habitat
 38 exists. However, vehicles may be allowed to pass through portions of the protected
 39 area that are considered inaccessible to plover chicks because of steep topography,
 40 dense vegetation, or other naturally-occurring obstacles. In a few cases, where several
 41 years of data documents that piping plovers on a particular site feed in only certain
 42 habitat types, the Service or the State wildlife management agency may provide
 43 written concurrence that vehicles pose no danger to plovers in other specified habitats
 44 on that site.

45 *Timing of Vehicle Restrictions in Chick Habitat* – Restrictions on use of vehicles in areas where
 46 unfledged plover chicks are present should begin on or before the date that hatching begins and
 47 continue until chicks have fledged. For purposes of vehicle management, plover chicks are
 48 considered fledged at 35 days of age or when observed in sustained flight for at least 15 meters,
 49 whichever occurs first. When piping plover nests are found before the last egg is laid, restrictions
 50 on vehicles should begin on the 26th day after the last egg is laid. This assumes an average
 51 incubation period of 27 days, and provides a 1 day margin of error. When plover nests are found

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1 after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles
2 should begin on a date determined by one of the following scenarios:

- 3 1. With intensive monitoring: If the nest is monitored at least twice per day, at dawn and
4 dusk (before 0600 hrs and after 1900 hrs) by a qualified biologist, vehicle use may
5 continue until hatching begins. Nests should be monitored at dawn and dusk to minimize
6 the time that hatching may go undetected if it occurs after dark. Whenever possible, nests
7 should be monitored from a distance with spotting scope or binoculars to minimize
8 disturbance to incubating plovers.

9 OR

- 10 2. Without intensive monitoring: Restrictions should begin on May 15 (the earliest probable
11 hatch date). If the nest is discovered after May 15, then restrictions should start
12 immediately.

13 If hatching occurs earlier than expected, or chicks are discovered from an unreported nest,
14 restrictions on vehicles should begin immediately. If ruts are present that are deep enough to
15 restrict movements of plover chicks, then restrictions on vehicles should begin at least 5 days prior
16 to the anticipated hatching date of plover nests. If a plover nest is found with a complete clutch,
17 precluding estimation of hatching date, and deep ruts have been created that could reasonably be
18 expected to impede chick movements, then restrictions on vehicles should begin immediately.

19 *Essential Vehicles* – Because it is impossible to completely eliminate the possibility that a vehicle
20 will accidentally crush unfledged plover chicks, use of vehicles in the vicinity of broods should be
21 avoided whenever possible. However, the Service recognizes that life-threatening situations on the
22 beach may require emergency vehicle response. Furthermore, some “essential vehicles” may be
23 required to provide for safety of pedestrian recreationists, law enforcement, maintenance of public
24 property, or access to private dwellings not otherwise accessible. On large beaches, maintaining
25 the frequency of plover monitoring required to minimize the size and duration of vehicle closures
26 may necessitate the use of vehicles by plover monitors. Essential vehicles should only travel on
27 sections of beaches where unfledged plover chicks are present if such travel is absolutely necessary
28 and no other reasonable travel routes are available. All steps should be taken to minimize number
29 of trips by essential vehicles through chick habitat areas. Homeowners should consider other
30 means of access, e.g., by foot, water, or shuttle services, during periods when chicks are present.
31 The following procedures should be followed to minimize the probability that chicks will be
32 crushed by essential (non-emergency) vehicles:

- 33 1. Essential vehicles should travel through chick habitat areas only during daylight hours,
34 and should be guided by a qualified monitor who has first determined the location of all
35 unfledged plover chicks.
- 36 2. Speed of vehicles should not exceed five miles per hour.
- 37 3. Use of open 4-wheel motorized ATVs or non-motorized all-terrain bicycles is
38 recommended whenever possible for monitoring and law enforcement because of the
39 improved visibility afforded operators.
- 40 4. A log should be maintained by the beach manager of the date, time, vehicle number and
41 operator, and purpose of each trip through areas where unfledged chicks are present.
42 Personnel monitoring plovers should maintain and regularly update a log of the numbers
43 and locations of unfledged plover chicks on each beach. Drivers of essential vehicles
44 should review the log each day to determine the most recent number and location of
45 unfledged chicks.

46 Essential vehicles should avoid driving on the wrack line, and travel should be infrequent enough
47 to avoid creating deep ruts that could impede chick movements. If essential vehicles are creating
48 ruts that could impede chick movements, use of essential vehicles should be further reduced and, if
49 necessary, restricted to emergency vehicles only.

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- 1 • **Incorporation of the 2008 Loggerhead Sea Turtle Recovery Plan.** The following elements
 2 from the Loggerhead Sea Turtle Recovery Plan were considered in development of the action
 3 alternatives:
- 4 2225. Prohibit recreational equipment on nesting beaches at night. Sea turtles prefer to nest on
 5 the mid to upper beach, protecting their nests from repeated and prolonged high tides.
 6 Recreational equipment (e.g., beach furniture, umbrellas, marine craft, tents) that are left on the
 7 beach at night can prevent nesting turtles from reaching the mid to upper beach. Therefore, at
 8 night, all recreational equipment should be completely removed from the beach by hand and
 9 stored behind the primary dune. Regulations should be developed and enforced to ensure these
 10 types of impediments to nesting are managed or eliminated.
- 11 Maintain at least the current length and quality of protected nesting beach. As of 2007, 1,581
 12 km of nesting beach in the U.S. were identified as being within conservation lands in public
 13 (Federal, state, or local government) ownership and privately owned conservation lands (e.g.,
 14 non-profit conservation foundations). Most of these lands are generally managed in a way that
 15 benefits sea turtle conservation. Public lands that have lighted development, armoring, or other
 16 profound threats to sea turtle nesting have not been included. In compiling the list of
 17 conservation lands, human visitation was not considered a profound threat to sea turtle nesting.
 18 Therefore, public lands designated for human recreation have been included. At a minimum, the
 19 amount of nesting beach in such protected status should be maintained.
- 20 251. Develop, fully implement, and effectively enforce light management plans to address
 21 direct and indirect (e.g., sky glow, uplighting) artificial lighting on nesting beaches.
- 22 2511. Implement and enforce lighting ordinances on lands under local government
 23 jurisdiction. Where lighting ordinances have been adopted and adequately enforced,
 24 hatchling disorientation has been managed at acceptable levels. All coastal counties and
 25 communities with nesting beaches should adopt and fully enforce ordinances from
 26 March through October in Brevard through Broward counties, Florida, and from May
 27 through October elsewhere. The State of Florida's Model Lighting Ordinance
 28 [<http://myfwc.com/seaturtle>] should be used as a template for developing new or
 29 revising existing lighting ordinances. In addition, Port Authorities should develop and
 30 enforce lighting management plans to ensure their direct and indirect lighting does not
 31 impact nesting and hatchling turtles on nearby beaches.
- 32 61. Minimize impacts to sea turtles on nesting beaches.
- 33 6113. Use the least manipulative method to protect nests. Until such time as a
 34 management plan for protecting nests is developed, the least manipulative method
 35 should be employed to protect nests. Because the incubation environment greatly
 36 influences the developing embryo, nest relocation can involve the transfer of eggs from
 37 an appropriate environment to an inappropriate one. As a general rule, nests should only
 38 be relocated if they are low enough on the beach to be washed daily by tides or if they
 39 are situated in well documented highrisk areas that routinely experience serious erosion
 40 and egg loss (e.g., nests laid near river mouths or beneath eroding sea walls).
- 41 Natural events, like storms, that accelerate beach erosion and accretion can sometimes
 42 reduce hatching success in existing nests. While damage from storm events can be
 43 severe, it is difficult to predict the precise areas where the storm is most likely to inflict
 44 damage. Because of the negative effects of relocating eggs and the unpredictability of
 45 storm events, nests should not be moved out of areas threatened by storms. Nests should
 46 not be relocated in areas where heavy foot traffic, lighting problems, or beach cleaning
 47 are a concern. Foot traffic generally is not a problem for nests, but depending on the
 48 nesting substrate, pedestrian traffic over nests near the time of emergence can cause the
 49 nests to collapse and result in hatchling mortality. Therefore, in areas where foot traffic
 50 is heavy, nests can be marked so pedestrians can avoid them. If a nest is made near a
 51 light that may misorient the hatchlings, efforts should focus on getting the light turned
 52 off or shielded (if protection is necessary, the nest should be caged). If nests are

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1 deposited on beaches that are periodically raked with mechanical equipment, beach
2 raking should be discontinued or the nests should be marked clearly so they can be
3 avoided by the beach cleaners.

4 6114. Discontinue the use of hatcheries as a nest management technique. Relocation of
5 sea turtle nests to hatcheries located higher on the beach was once a common practice
6 throughout the southeast U.S. to mitigate the effects of naturally occurring events, such
7 as erosion and vegetation encroachment, predation, and a variety of human-induced
8 factors. In some areas, the extent and type of coastal development have resulted in
9 significant light pollution problems. As a result, a few hatcheries are still used to protect
10 hatchlings from disorientation. However, relocating nests into hatcheries concentrates
11 eggs in an area and makes them more susceptible to catastrophic events and predation
12 from both land and marine predators. Therefore, in areas where hatcheries are still being
13 used to protect nests and hatchlings from light pollution, management efforts should be
14 shifted to eliminate the lighting problems and phase out the use of hatcheries. At Cape
15 Romain [National Wildlife Refuge (NWR)] in South Carolina, hatcheries are being used
16 as a last resort in response to severe erosion. In this case, the conservation benefits (i.e.,
17 embryo survivorship) are believed to outweigh the potential conservation risks (e.g.,
18 hatchling predation). Given these circumstances, the use of hatcheries at Cape Romain
19 NWR is currently considered appropriate until sufficient habitat for successful
20 incubation is available. Continued use of hatcheries on the refuge should be based on
21 periodic quantitative assessments of their effectiveness as a management tool.

22 6121. Prohibit nighttime driving on beaches during the loggerhead nesting season.
23 Vehicles on the beach have the greatest potential to come into contact with nesting
24 females and emerging hatchlings at night. In areas where beach driving is still allowed,
25 nighttime vehicle use should be limited to essential vehicles (e.g., emergency or
26 permitted research vehicles) only. When essential vehicles are allowed on the beach at
27 night during the sea turtle nesting season, their potential for harming turtles should be
28 minimized by driving at speeds of 5 miles per hour or less (except when higher speeds
29 are necessary for law enforcement, human safety, or medical emergencies), and by
30 driving seaward of the wrack or debris line or just above it during high tide conditions.
31 In addition, regardless of the time of year, vehicles or equipment driven or used on the
32 beach should be equal to or less than 10 pounds per square inch (psi) based on ground
33 loading characteristics (e.g., all terrain vehicles) to minimize the potential for sand
34 compaction.

35 6123. Manage daytime driving to minimize impacts to loggerheads. In addition to
36 prohibiting nighttime driving of non-essential vehicles on the beach, other measures
37 should be implemented to minimize the potential for impacts to sea turtles. Examples of
38 minimization measures include the designation and enforcement of no-driving zones in
39 areas where the greatest concentration of nests are typically located (e.g., conservation
40 zones near the dunes), monitoring and marking of all sea turtle nests for avoidance, and
41 developing and implementing a vehicle rut removal program seaward of nests during
42 periods when hatchlings are expected to emerge.

43 614. Minimize harassment of nesting females and hatchlings. Resident and visitor use of
44 nesting beaches can adversely affect nesting sea turtles, incubating egg clutches, and
45 hatchlings. Intentional and unintentional disturbance and harassment of nesting females
46 and hatchlings is an increasing problem on many beaches. Problem areas where repeated
47 incidents of turtle harassment have been reported should be identified, and law
48 enforcement efforts should be focused there.

49 6142. Conduct public education campaigns to minimize harassment of nesting females
50 and hatchlings. Resident and visitor use of nesting beaches can adversely affect nesting
51 sea turtles and hatchlings. The most serious threat caused by human presence on the
52 beach is the disturbance of nesting females. Disturbance of nesting females can cause
53 them to leave the beach without finishing nesting and thus delay egg laying, shift their

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1 nesting beaches, and select poor nesting sites. Hatchlings rely on a store of energy and
 2 nutrients within their retained yolk sac to make their way from the nest to their offshore
 3 developmental habitat. Any delays they encounter on the beach by pedestrians may
 4 impair their ability to migrate offshore. Beachgoers should be informed through
 5 presentations and educational materials about the potential impacts to sea turtles from
 6 pedestrians on the beach and how to avoid frightening or disorientating any nesting and
 7 hatchling turtles encountered. In addition, signage at access points to the beach is
 8 recommended to further inform residents and visitors about proper nesting beach
 9 etiquette.

10 6143. Increase the number of interpretive turtle walks to meet demand and minimize
 11 overall disturbance to nesting females and hatchlings. In the U.S., numerous state-
 12 permitted organizations conduct organized turtle walks to allow the public to view the
 13 nesting process. Thousands of coastal visitors and local residents attend these organized
 14 turtle watches each year; however, thousands more are turned away due to the limited
 15 number of walks available. As a result, numerous unsupervised individuals who were
 16 unable to get into a turtle walk often try to find turtles by themselves and inadvertently
 17 end up harassing them. Interpretive turtle walks also are a mechanism for garnering
 18 support for sea turtle conservation through education and should be expanded to
 19 accommodate the high public demand for participation.

20 6144. Enforce laws to minimize harassment of nesting females and hatchlings.
 21 Intentional and unintentional disturbance and harassment of nesting turtles and
 22 hatchlings is an increasing problem on many beaches. Problem areas should be
 23 identified and law enforcement efforts should be focused in these areas to deter
 24 harassment of nesting turtles and hatchlings.

25 615. Develop and enforce guidelines for special events on the beach to minimize
 26 impacts on nesting females, nests, and hatchlings. A wide variety of special events (e.g.,
 27 volleyball tournaments, concerts) take place on the beach. Some of these events
 28 considerably increase the number of people and equipment in a given area. Many events
 29 are scheduled outside of the sea turtle nesting period, but some do occur during the
 30 nesting season. State resource agencies and local governments should develop and
 31 enforce guidelines for special events that will occur during the nesting season to ensure
 32 there will be no direct or indirect impacts on nesting turtles, nests, and emerging
 33 hatchlings.

- 34 • **Establishment of Buffer Distances.** The potential impacts of human disturbance on beach-
 35 nesting birds and their chicks are well documented and described in chapter 3 of this document. A
 36 buffer is an area surrounding a sensitive resource, such as bird nests or chicks, which is restricted
 37 (or closed) to visitor access during critical life cycle stages in order to reduce human disturbance
 38 and the risk of mortality due to pedestrians and ORVs. The sensitivity of beach-nesting birds to
 39 human disturbance varies by species and can vary among individual birds of the same species
 40 depending upon the circumstances. Buffer distances for managed species are detailed in tables 11
 41 [and 11-1](#). The buffer distances identified in the action alternatives were developed after
 42 consideration of the best available science, which includes existing guidelines and
 43 recommendations, such as the Piping Plover Recovery Plan (USFWS 1996a) and [the USGS](#)
 44 [Open-File Report 2009-1262 \(2010\) on the management of species of special concern at the](#)
 45 [2005 USGS protocols for the Seashore](#), as well as relevant scientific literature (research, studies,
 46 reports, etc.) for the respective species. In addition, buffer distances were developed using the
 47 practical knowledge gained by NPS resources management staff during two years of
 48 implementing the Interim Strategy (2006–2007) and ~~two~~ [three](#) years implementing the consent
 49 decree (2008–~~2009~~ [2010](#)). In 2007 under the Interim Strategy, which identified the buffer
 50 distances that would be used under alternative A, NPS staff implemented a total of 126 shorebird
 51 management actions that involved establishing, modifying, or removing fencing around resource
 52 closures. In 2009 [and 2010](#) under the consent decree, which identified the buffer distances that

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1 would be used under alternative B, NPS staff implemented a total of 202 ~~and 164~~ shorebird
2 management actions, ~~respectively~~.

3 The buffer distances ~~identified as common to all action alternatives~~ are intended to provide
4 adequate protection to minimize the impacts of human disturbance on nesting birds and chicks in
5 the majority of situations, given the level of visitation and recreational use in areas of sensitive
6 wildlife habitat at the Seashore and issues related to non-compliance with posted resource
7 protection areas. For example, under the action alternatives the buffer distance for nesting piping
8 plovers is set at 75 meters ~~in areas managed under both ML1 and ML2 measures~~, and would be
9 expanded upon disturbance or when chicks are present. A 1992 study at Assateague Island
10 National Seashore (Loegering 1992), a national seashore with a similar type of barrier island
11 habitat and recreational use as Cape Hatteras, found that on average, incubating plovers flushed
12 from their nests at a distance of 78 meters (256 feet), although some birds flushed when
13 researchers were as far as 174 meters (571 feet) away. Researchers reported that the minimum
14 agitation distance to nesting piping plover was 50 meters, and suggested a buffer radius of
15 225 meters. The recommended buffers for piping plover under this plan/EIS not only took into
16 consideration the Piping Plover Recovery Plan, but also studies in similar environments such as
17 Assateague Island. Buffers for the other bird species were developed in a similar manner, taking
18 into consideration the best available studies, combined with Seashore staff observations of how
19 the species react in the specific environment of the Seashore. The action alternatives' buffers,
20 when combined with the ~~Species Management Areas (SMAs) under alternatives C, D, and E~~ and
21 ~~the prenesting areas and vehicle-free areas for all action alternatives~~, are designed to be effective
22 for species protection and operationally feasible to implement and sustain.

23 ORV Permits

- 24 • Permits would be required for vehicular use on designated ORV routes.
- 25 • There would be no limit on the number of permits issued.
- 26 • Permits would be available at designated permit issuing stations ~~and online~~.
- 27 • Permit stickers would be affixed to vehicles in a manner approved by the NPS.
- 28 • Permits could be revoked for violation of applicable Seashore regulations or terms and conditions
29 of the permit.

30 ADAPTIVE MANAGEMENT APPROACHES INCLUDED IN THE 31 ACTION ALTERNATIVES

32 The Department of the Interior requires that its agencies “use adaptive management to fully comply” with
33 CEQ guidance that requires “a monitoring and enforcement program to be adopted ... where applicable,
34 for any mitigation” (516 DM 1.3 D (7); 40 CFR 1505.2). Adaptive management is based on the
35 assumption that current resources and scientific knowledge are limited. Nevertheless, adaptive
36 management attempts to apply available resources and knowledge and adjusts management techniques as
37 new information becomes available.

38 Adaptive management incorporates scientific experimental methods into the management process while
39 providing flexibility to adjust to changes in the natural environment. It is based on a continuing, iterative
40 process of

- 41 • Applying management actions.

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- 1 • Monitoring consequences.
- 2 • Evaluating monitoring results against plan objectives.
- 3 • Adjusting management.
- 4 • Using feedback to make future management decisions.

5 | All action alternatives incorporate adaptive management initiatives (outlined in table 10 and table 10-1)
 6 that are designed to assist the Seashore in meeting the objectives of this plan/EIS and desired future
 7 conditions as outlined in chapter 1 of this document. These species-specific initiatives include
 8 implementing additional research and monitoring for piping plover, sea turtles, and seabeach amaranth,
 9 based on available funding. Information obtained from the implementation of adaptive management
 10 initiatives would be integrated into future decision making.

11 **PERIODIC REVIEW UNDER THE ACTION ALTERNATIVES**

12 A systematic review of data, annual reports, and other information would be conducted by NPS every
 13 five years, after storms or events that Seashore management determines to be a major modification of
 14 habitat quantity or quality, a major hurricane, or if necessitated by a significant change in protected
 15 species status (e.g., listing or de-listing), in order to evaluate the effectiveness of management actions in
 16 making progress toward the accomplishment of stated objectives and desired future conditions (see
 17 chapter 1 of this document). Periodic review could result in changes to the management actions in order
 18 to improve effectiveness. When desired future conditions for resources are met or exceeded, periodic
 19 review and adaptive management may allow for more flexible management of recreational use, provided
 20 adverse impacts of such use are effectively managed and wildlife populations remain stable. Where
 21 progress is not being made toward the attainment of desired future conditions goals, periodic review and
 22 adaptive management may result in increased restrictions on recreational use provide for additional
 23 management including increased appropriate restrictions on recreational use. Components subject to
 24 periodic review vary among the action alternatives.

25 **DISCUSSION OF ACTION ALTERNATIVES**

26 **ALTERNATIVE C: SEASONAL MANAGEMENT**

27 This alternative is designed to provide visitors to the Seashore with a degree of predictability regarding
 28 areas available for ORV use, as well as vehicle-free areas, based largely on the seasonal resource- and
 29 visitor-use characteristics of various areas in the Seashore. This alternative would manage ORV use by
 30 identifying areas that historically do not support sensitive resources or that historically have lower visitor
 31 use. Many of these areas would generally be designated as ORV routes year-round. Areas of high
 32 resource sensitivity and high visitor use would generally be designated as seasonal ORV routes, with
 33 restrictions based on seasonal resource and visitor use or as year-round non-ORV vehicle-free areas. Some
 34 areas would be designated as vehicle-free year-round to provide opportunities for non-ORV users to
 35 experience the Seashore without the presence of vehicles. The establishment of ORV routes and vehicle-
 36 free areas would be based largely on seasonal resource requirements and year-round visitation patterns
 37 and would provide the public and the Seashore with a structured management approach that clearly states
 38 what areas are available for ORV use and when they are open. The public would have clear direction as to
 39 what would be open seasonally or year-round; however, it would require some effort on the public's part
 40 to be informed and to understand what areas are open and when use is permitted. Implementation would
 41 require an increase in Seashore staff and resources for public education and enforcement, but would
 42 provide for efficient Seashore operations with the identification of defined use areas.

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1 Generally, most areas where there is a seasonally designated ORV route would be open to ORVs from
 2 October 15 to March 14, primarily due to concerns about resource protection for birds and turtles during
 3 breeding and hatching/fledging periods and to minimize conflicts with high visitor use periods. Areas that
 4 would be seasonally designated vehicle-free would include SMAs and some village beaches. These
 5 seasonal vehicle-free areas would primarily occur during periods of high visitation and high resource
 6 sensitivity—the summer and shoulder season months. The spits and points would be closed to ORVs
 7 from March 15 to October 14 to provide resource protection. A pedestrian access corridor would be
 8 provided at Bodie Island Spit, Cape Point, and South Point although the corridor could close during the
 9 breeding season as resource protection buffers and closures are established. Existing soundside ORV
 10 access areas would be retained and designated as ORV routes, including existing primitive parking and
 11 designated boat launch areas. The Seashore would maintain posts and signage defining the location of the
 12 parking areas and ORV access routes on the soundside.

13 ORV routes under this alternative would still be subject to temporary resource closures established when
 14 protected species breeding behavior warrants and/or if new habitat is created. In addition to the breeding
 15 season measures, resource closures and/or vehicle-free areas would be established, based on an annual
 16 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 17 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 18 access corridor in areas designated by the NPS (common to all alternatives).

19 Designated ORV routes would be established seasonally in areas with high visitation and/or sensitive
 20 resources and year-round in some areas that historically do not support sensitive resources or that have
 21 lower visitor use. To facilitate ORV access to the designated routes, existing ramps would be improved,
 22 reconfigured, and/or supplemented by new ramps, including the construction of ramps ~~47, and 48, 62,~~
 23 ~~and 64.~~ (Note: All action alternatives involve relocating ramp 2 and building a new ramps at 32.5, ~~62, and~~
 24 ~~64.~~) In addition, the interdunal road network would be maintained at its current level of access in most
 25 places, although an extension from ramp 45 west to ramp 49 would be provided. Pullouts or road
 26 widening would be provided where appropriate to provide safe ORV passage on the interdunal roads.
 27 Designated ORV routes would be open to ORV use 24 hours a day from November 16 through April 30,
 28 although SMAs would be closed to ORV use beginning on March 15. From May 1 through November 15,
 29 all potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) would be closed
 30 to non-essential ORV use from 7:00 p.m. to 7:00 a.m. This alternative also involves the addition or
 31 expansion of parking areas at several locations.

32 ORV safety closures would be designated as conditions warrant and would be evaluated for reopening by
 33 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
 34 access; pedestrian and commercial fishing access would generally be maintained through ORV safety
 35 closures.

36 Alternative C would include a Seashore-wide carrying-capacity element (“peak use limit”), which would
 37 be based on a physical space requirement of an average of one vehicle per 20 linear feet for Bodie and
 38 Hatteras Island Districts and one vehicle per 30 linear feet for the Ocracoke Island District. The provision
 39 of a lower carrying-capacity on Ocracoke Island would provide for a less crowded visitor experience in
 40 this area, enhancing the types of experiences available throughout the Seashore. The carrying capacity
 41 could be implemented whenever overcrowding could cause safety concerns, such as peak use periods
 42 during major summer holidays and weekends. The allowable number of vehicles in each area subject to
 43 the carrying capacity would be determined by the space requirements and the beachfront length of the
 44 area.

45 Alternative C would include an ORV permit system, with no limit on the number of permits issued.
 46 Permit fees would be determined based on the recovery of NPS costs incurred in managing ORV use.

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1 Only annual permits would be available under this alternative, but these would be valid for 12 months
2 from date of purchase so they could extend over the length of a season. To obtain the permit, ORV
3 owners would be required to complete a short education program in person or online and pass a basic
4 knowledge test demonstrating their understanding of the rules and regulations governing ORV use at the
5 Seashore, beach-driving safety, and resource closure requirements. Following completion of the test,
6 owners would need to sign for their permits to acknowledge that they understand the rules and that all
7 drivers of the permitted vehicles will abide by the rules and regulations governing ORV use at the
8 Seashore. A violation of the rules and regulations by the owner or driver of an ORV could result in
9 revocation of the vehicle permit, and the owner/permittee would not be allowed to obtain another permit
10 for any vehicle for a specified period of time.

11 Every five years the NPS would conduct a systematic review of the ORV and species management
12 measures identified in this alternative as being subject to periodic review. This could result in changes to
13 those management actions in order to improve effectiveness.

14 Designated routes and areas under alternative C are shown on figure 2 and described in table 7. Details of
15 the management actions under this alternative are described in table 8 [and species management strategies](#)
16 [are described in table 10](#).

17 **ALTERNATIVE D: INCREASED PREDICTABILITY AND SIMPLIFIED MANAGEMENT**

18 This alternative is designed to provide visitors to the Seashore with the maximum amount of
19 predictability regarding routes available for ORV use and vehicle-free areas for pedestrian use, which
20 means establishing year-round ORV routes and ~~non-ORV vehicle-free areas designations consistent with~~
21 ~~approved use patterns over the course of the year~~. Under this alternative, ORV routes would be
22 determined by identifying areas that historically do not support sensitive resources and areas of lower
23 visitor use. These areas would be designated as ORV routes year-round. Areas of historically high
24 resource sensitivity or high visitor use would not be designated as ORV routes. The establishment of
25 ORV routes and vehicle-free areas on a year-round (rather than seasonal) basis would provide the public
26 and the Seashore with a simplified management approach that would increase predictability and reduce
27 confusion about what and when areas are available for ORV use, and reduce the need for staff resources
28 on the beach. Because of the relative simplicity of the elements of this alternative, implementation would
29 require a lower level of Seashore staff and resources than other action alternatives and would maximize
30 the efficiency of Seashore operations.

31 Year-round vehicle-free areas would include lifeguarded beaches and the areas in front of villages, as well
32 as designated SMAs. These vehicle-free areas would provide for visitor safety during periods of high
33 visitation, particularly in the summer months, and would also provide a vehicle-free experience for
34 visitors during the off-season. Soundside access would continue as currently provided under the no-action
35 alternatives. Vehicle-free areas would also be established year-round at Cape Point and the spits to
36 provide a simplified approach to sensitive species management for Seashore operations, maximizing
37 contiguous protected areas and eliminating seasonal changes in designated ORV routes and the demands
38 associated with enforcing those changes. Other uses would still be allowed in these vehicle-free areas
39 outside any identified resource closures or SMAs. All SMAs would be managed using the ML1 strategy,
40 which would involve larger and longer species protection buffers and would not allow pedestrian access
41 once prenesting closures are established. Pedestrian access to these areas would be allowed once breeding
42 activities are completed.

43 ORV routes under this alternative would still be subject to temporary resource closures established when
44 protected species breeding behavior warrants and/or if new habitat is created. In addition to the breeding
45 season measures, resource closures within some vehicle-free areas would be established, based on an

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1 annual nonbreeding habitat assessment conducted after the breeding season, to provide areas of
2 nonbreeding shorebird habitat while still allowing a pedestrian or pedestrian/ORV access corridor in areas
3 designated by the NPS (common to all alternatives).

4 To facilitate access to designated ORV routes, existing ORV ramps would be improved, reconfigured,
5 and/or supplemented by new ramps ~~at 62 and 64~~. (Note: All action alternatives involve relocating ramp 2
6 and building ~~a~~ new ramps at 32.5, ~~62, and 64~~). No new or ~~expanding-expanded~~ parking areas would be
7 provided under alternative D. Designated ORV routes would be open to ORV use 24 hours a day from
8 November 16 through April 30. From May 1 through November 15, all potential sea turtle nesting habitat
9 (ocean intertidal zone, ocean backshore, and dunes) would be closed to non-essential ORV use from 7:00
10 p.m. to 7:00 a.m. to provide for sea turtle protection and allow enforcement staff to concentrate their
11 resources during the daytime hours.

12 ORV safety closures would not be designated; ORV users would drive at their own risk and would be
13 expected to rely on their knowledge of beach driving to determine if an area is safe to access based on
14 their assessment of current conditions.

15 Alternative D would not include a carrying-capacity requirement, but would limit vehicles to a one-
16 vehicle-deep parking configuration so that areas would not become overcrowded such that a safety
17 concern would occur.

18 Alternative D would include a simple vehicle permit system, with no limit on the number of permits
19 issued. Permit fees would be based on the recovery of NPS costs incurred in managing ORV use, but the
20 fee should be lower than fees under alternatives C, E, or F due to the decreased management costs under
21 this alternative. Only annual (based on the calendar year, as opposed to a 12-month period) permits would
22 be available under this alternative. To obtain a permit, ORV drivers would be required to read the rules
23 and regulations governing ORV use at the Seashore, including beach-driving safety and resource closure
24 requirements. Owners would need to sign for their permit to acknowledge that they understand the rules
25 and that all drivers of the permitted vehicle will abide by the rules and regulations governing ORV use at
26 the Seashore. Special consideration would be paid to providing beach safety information because of the
27 lack of safety closures under this alternative. A violation of the rules and regulations by the owner or
28 driver of the ORV could result in revocation of the vehicle permit, and the owner/permittee would not be
29 allowed to obtain another permit for any vehicle for a specified period of time.

30 Every five years the NPS would conduct a systematic review of the species management measures
31 identified in this alternative as being subject to periodic review. This could result in changes to those
32 management actions in order to improve effectiveness.

33 Designated routes and areas under alternative D are shown on figure 2 and described in table 7. Details of
34 the management actions under this alternative are described in table 8 [and species management strategies](#)
35 [are described in table 10](#).

36 **ALTERNATIVE E: VARIABLE ACCESS AND MAXIMUM MANAGEMENT**

37 This alternative is designed to provide visitors to the Seashore with a wide variety of access opportunities
38 for both ORV and pedestrian users, including to the spits and points, but often with controls or restrictions
39 in place to limit impacts on sensitive resources. During the shorebird breeding season, some ORV routes
40 may be kept open to use for longer periods of time by providing ORV pass-through zones at some spits
41 and points and by improving interdunal road and ramp access. More pedestrian access would be provided
42 through substantial additions to parking capacity at various key locations that lend themselves to walking
43 on the beach. Vehicle-free areas would be provided during all seasons for non-ORV users to experience

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1 the Seashore without the presence of vehicles. Like the other action alternatives, this alternative would
 2 manage ORV use by identifying areas that historically do not support sensitive resources and areas of
 3 lower visitor use. Most of these areas would be designated as ORV routes year-round. Areas of high
 4 resource sensitivity and high visitor use would either be designated as seasonal ORV routes, with
 5 restrictions based on seasonal resource and visitor use, or as year-round ~~non-ORV~~ vehicle-free areas. In
 6 addition, the SMAs would be reopened to ORV use approximately six weeks earlier than under
 7 alternative C (September 1 versus October 15).

8 During the shorebird breeding season, ORV pass-through zones would be designated at Bodie Island Spit,
 9 Cape Point, and South Point. The pass-through zones would use standard resource protection buffers and
 10 would not allow pedestrians, pets, ORV stopping, parking, or disembarking of passengers. These pass-
 11 through zones would be established to provide an increased possibility of access during the prenesting
 12 and incubation periods only, and would be subject to resource closures. Once through the pass-through
 13 zone, recreation would be allowed outside any existing resource closures. Both Bodie Island Spit and
 14 South Point would have pedestrian-only areas, when conditions allow, extending access beyond the end
 15 of the ORV route. When unfledged chicks are present, the probability of being able to provide this access
 16 would decrease. Therefore, in addition to the pass-through zones, the Seashore would promote the use of
 17 water taxis as alternative transportation to Bodie Island Spit and South Point, subject to designated
 18 landing zones and resource closures. Alternative E also involves the development of an interdunal
 19 pedestrian trail on Bodie Island. The trail would begin at a new parking area near ~~ramp 4~~ the campground
 20 and would provide access to the inlet. This new trail would also be subject to resource protection closures.

21 The variety of access methods possible under alternative E, based on the establishment of ORV routes,
 22 seasonal vehicle-free areas, designation of ORV pass-through zones, and the promotion of water taxi
 23 service to designated points and spits, would provide the public with ORV and pedestrian access to a
 24 greater number of areas within the Seashore, even during portions of the shorebird breeding season.
 25 However, this alternative would afford less predictability than alternatives C and D regarding areas
 26 available for use and would require a greater amount of oversight and management. Implementation
 27 would perhaps be difficult for the public to understand and would require more Seashore staff and
 28 resources than the other alternatives.

29 Areas that would be seasonally designated vehicle-free would include the areas in front of villages, except
 30 Frisco and Hatteras, and most of the SMAs. The ORV open season in front of the villages would be
 31 defined as November 1 to March 31 and in most SMAs from September 1 through March 14 (when a
 32 resource closure is not limiting access), with ORV access (via a pass-through zone) to Bodie Island Spit,
 33 Cape Point, and South Point from March 15 through August 31 via a pass-through zone, subject to
 34 resource closures. Soundside access would remain open at currently designated boat launch areas, on
 35 Hatteras Inlet Spit from the Pole Road to Cable Crossing and the Spur Road, and on Ocracoke Island
 36 soundside areas where commercial fishing access is currently allowed. Under this alternative, motorcycles
 37 would be allowed on all routes and areas open to ORVs on the soundside.

38 The remaining soundside access points would be closed to ORV use and small parking areas would be
 39 constructed to provide pedestrian access to the water. Signage/posts would be installed at the parking
 40 areas and boat launch areas to prevent damage to vegetation and other soundside resources.

41 ORV routes under this alternative would still be subject to temporary resource closures established when
 42 protected-species breeding behavior warrants and/or if new habitat is created. In addition to the breeding-
 43 season measures, resource closures and/or vehicle-free areas would be established, based on an annual
 44 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 45 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 46 access corridor in areas designated by the NPS (common to all alternatives).

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1 To facilitate access to ORV routes, this alternative would extend the existing interdunal road west of ramp
2 45 all the way to ramp 49, ~~and~~ construct two new ramps (47 and 48), and build two new ramps at 62 and
3 64. (Note: All action alternatives involve relocating ramp 2 and building a new ramps at 32.5, ~~62, and 64~~).
4 A new ramp would be established at either 24 or 26, along with a new parking area at the selected
5 location. Designated ORV routes would be open to ORV use 24 hours a day from November 16 through
6 April 30. From May 1 through September 15, all potential sea turtle nesting habitat (ocean intertidal zone,
7 ocean backshore, and dunes) would be closed to non-essential ORV use from 10:00 p.m. to 6:00 a.m. to
8 provide for sea turtle protection and allow enforcement staff to concentrate their resources during the
9 daytime hours. From May 1 through September 15, a limited number of ORV users would be permitted to
10 park and stay overnight at selected spits and points, under the terms and conditions of a special use
11 permit, when such areas are not otherwise closed to protect sensitive resources. From September 16
12 through November 15, ORV routes with no or a low density of turtle nests remaining (as determined by
13 the NPS) would be open between 10:00 p.m. and 6:00 a.m., subject to the terms and conditions of a
14 required permit (see table 8 for details). This alternative also involves the addition of parking spaces at
15 several ramp locations.

16 ORV safety closures could be designated as conditions warrant and would be evaluated for reopening by
17 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
18 access; pedestrian and commercial fishing access would generally be maintained through ORV safety
19 closures. For village beaches that are open to ORV use during the winter season, the village beaches must
20 be at least 20 meters wide from the toe of the dune seaward to the mean high tide line in order to be open
21 to ORV use.

22 Alternative E would include a carrying-capacity requirement for all areas based on a physical space
23 requirement of one vehicle per 20 linear feet for Bodie and Hatteras Island Districts, except 400 vehicles
24 would be allowed within a 1-mile area centered on Cape Point, and one vehicle per 30 linear feet for the
25 Ocracoke Island District. The carrying capacity would be implemented whenever overcrowding could
26 cause safety concerns, such as at peak use periods during major summer holidays and weekends. The
27 allowable number of vehicles in each area would be determined by the space requirements and the
28 beachfront length of the area.

29 Alternative E would include an ORV permit system, with no limit on the number of permits issued.
30 Permit fees would be determined based on the recovery of NPS costs incurred in managing ORV use.
31 Expected permit fees would be higher under this alternative due to the intense level of management
32 required for implementation. Both annual and weekly permits would be available under this alternative.
33 To obtain a permit, ORV owners would be required to complete a short education program in person or
34 online and pass a basic knowledge test demonstrating their understanding of the rules and regulations
35 governing ORV use at the Seashore, beach-driving safety, and resource-closure requirements. Following
36 completion of the test, owners would need to sign for their permit to acknowledge that they understand
37 the rules and that all drivers of the permitted vehicle will abide by the rules and regulations governing
38 ORV use at the Seashore. A violation of the rules and regulations by the owner or driver of the ORV
39 could result in revocation of the vehicle permit, and the owner/permittee would not be allowed to obtain
40 another permit for any vehicle for a specified period of time. The park-and-stay provision would be
41 managed under a separate special use permit. Alternative E would also include a self-contained vehicle
42 (SCV) camping opportunity from November 1 to March 31 at three NPS campgrounds (one in each
43 district), with a separate permit requirement and use limits.

44 Every five years the NPS would conduct a systematic review of the ORV and species management
45 measures identified in this alternative as being subject to periodic review. This could result in changes to
46 those management actions in order to improve effectiveness.

Chapter 2: Alternatives

1 Designated routes and areas under alternative E are shown on figure 2 and described in table 7. Details of
 2 the management actions under this alternative are described in table 8 [and species management strategies](#)
 3 [are described in table 10.](#)

4 **ALTERNATIVE F: NPS PREFERRED ALTERNATIVE MANAGEMENT BASED ON ADVISORY**
 5 **COMMITTEE INPUT**

6 In December 2007, the Department of the Interior established a negotiated rulemaking advisory
 7 committee (Committee) to assist the NPS in the development of an ORV regulation for the Seashore. The
 8 Committee met 11 times from January 2007 through February 2009, and conducted numerous
 9 subcommittee and work group meetings and conference calls. The Committee discussed and explored
 10 options for the full spectrum of ORV management issues covered in this plan/EIS. [As a result of these](#)
 11 [discussions, although the Committee did not reach a consensus on a recommended alternative, the NPS](#)
 12 [considered a variety of concepts and measures that either originated from Committee members or were](#)
 13 [discussed during Committee, subcommittee, or work group sessions. Although the Committee as a whole](#)
 14 [did not reach a consensus on a recommended alternative, in creating this action alternative the NPS has](#)
 15 [made a management judgment as to which combination of concepts and measures would make an](#)
 16 [effective overall ORV management strategy, the NPS has used the Committee's input to create this action](#)
 17 [alternative. In any case of conflicting advice from Committee members about any particular issue, the](#)
 18 [NPS has made a management judgment as to which approach would make an effective overall ORV](#)
 19 [management alternative.](#) The NPS has also included under alternative E some ORV management
 20 approaches identified by the Committee that would require more intensive management (such as park-
 21 and-stay and SCV camping), in keeping with the maximum management theme of that alternative.

22 [After reviewing public and agency comments, the NPS revised alternative F by adopting some of the](#)
 23 [simpler approaches from the other alternatives, e.g., instead of SMAs, using standard buffers with](#)
 24 [prenesting and nonbreeding closures; simpler and easier to understand hours for night-driving restrictions;](#)
 25 [and using more consistent seasonal closure dates among the villages. Also in response to public and](#)
 26 [agency comments, the amount of construction was decreased and, pedestrian access increased, and The](#)
 27 [bypass provision and criteria from alternative A was incorporated in Alternative F to mitigate effects](#)
 28 [of sea turtle closures that could block fall ORV access to Cape Point, attention paid to increasing](#)
 29 [management efficiency and reducing costs of implementation. Designation of ORV routes was adjusted to](#)
 30 [provide balance between ORV areas and vehicle-free areas.](#)

31 This alternative is designed to provide visitors to the Seashore with a wide variety of access opportunities
 32 for both ORV and pedestrian users, including access to the spits and points, but often with controls or
 33 restrictions in place to limit impacts on sensitive resources. This means that some areas may be kept open
 34 to ORV users for longer periods of time by reopening some ORV corridors at the spits and points sooner
 35 after shorebird breeding activity is completed than in alternatives C or E, and by improving interdunal
 36 road and ORV ramp access. Pedestrian access would be enhanced by providing increased parking
 37 capacity at various points of access to vehicle-free areas. Such areas would be provided during all seasons
 38 so non-ORV users can experience the Seashore without the presence of vehicles. Like the other action
 39 alternatives, this alternative would manage ORV use by identifying areas that historically do not support
 40 sensitive resources and areas of lower visitor use. ~~Some~~ Many of these areas would ~~generally~~ be
 41 designated as ORV routes year-round. Areas of high resource sensitivity and high visitor use would
 42 generally be designated as [vehicle-free areas year-round or as seasonal ORV routes](#), with restrictions
 43 based on seasonal resource and visitor use, ~~or as year-round non-ORV areas.~~

44 [The year-round designation of vehicle-free areas and ORV routes, in conjunction with the species](#)
 45 [management strategies described in table 10-1, would provide for species protection during both the](#)
 46 [breeding season and the nonbreeding season. SMAs would not be designated under this alternative and](#)

Comment [seh5]: Add an "s" here on "comment" if you're going to add one in the first sentence of this paragraph.

Comment [seh6]: MIKE: OK to add this?

Comment [seh7]: Delete because the cost of alt F in the FEIS is more than in the DEIS

Comment [mbm8]: All changes look fine to me

Action Alternatives

1 one set of standard buffers, similar to the ML2 buffers in the other action alternatives, would be utilized.
 2 In addition, the SMAs could reopen to ORV use as early as July 31, which is up to four weeks earlier than
 3 under alternative E (September 1), when the shorebird breeding season is completed at each site (typically
 4 in August). During the shorebird breeding season, pedestrian shoreline access along ocean and inlet
 5 shorelines below the high-tide line would be permitted in front of (i.e., seaward of) prenesting areas until
 6 breeding activity is observed, then standard buffers for breeding activity would apply. ~~standard buffers for~~
 7 breeding activity would apply. ~~the prenesting area would be closed to pedestrians.~~ The NPS retains
 8 discretion at all times to enforce more proactive closures or take other measures, if considered necessary,
 9 consistent with its obligations under the law. Prenesting areas would generally be closed March 15
 10 through July 31 (or August 15 if black skimmers are present), or until two weeks after all chicks have
 11 fledged and breeding activity has ceased, whichever comes later. For all species closures, including
 12 prenesting closures, the NPS ~~shall~~ would not reduce buffers to accommodate an ORV corridor or ORV
 13 ramp access.

Comment [mbm9]: We need a universal change any place in the document that it says (for alt F) "one set of standard buffers, equivalent to the ML2 buffers". It needs to be changed to "similar to", because the nest buffer in table 10-1 for WIPL has been revised to 75 m. In Table 10 in the DEIS, it was 150 m.

14 ~~a shoreline pedestrian access corridor would be established at Bodie Island Spit would be designated as a~~
 15 ~~seasonal ORV route from September 15 through March 14 and would be vehicle-free from March 15~~
 16 ~~through September 14, and ORV access corridors would be established at Cape Point and South Point.~~
 17 ~~These corridors would use standard resource protection buffers and would be subject to resource closures.~~
 18 ~~When unfledged chicks are present, the probability of being able to provide this access would decrease.~~
 19 Like alternative E, alternative F also involves the development of an interdunal pedestrian trail on Bodie
 20 Island. The trail would begin at a new parking area near ~~ramp 4 the campground~~ and would provide
 21 access to the inlet. This new trail would also be subject to resource-protection closures. Year-round ORV
 22 routes would be designated at Cape Point and South Point, with 35-meter-wide (115-foot-wide) ORV
 23 corridors during the breeding season. Standard resource-protection buffers would apply to these ORV
 24 corridors. When nests occur near the ORV corridor or unfledged chicks are present, the probability of
 25 being able to provide this access would decrease. The provision and criteria described in alternative A for
 26 creation of short-term bypasses would be incorporated in alternative F only for sea turtle nests and only
 27 between Ramp 44 and Cape Point. Alternative F would include the construction of a short seasonal ORV
 28 route to provide pedestrian access ~~a new pedestrian trail~~ to the sound on Ocracoke Island. In addition, the
 29 NPS would consider applications for commercial use authorizations to offer beach and water shuttle
 30 services and would apply for funding to conduct an alternative transportation study to evaluate the
 31 feasibility of alternative forms of transportation to popular sites, such as inlets and Cape Point.

Comment [seh10]: MIKE: should this say "at Cape Point or between ramp 44 and Cape Point?"

Comment [mbm11]: "between Ramp 44 and Cape Point" seems good to me.

32 The variety of access methods possible under alternative F, based on the establishment of year-round and
 33 seasonal ORV routes and vehicle-free areas, and increased interdunal roads and parking to support access,
 34 would provide the public with ORV and pedestrian access to a greater number of areas within the
 35 Seashore. This alternative would afford less predictability than alternative C or D, but ~~some~~ more
 36 predictability than alternative E, regarding areas available for use, and it would require a comparable level
 37 of oversight and management to alternative E.

38 Areas that would be seasonally designated as vehicle free would include the areas in front of Ocracoke
 39 Campground and villages, except for Rodanthe north of the pier and Buxton, which would be vehicle free
 40 year-round. The ORV open season ~~area dates open to for~~ ORV use in front of the seasonally-designated
 41 villages and Ocracoke Campground would be November 1 to March 31 when visitation and rental
 42 occupancy is lowest. These areas would be vehicle free April 1 to October 31 when visitation and rental
 43 occupancy is highest. When these beaches are open to ORV use, a safety closure would be implemented
 44 on portions of the beach that are not consistently at least 20 meters (66 feet) wide during normal high
 45 tides.

46 To facilitate access to ORV routes, this alternative would add new ramp 25.5 approximately 2.5 miles
 47 south of ramp 23, relocate ramp 59 to 59.5, and add a new ramp 63 across from Scrag Cedar Road. (Note:

Chapter 2: Alternatives

1 All action alternatives involve relocating ramp 2 and building a new ramp at 32.5). New interdunal roads
 2 would facilitate access to locations that have either seasonal or year-round restrictions on ORV use.
 3 Locations for interdunal roads would include: on inland of South Beach from ramp 45 to ramp 49, with
 4 one new ramp at 47.5 and on Hatteras Inlet Spit extending from the intersection of Pole and Spur Roads
 5 southwest toward the inlet, stopping at least 100 meters from the inlet northeast and southwest from the
 6 southern terminus of the Pole Road, and on North Ocracoke Spit from ramp 59 extending northeast
 7 toward the inlet would facilitate access to locations that have either seasonal or year-round restrictions on
 8 ORV use. Existing soundside access points would remain open, with better maintenance than currently
 9 occurs. Signage/posts would be installed at the soundside parking areas and boat launch areas to prevent
 10 damage to vegetation and other soundside resources. This alternative also involves the addition of new
 11 parking areas with associated foot trails or boardwalks to facilitate pedestrian access at a number of
 12 locations/spaces at several ramp locations.

13 ORV routes and vehicle-free areas under this alternative would still be subject to temporary resource
 14 closures established when protected-species breeding behavior warrants and/or if new habitat is created.
 15 Outside the breeding season, in addition to the breeding season measures, vehicle-free areas throughout
 16 the Seashore would provide relatively less-disturbed foraging, resting, and roosting habitat for migrating
 17 and wintering birds. These areas would be open to pedestrians for recreational use. In addition, resource
 18 closures at spits and points and/or vehicle-free areas would also be established, based on an annual
 19 nonbreeding habitat assessment conducted after the breeding season, to provide areas of nonbreeding
 20 shorebird habitat with reduced human disturbance while still allowing a pedestrian or pedestrian/ORV
 21 access corridor in areas designated by the NPS. This would include three “floating” nonbreeding
 22 shorebird habitat areas located between ramps 23 and 34, between ramps 45 and 49, and south of ramp
 23 72. The “floating area” would be adjusted on a yearly basis to provide nonbreeding habitat in these areas.
 24 The closure would float year to year, depending on where the most effective wintering habitat is located
 25 which would be determined based on a review of the previous year’s monitoring results.

26 Designated ORV routes would be open to ORV use 24 hours a day from November 16 through April 30.
 27 To facilitate access to ORV routes, this alternative would add ramp 39 near Haulover Beach. (Note: All
 28 action alternatives involve relocating ramp 2 and building new ramps at 32.5, 62, and 64). New ramps
 29 would also be established at both 24 and 26, along with new parking areas. Designated ORV routes would
 30 be open to ORV use 24 hours a day from November 16 through April 30. From May 1 through November
 31 September 15, all potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes)
 32 would be closed to non-essential ORV use from 9:00 p.m. 1 hour after sunset until 7:00 a.m. NPS turtle
 33 patrol has checked the beach in the morning (by approximately one half hour after sunrise) to provide for
 34 sea turtle protection and allow enforcement staff to concentrate their resources during the daytime hours;
 35 however, from September 16 through November 15, however, selected ORV routes with no or a low
 36 density of turtle nests remaining (as determined by the NPS) would reopen to night driving, subject to the
 37 terms and conditions established under the ORV of a required permit.

38 ORV safety closures could be designated as conditions warrant and would be evaluated for reopening by
 39 NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV
 40 access; pedestrian and commercial fishing access would generally be maintained through safety closures.
 41 Alternative F provides specific guidelines for establishing and removing safety closures. Additional
 42 ORV-driving requirements would be implemented to provide for increased pedestrian safety in all areas
 43 open to ORV use, including the village beaches when open to ORV use. Under the carrying capacity
 44 requirement for alternative F, the maximum number of vehicles allowed on any particular ORV route
 45 during peak use periods would be the linear distance of the route divided by 6 meters (20 feet) per vehicle
 46 (i.e., the equivalent of 260 vehicles per mile). Alternative F would include a carrying capacity requirement
 47 (peak use limit) for all areas based on a physical space requirement of one vehicle per 20 linear feet for
 48 Bodie Island, Hatteras Island, and Ocracoke Island Districts, except that 400 vehicles would be allowed

How Alternatives Meet Objectives

1 ~~within a 1-mile area centered on Cape Point. In addition, The carrying capacity would parking within~~
 2 ~~ORV routes would be allowed, but restricted to one vehicle deep. These measures would reduce~~
 3 ~~safety concerns associated with overcrowding, such as at peak use periods during major summer holidays~~
 4 ~~and weekends.~~

5 ~~The allowable number of vehicles in each area would be determined by the space requirements and the~~
 6 ~~beachfront length of the area.~~

7 Alternative F would include an ORV permit system, with no limit on the number of permits issued.
 8 Permit fees would be determined based on the recovery of NPS costs incurred in implementing the ORV
 9 management plan~~managing ORV use that are not already covered by the Seashore's base operating funds.~~
 10 Expected permit fees would be similar to alternative E due to the level of management required for
 11 implementation. Both annual and ~~7-day~~short-term permits would be available under this alternative. To
 12 obtain a permit, ORV owners would be required to complete a short education program in person at an
 13 NPS facility. Ver online and pass a basic knowledge test demonstrating their understanding of the rules
 14 and regulations governing ORV use at the Seashore, beach driving safety, and resource closure
 15 requirements. Following completion of the test, chicle owners would need to sign for their permit to
 16 acknowledge that they understand the rules and that all drivers of the permitted vehicle will abide by the
 17 rules and regulations governing ORV use at the Seashore. A violation of the rules and regulations by the
 18 owner or driver of the ORV could result in revocation of the vehicle permit, and the owner/permittee
 19 would not be allowed to obtain another permit for any vehicle for a specified period of time. In addition to
 20 the mandatory education program for ORV users, the NPS would establish a voluntary resource-education
 21 program targeted toward non-ORV beach users.

22 Every five years the NPS would conduct a systematic review of the ~~ORV and~~ species management
 23 measures identified in this alternative as being subject to periodic review. This could result in changes to
 24 those management actions in order to improve effectiveness.

25 Designated ORV routes under alternative F are shown on figure 2 and described in table 7-1. Details of
 26 the management actions under this alternative are described in table 8 and species management strategies
 27 are described in table 10-1.

28 HOW ALTERNATIVES MEET OBJECTIVES

29 As stated in chapter 1 of this document, all action alternatives selected for analysis must meet all
 30 objectives to a large degree. The action alternatives must also address the stated purpose of taking action
 31 and resolve the need for action; therefore, the alternatives were individually assessed in light of how well
 32 they would meet the objectives for this plan/EIS, which are stated in chapter 1 of this document.
 33 Alternatives that did not meet the objectives were not analyzed further (see the "Alternative Elements
 34 Considered but Dismissed from Further Consideration" section in this chapter).

35 Table 12 compares how each of the alternatives described in this chapter would meet the plan objectives.
 36 Chapter 4 of this document describes the effects of each alternative on each impact topic. These impacts
 37 are summarized in table 13. Tables 12 and 13 are included at the end of this chapter.

1 ALTERNATIVE ELEMENTS CONSIDERED BUT DISMISSED FROM 2 FURTHER CONSIDERATION

3 USE AREAS, ORV MANAGEMENT, AND VISITOR USE

4 Modify the ORV Management Plan In Accordance with Plans Proposed by Groups 5 Outside the NPS

6 During the public comment period for the draft plan/EIS, alternative plans for the management of ORVs
7 and wildlife at the Seashore were submitted. Many of the elements in these proposals have been are
8 already included in the range of alternatives considered, or have been incorporated into the revised
9 alternative F (NPS preferred alternative). Those elements that are not included were considered but
10 dismissed for the reasons discussed below under the headings: Implement Additional Vehicle
11 Requirements, Additional Requirements for Permit Holders, Alternative Methods for Developing ORV
12 Carrying Capacity, Allow for a eGreater Level of Night Driving at the Seashore, Provide an ORV Pass-
13 through Corridor Though All Species Closures/Buffers, Criteria for the Designation of SMAs, Relocate
14 Bird and Turtle Nests, Modify the Turtle Program, Implement a Volunteer Program to Assist with Species
15 Protection, Create an Oversight Committee with External Experts and Scientists, Create New Habitat, and
16 Give Special Consideration Only to Flora and Fauna Listed as Threatened and Endangered.

17 **Consider Pea Island National Wildlife Refuge when Considering Use Areas**

18 Many commenters suggested that Pea Island NWR (refuge) should be considered when developing this
19 plan/EIS. Suggestions included considering Pea Island the refuge as a vehicle-free area, and conversely,
20 as a potential area where ORVs could be used where there is not a resource conflict. Commenters felt that
21 the refuge Pea Island NWR should be considered a part of the baseline for analysis, and should be
22 considered when providing appropriate visitor use. Although the 5,880-acre Pea Island NWR is located at
23 the northern end of Hatteras Island, and is within the boundary of the Seashore, the refuge is administered
24 by the USFWS and therefore the NPS cannot direct the management of visitor use at the refuge. The
25 Seashore's 1978 draft interim ORV management plan affirmed that the refuge manager has management
26 responsibility for posting closures on beaches within the refuge as he or she may find necessary to
27 implement the regulations of the USFWS. NPS recognizes that approximately 12.1 miles of beach within
28 the refuge has been closed to ORVs for a number of years and at present provides an opportunity for
29 visitors to the north end of Hatteras Island to walk on the beach in the absence of vehicles; however,
30 because the refuge is not administered by the NPS, the Seashore cannot direct the management of visitor
31 use at the refuge. The USFWS is responsible for making decisions about ORV and pedestrian access and
32 has done so under a public planning process in the Pea Island National Wildlife Refuge Comprehensive
33 Conservation Plan (USFWS 2006b), as mandated by the National Wildlife Refuge Improvement Act of
34 1997. Through this process, the USFWS has determined that ORV use would not be appropriate or
35 compatible with the mission of the refuge.

36 NPS also recognizes that there are times and locations on Nags Head and Cape Lookout National
37 Seashore beaches, where ORVs may and may not be driven, providing additional opportunity for
38 recreation with and without vehicles. The NPS acknowledges that there are approximately 12.1 miles of
39 vehicle-free beaches within the refuge that are available for pedestrian use and has ; however, bBecause
40 the refuge it is not administered by the NPS, the Seashore cannot direct the management of visitor use at
41 the refuge Pea Island NWR. The USFWS is responsible for making decisions about ORV and pedestrian
42 access and has done so under a public planning process in the Pea Island National Wildlife Refuge
43 Comprehensive Conservation Plan (USFWS 2006x), as mandated by the National Wildlife Refuge
44 Improvement Act of 1997. Through this process, Currently, the USFWS has determined that ORV use
45 would not be appropriate or compatible with the mission of the refuge. Under the Organic Act, the NPS

Comment [seh12]: This is stated a few lines below. No need to say it twice, so I've deleted it here.

Alternative Elements Considered but Dismissed From Further Consideration

1 is responsible for managing activities in the Seashore to conserve the natural resources unimpaired on
 2 NPS-managed lands within the Seashore, which includes protecting the wildlife and its habitat. Similarly,
 3 under the Seashore’s enabling legislation, NPS is mandated to preserve the unique flora and fauna and
 4 physiographic conditions. The presence of a species outside the Seashore does not mitigate, eliminate, or
 5 affect the authority and responsibility of the NPS under both the Organic Act and the Seashore enabling
 6 legislation to preserve unimpaired the Seashore populations of wildlife.

Comment [dw13]: What precipitated the addition of this language?

7 Prohibit the Use of Off-Road Vehicles

8 Prohibition of ORV use at the Seashore would not meet the purpose, need, and objectives of this
 9 plan/EIS. The purpose of this plan is to “develop regulations and procedures that carefully manage ORV
 10 use/access in the Seashore to protect and preserve natural and cultural resources and natural processes,
 11 provide a variety of visitor use experiences while minimizing ~~minimize~~ conflicts among various users,
 12 and promote the safety of all visitors...” ORV use, if effectively managed, provides convenient access for
 13 many appropriate visitor activities at some popular beach sites including, for example, activities that use
 14 vehicles to transport substantial amounts of gear for the activity. Prohibition, rather than management, of
 15 ORV use could substantially diminish such visitor experience opportunities. Therefore prohibition of all
 16 ORV use would not meet the plan need.

17 In addition to not meeting the purpose, need, and objectives of this plan/EIS, ORV use is a historical use
 18 at the Seashore that has been accounted for in Seashore planning documents. Management goals related to
 19 ORV use are included in the Seashore’s General Management Plan, which states, “Selected beaches will
 20 continue to be open for ORV recreational driving and in conjunction with surf fishing in accordance with
 21 the existing use restrictions” (NPS 1984). Providing for this use would occur in the context of the overall
 22 planning objective of preserving the cultural resources and the flora, fauna, and natural physiographic
 23 conditions, while providing for appropriate recreational use and public access to the oceanside and
 24 soundside shores in a manner that will minimize visitor use conflict, enhance visitor safety, and preserve
 25 Seashore resources. ORV use preceded the establishment of the Seashore and management of this use,
 26 rather than prohibition, continues to be the intent of the NPS. The NPS acknowledges that if it does not
 27 promulgate a special regulation to authorize ORV use, then ORV use would, in fact, be prohibited at the
 28 Seashore; however, bBecause a complete prohibition of ORV use does not meet the purpose, need, and
 29 objectives of this plan/EIS and because ORV use is a use that is accounted for in Seashore plans and
 30 policies, elimination of all ORV use at the Seashore was not carried forward for further analysis.

31 Changes in Infrastructure and Regulations of Other Jurisdictions

32 Commenters suggested elements that would involve jurisdictions outside the NPS, including:

- 33 • Provide NPS parking and beach access points throughout Dare County villages.
- 34 • Lower the speed limit on NC-12 between villages to 45 mph during peak use times to reduce the
 35 danger from vehicles with aired-down tires.
- 36 • Limit the use of bright lighting in oceanfront houses.
- 37 • Create a sound ordinance.
- 38 • Create guidelines for oceanfront structures, such as setbacks from the high-tide mark and
 39 rebuilding guidelines, to address damage to existing oceanfront structures.

40 These suggestions would require action by the county or state. Lowering the speed limit would require a
 41 change in current state regulations. The county would be responsible for changing building codes or
 42 adding more parking and access points. Creating sound or turtle friendly lighting ordinances or occupancy

Chapter 2: Alternatives

1 restrictions for rental homes would require action of the respective counties. The NPS does not have the
 2 authority to require these jurisdictions to undertake such action. However, the NPS has worked with the
 3 communities within the Seashore on many issues, including those related to ORV management, and under
 4 all alternatives would continue to work cooperatively to encourage actions such as turtle-friendly lighting
 5 and education. Although the NPS cannot require Dare County to provide more parking or beach access,
 6 some of the alternatives evaluated in this plan/EIS address additional parking areas on Seashore land.

7 **Implement Additional Vehicle Requirements**

8 During public comment on the draft plan/EIS, commenters recommended additional vehicle requirements
 9 such as requiring vehicles to be oil leak free, permitting only electric vehicles, and requiring that license
 10 plates be displayed properly. The Seashore does not have the capability to efficiently inspect each vehicle
 11 that enters the beach to determine if it is leaking oil. Individual vehicle inspections for leaking fluids
 12 could cause substantial traffic backups, which would adversely affect visitor experience and safety.
 13 However, all vehicles operated in the Seashore must comply with state inspection requirements, which
 14 include regulations on leaking fluids. If the NPS were to observe a vehicle leaking oil, it would be
 15 removed from the beach. The NPS is not proposing to allow only electric vehicles in the Seashore due to
 16 the limited availability of these vehicles to the general public. Obstruction of the rear license plate is a
 17 violation of North Carolina law, which is enforced by NPS law enforcement staff under 36 CFR 4.2(b). In
 18 developing the details of the ORV permit program, the Seashore would consider whether this violation
 19 would be a basis for permit revocation.

20 **Provide All-Terrain Vehicle/Utility Terrain Vehicle Access and Remove the Helmet** 21 **Requirement**

22 Commenters suggested that ATVs and utility terrain vehicles (UTVs) should be allowed on the beach and
 23 that ATV users should not be required to use helmets. The NPS only allows street-legal vehicles on the
 24 beach under the North Carolina Motor Vehicle Code, which does not include ATVs or UTVs.
 25 Alternatives in this plan/EIS do not include changing the requirement for street-legal vehicles. The
 26 Seashore considers ATV and UTV use at the Seashore to be incompatible with visitor use and resource
 27 protection goals and objectives due to the damage they could cause. Further, street-legal vehicles are used
 28 for transportation, but the majority of ATVs and UTVs are used primarily for recreational or utility
 29 purposes, although they may secondarily serve a transportation function. Since ATVs and UTVs would
 30 not be permitted, the issue of requiring helmets is not applicable.

31 **Assign Permits to Users Instead of Vehicles**

32 For the alternatives that include a permit system, permits would be assigned to a particular vehicle
 33 through issuance to the registered owners of vehicles. A permit sticker would then be affixed to the
 34 vehicle, where it would be easily visible by law enforcement personnel. Another option of assigning
 35 permits to the person only, not the vehicle, was considered, but eliminated. Verifying that people have
 36 permits that are movable between multiple vehicles would require substantially more effort by law
 37 enforcement staff, who would have to stop each driver visitor and ask to see their permit. Therefore, to
 38 assist in enforcing the permit system, permits are assigned to the registered owners and affixed to the
 39 vehicles under all alternatives.

40 **Require a Permit for All Users of the Seashore**

41 The idea of an entrance or admission fee for the Seashore was discussed thoroughly during the negotiated
 42 rulemaking process, and was dismissed primarily due to administrative and financial obstacles. The
 43 establishment of an entrance fee would require the NPS to install manned entrance gates in the Seashore

Alternative Elements Considered but Dismissed From Further Consideration

1 to collect visitor fees. However, there are thousands of local residents who have to travel through the
 2 Seashore to gain access to their property. The logistics of collecting entrance fees from all visitors would
 3 result in delays at entrances and would impede efficient travel along NC-12.

4 In addition, parking and access fees are managed under the Federal Lands Recreation Enhancement Act
 5 (FLREA), which does not provide for a cost recovery program. Therefore, the Seashore would be able to
 6 retain only a portion of the entrance or parking fees collected and could not use those funds to support key
 7 functions associated with an ORV management program, such as law enforcement, maintenance of routes
 8 or parking lots, or resource management. As a result, the collection of admission and parking fees was not
 9 carried forward for further analysis.

10 **Provide Separate Permits for Different Areas of the Seashore as a Means of Limiting**
 11 **Congestion**

12 The ORV permit system is an enforcement and education tool to reduce adverse impacts to park resources
 13 and visitor experience. It is not intended to limit the number of ORVs on Seashore beaches. During
 14 internal and public scoping as well as the negotiated rulemaking process, the NPS considered various
 15 methods for establishing an ORV permit system. A common theme among the alternatives for ORV
 16 permits was that fees should be kept reasonable so that all visitors, regardless of income level, would be
 17 able to afford to purchase an ORV permit. The most logical method of implementing an ORV permit
 18 system would be to use the special park uses authority under 16 USC 3a which would allow the Seashore
 19 to recover the cost of implementing the ORV management program. A permit system that required a
 20 different permit for different locations in the Seashore would be complex to implement, resulting in
 21 increases in NPS management costs. Such costs would ultimately be passed along to ORV users because
 22 the permit fees would be based on cost recovery. Therefore, more complex permitting systems were
 23 considered but not carried forward for analysis. As a result, the concept of establishing vehicle limits in
 24 certain areas through an ORV permit system was not carried forward for further analysis.

Comment [seh14]: Needs a period here.

25 **Additional Requirements for Permit Holders**

26 During public comment on the draft plan/EIS, commenters recommended a range of requirements that
 27 could be included in a permit system such as having permit holders report turtle crawl activity. It was
 28 determined that requiring the public to report turtles crawls would not be enforceable. Although the
 29 Seashore encourages the public to report certain species activities, including turtle crawls, requiring the
 30 public to report turtle crawls would not be appropriate as part of an ORV permit program and was not
 31 included in the range of alternatives dismissed from further analysis. However, suggestions made for
 32 various educational components, such as watching an educational video, are included in the range of
 33 alternatives.

Comment [seh15]: This text is consistent with the response to comment about requiring reporting of turtle crawls (the SOL suggested "not be appropriate" instead of "not be enforceable")

34 **Provide Night Parking at the End of Access Ramps on the Beach Side and Along the Sandy**
 35 **Road Behind the Dunes at Cape Point and the Spits**

36 Night parking (but not camping) for pedestrian beach access would be allowed at roadside parking areas
 37 identified on the maps for alternative F. Allowing vehicles to park overnight on interdunal roads or ORV
 38 ramps immediately adjacent to resource sensitive locations would be difficult to patrol and enforce.
 39 Additionally, it could place an unrealistic expectation on visitors in such locations to strictly comply with
 40 the applicable resource protection restrictions. The NPS does not have the resources to patrol the entire
 41 Seashore at night to enforce compliance. The placement of more parked vehicles on ORV routes adjacent
 42 to the beach at night would potentially result in additional compliance problems, and was not carried
 43 forward for further analysis.

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Locate ORV Routes Behind the Dunes, Away from Pedestrian Users

Routes behind the dunes would be more damaging to the environment in some cases because the land there is not hard, bare beach sand but instead is rather loose sand, and the area contains vegetation and other wildlife. Additionally, interdunal roads would not allow the same degree of access that designated ORV routes would provide to visitors that use ORVs for access to recreational activities. Some interdunal roads would be provided to allow for ORV access around designated vehicle free areas. As a result, locating ORV routes behind dunes as a general practice was not carried forward for further analysis.

Alternative Methods for Determining ORV Carrying Capacity

During public comment on the draft plan/EIS, commenters provided a range of suggestions for determining the ORV carrying capacity at the Seashore. This includes extending carrying capacity limits to all areas of the Seashore, allowing vehicles to stack more than one deep, implementing limits on pedestrian use, and increasing or decreasing the proposed vehicle limits. Overall, the NPS established carrying capacity limitations primarily as a visitor safety mechanism to reduce the potential for vehicle-vehicle and pedestrian-vehicle conflicts that can occur in areas where vehicles and pedestrians coexist. The NPS considered various options for determining carrying capacity limits which are included in the range of the alternatives in this plan/EIS. For more information please see appendix C: Concern/Response Report (response to Concern ID 24129).

Use a Different Term for “Requirement” in Law Enforcement Text

Commenters suggested using the words “courtesy,” “guidelines,” or “rule” instead of “requirements.” Where the word “requirements” is used in an alternative, it implies a level of regulatory enforcement authority. In these areas, changing the word to “guidelines” or “courtesy” would not imply enforcement capability; therefore, this suggestion was not carried forward in the alternatives.

Provide Around-the-Clock Enforcement

Commenters suggested that around-the-clock enforcement would ensure resource protection. The Seashore has no source of funding capable of supporting around-the-clock enforcement in all areas at all times. This suggested level of enforcement is not the norm for any national seashore. The action alternatives provide for increased outreach and education to help improve voluntary compliance, but around-the-clock enforcement would not be feasible and was therefore not included in any alternatives.

Designate a “Backcountry Zone” Where Pedestrians Can Walk

Designation of a backcountry zone is not within the scope of this project. However, the Seashore will address park management zones in the revision of the General Management Plan (GMP) for the Seashore.

Establish Two Marked Travel Paths on the Beach

Marking travel lanes in ORV routes along the length of the Seashore would not be possible nor desirable because of the visual impact. However, alternative F requires that two-way traffic remain unimpeded within ORV routes and also provides the Seashore with the authority to close down a section of beach if two-way traffic is impeded.

Alternative Elements Considered but Dismissed From Further Consideration

1 **Construct an “Access Trail” to Hatteras Spit**

2 Over the past several years, the Seashore has provided ORV access to the back side of Hatteras spit
 3 whenever it is would not result in human safety or resource impacts. Some of the sound shoreline area is
 4 very narrow; having a small strip of sand that is subject to flooding at high tide unless one drives on the
 5 vegetation. This includes wetland vegetation that bounds it on the land side. Because it is problematic to
 6 access the Sound from Pole Road at other points, alternative F provides for ORV access to the Sound
 7 behind the Coast Guard Station, at Cable Crossing and at Spur Road, and did not carry an access trail to
 8 Hatteras Spit forward for further analysis.

9 **Add a Public Soundside Beach on Ocracoke**

10 NPS believes that the suggestion to provide a soundside beach on Ocracoke has merit. However, it is
 11 outside the scope of the ORV plan/EIS and was not included in the alternatives carried forward for further
 12 analysis. The NPS believes that it would be an appropriate topic for the Seashore’s upcoming GMP
 13 revision process.

14 **Divide the Seashore by Different Recreational Uses**

15 The purpose of the plan is to develop regulations and procedures that carefully manage ORV use/access
 16 in the Seashore to protect and preserve natural and cultural resources and natural processes; to provide a
 17 variety of visitor use experiences while minimizing conflicts among various users; and to promote the
 18 safety of all visitors. While it is recognized that individuals who use ORVs do so for a variety of purposes
 19 or to pursue different recreational interests, developing a nuanced approach to designating ORV areas
 20 based on the different individual interests would be extremely difficult and is beyond the scope of this
 21 plan. Therefore, this approach was not carried forward as an element of the alternatives evaluated. The
 22 NPS believes that the range of alternatives evaluated in this plan/EIS provide various ORV routes and
 23 vehicle-free areas, which offer visitors the opportunity to select the locations best suited for pursuing their
 24 respective interests, whether it be fishing, swimming, shell collecting, bird watching or other uses.

25 **Allow for a Greater Level of Night Driving at the Seashore**

26 During public comment on the draft plan/EIS, commenters requested that night driving only be restricted
 27 between May 27 and August 25, and requested that some level of nighttime access be maintained between
 28 these dates. NPS considered a range of dates for night driving from unrestricted night driving, 365 days
 29 per year in alternative A to the dates for nighttime restrictions in alternatives B – F. These dates were
 30 identified based on the sea turtle nesting season to reduce the chance for direct or indirect impacts to
 31 nesting sea turtles from ORV use. Since 2000, three nests were found prior to May 15 (two of which were
 32 leatherback nests) and four nests have been found after September 1. It is important to note that prior to
 33 2008, nest patrols were conducted only from June 1 through August 31 (2001–2005), or May 15 through
 34 September 15 (2006 and 2007). Any nests laid outside of that timeframe had a greater likelihood of not
 35 being found, recorded, and protected by resource management staff.

36 The NPS believes that nighttime restrictions from May 1 until November 15 provide the proper level of
 37 protection for sea turtles. Further, the NPS believe that providing exceptions to this would have adverse
 38 impacts to the species. Direct adverse impacts of nighttime driving were documented during the 2010
 39 nesting season when an ORV driving on the beach at night – in violation of the consent decree – struck
 40 and killed a nesting female loggerhead turtle during the nighttime hours between June 23 and June 24.
 41 The turtle had crawled out of the ocean and attempted to lay a nest between Ramps 70 and 72 on
 42 Ocracoke Island. The ORV hit the turtle and dragged her approximately 12 feet, causing fatal injuries.

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1 The turtle was found dead by NPS turtle patrol at 6:10 a.m. on June 24. This particular incident is the first
 2 documented time a nesting sea turtle has been killed by an ORV at the Seashore (NPS 2010b).

3 The NPS believes that nighttime restrictions from May 1 until November 15 provide the proper level of
 4 protection for sea turtles. Further, the NPS believes that providing exceptions to this would have
 5 unacceptable adverse impacts to sea turtles at the Seashore. For these reasons, the NPS did not
 6 specifically analyze a May 27 to August 25 nighttime driving restriction period.

7 **No Restrictions on ORV Use**

8 Unrestricted ORV use at the Seashore would not meet the purpose, need, and objectives of this plan/EIS.
 9 The purpose of this plan/EIS is to “develop regulations and procedures that carefully manage ORV
 10 use/access in the Seashore to protect and preserve natural and cultural resources and natural processes, to
 11 provide a variety of visitor use experiences while minimizing conflicts among various users, and to
 12 promote the safety of all visitors.” Unrestricted ORV use would not provide for a variety of appropriate
 13 uses and, therefore, not meet the plan/EIS need. Also, the need of the plan/EIS, including providing
 14 consistent management of ORV use, would not be addressed. Unrestricted ORV use would not meet
 15 many of the plan/EIS objectives that relate to managing ORV use. For example, the following three
 16 Visitor Use and Experience objectives would not be met if unrestricted ORV use was allowed:

- 17 • Ensure that ORV operators are informed about the rules and regulations regarding ORV use at the
 18 Seashore.
- 19 • Manage ORV use to allow for a variety of visitor use experiences.
- 20 • Minimize conflicts between ORV use and other uses.

21 Therefore, because it would not meet the purpose, need, and objectives of this plan/EIS, unrestricted ORV
 22 use was not carried forward for further analysis.

23 **SPECIES PROTECTION**

24 **Implement an Escort Program**

25 During development of the Interim Strategy, some alternative elements were considered but not carried
 26 forward because they would be reevaluated in this plan/EIS. One of these elements was the
 27 implementation of an escort program, whereby vehicles would be escorted around resource closures by
 28 Seashore staff.

29 This program would be similar to the situation in 2005, where at Hatteras Inlet Spit, ORV traffic was
 30 permitted only in the ORV corridor once per hour in convoys escorted by bird monitors, to reduce the risk
 31 of mortality to an American oystercatcher brood and to reduce disturbance to an incubating plover nest.
 32 ORVs were permitted to park at the tip of the spit, west of the escort corridor. The spit was closed to
 33 recreation at night. Once the piping plover eggs hatched, Hatteras Inlet Spit was closed to ORV traffic
 34 until the chicks fledged.

35 This type of escort system was considered for this plan/EIS, but, as stated in the Interim Strategy, the
 36 escort system would be extremely labor intensive to initiate, and providing the staffing levels necessary to
 37 adequately implement an escort program would likely not be feasible. This was demonstrated during the
 38 2005 season when the Seashore had to transfer personnel from other NPS units to implement the escort
 39 system. Due to the intensive staffing required for this effort, it was determined that this element would not
 40 meet the plan/EIS objectives related to Seashore operations.

Alternative Elements Considered but Dismissed From Further Consideration

1 **Provide an ORV Pass-through Corridor Through All Species Closures/Buffers**

2 During public comment on the draft plan/EIS, commenters recommended providing a corridor though all
 3 species resource closures and buffers. A buffer or resource closure is an area surrounding a sensitive
 4 resource, such as bird nests or chicks, which is closed to visitor access during critical life cycle stages to
 5 reduce human disturbance and the risk of mortality due to pedestrians and ORVs. Any passages,
 6 corridors, or pass-throughs that cut directly across/through a resource closures would essentially
 7 undermine the biological function of the closure and could render it compromised, perhaps even useless
 8 to the species it is meant to protect if all buffers include ORV corridors. Therefore, the element of
 9 including an ORV corridor in all buffers was not included in the range of alternatives, but a more limited
 10 concept of a pass-through was included in alternative E.

11 **Criteria for the Designation of SMAs**

12 During public comment on the draft plan/EIS, commenters recommended additional criteria for the
 13 designation of SMAs. Such criteria included areas of high quality habitat (even if there has not been
 14 recent breeding activity), how SMAs should be established and expanded, and the use of 10 years (rather
 15 than 5 years) of nesting history to designate these areas. The concept of including high quality habitat was
 16 incorporated in the range of alternatives by the use of prenesting surveys that would result in prenesting
 17 closures of suitable habitat. Although the SMA would not be designated based on the “high quality
 18 habitat” criteria, these areas would still be offered protection through the prenesting survey and closure.
 19 This would also apply to expanding SMAs; as although the SMA itself would not expand habitat outside
 20 the SMA would be protected through prenesting closures or breeding/nesting buffers. For these reasons,
 21 these elements were not carried forward for further analysis.

22 The use of 10 years, rather than 5 years, of nesting history to designate SMAs was not considered a
 23 reasonable alternative because so much potential nesting substrate is impacted and rearranged on an
 24 annual basis, especially during fall and winter storms. Since this area is frequently changing, it is believed
 25 that it is sufficient to use breeding and nesting location data from the five previous years in conjunction
 26 with an annual pre-season habitat assessment. Given how much annual change there is in suitable nesting
 27 substrates on barrier islands, 10 years of nesting/breeding data would very likely capture many sites that
 28 do not presently have sufficient potential to support breeding populations. As a result, the use of 10 years
 29 of nesting data was not carried forward for detailed analysis.

30 **Move Hatched Chicks to Pea Island National Wildlife Refuge or Other Area**

31 Commenters suggested moving hatched bird chicks from the beach to other areas where they would be
 32 protected. This conflicts with NPS responsibilities under the ESA, MBTA, *Organic Act* (as described in
 33 the turtle hatcheries section below), and the *NPS Management Policies 2006*. Further, moving chicks is
 34 not feasible because until they fledge, chicks must remain with their parents for foraging and protection.
 35 Relocating chicks would not meet the plan/EIS objective of minimizing adverse impacts to threatened,
 36 endangered, and other protected species.

37 **Provide Captive Rearing of Piping Plovers and Turtles**

38 Commenters suggested rearing endangered species in captivity. Wildlife managers use captive
 39 breeding/rearing of threatened or endangered species in the following circumstances: (1) to provide an
 40 opportunity to restore populations where direct translocation may risk the persistence of the donor
 41 population; or (2) as a last resort in cases where most or all of the entire remaining wild population are
 42 brought to a captive breeding facility with the goal of avoiding extinction and breeding enough
 43 individuals for eventual reintroduction into the wild (e.g., California condor) (Gilpin and Soulé 1986).

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1 The Kemp's ridley sea turtle hatchery at Padre Island National Seashore is an example of a last-resort
 2 captive rearing facility used to restore a population. None of these situations apply to piping plover or
 3 nesting loggerhead, leatherback, or green sea turtles at Cape Hatteras National Seashore, so this
 4 suggestion was not included in any of the alternatives. Furthermore, the revised Loggerhead Sea Turtle
 5 Recovery Plan (NMFS and USFWS 2008) recommends the use of the least manipulative method to
 6 protect nests and the discontinuance of the use of hatcheries as a nest management technique.

7 Relocate Bird and Turtle Nests

8 Commenters suggested that the Seashore relocate bird or turtle nests to areas of the beach already closed
 9 to ORV use or relocate nests to smaller, more compact areas to facilitate management. These alternatives
 10 have been considered but are not carried forward, as discussed below.

11 **Birds.** Some species of birds, such as the burrowing owl, adapt well to nest relocation, but others do not.
 12 Birds that do not relocate well typically are those that demonstrate higher levels of nest abandonment.
 13 Nest abandonment by piping plovers and American oystercatchers is a documented source of nest failure
 14 at the Seashore. Therefore, relocating nests would likely result in increased nest abandonment and failure.
 15 In addition, moving nests into one area would not be feasible. Plovers and oystercatchers are solitary
 16 rather than colonial nesters (i.e., they nest away from others of their species). Plovers sometimes nest near
 17 tern colonies to benefit from the aggressive behavior of terns protecting their colonies; however, they
 18 typically do not nest with other plovers. Since the purpose of the strategy is species protection, and
 19 moving nests would reduce these species' ability to reproduce, moving nests was eliminated from further
 20 analysis.

21 **Turtles – Routinely Relocate Turtle Nests.** Turtles do not face the same nest-abandonment issues as
 22 those described for birds. Parental investment in the young ends with the laying and burying of eggs.
 23 However, the eggs, subsequent hatchlings, and overall species may face additional problems related to
 24 nest relocation. Studies indicate that the determination of the hatchling sex ratio depends on the
 25 temperature at which the eggs incubate. Changes in these temperatures due to moving eggs may result in
 26 changes to the sex ratio, which would have implications for the species as a whole.

27 Other hatchling characteristics can be altered by relocating nests as well. Sea turtles naturally distribute
 28 their nests both temporally (nest several times throughout the nesting season) and spatially (locate nests
 29 low or high on the beach and in different sections along the beach). This not only helps to avoid
 30 completely losing their reproductive effort in case environmental factors (such as storms, temperature,
 31 and sand conditions) or if other incubation environments factors preclude development of the
 32 hatchlings/embryos, but it also varies the incubation environment of the eggs. In addition to sex ratio, the
 33 incubation environment has also been shown to influence among other things size, early swimming
 34 behavior, and early growth in hatchlings (Foley et al. 2006). Because the characteristics of hatchlings vary
 35 with incubation environments, a scattered nesting pattern also increases the variation of hatchling
 36 characteristics. -This variation ensures that, at all times, at least some hatchlings have characteristics that
 37 are appropriate for survival. The exact characteristics that are best suited for survival vary unpredictably
 38 over space and time (Carthy et al. 2003). Relocating nests and/or concentrating them in one area of a
 39 beach (e.g., hatchery or corral areas) may very well reduce the variety of incubation environments that
 40 could influence the development of hatchling characteristics that increase survival rates (Foley et al.
 41 2006).

42 In addition, handling eggs can result in increased hatch failure. When relocating nests, there is always a
 43 risk of disrupting the membranes inside the eggs, which can kill the embryos. Typically, a blanket policy
 44 of routinely relocating all or most turtle nests is seen as part of an intensive management effort to keep the
 45 species from going extinct, whereas allowing for natural breeding and nesting is the preferred option

Alternative Elements Considered but Dismissed From Further Consideration

1 whenever available. The revised Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008)
 2 recommends the use of the least manipulative method to protect nests and states that as a general rule,
 3 nests should only be relocated if they are low enough on the beach to be washed daily by tide or if they
 4 are situated in well documented high-risk areas that routinely experience serious erosion and egg loss.
 5 Currently in North Carolina, the state permits sea turtle nest relocations for research or when there is an
 6 imminent threat and potential loss of the nest due to erosion or frequent flooding, but not to accommodate
 7 recreational uses. Nests in some states may be moved to avoid damage from beach nourishment or in
 8 highly developed urban areas (e.g., along some urban areas of Florida's Atlantic Coast). None of these
 9 special conditions apply at the Seashore. Consequently, routine relocation of all nests to allow for
 10 recreational access is not considered in this plan/EIS. However, the NPS would continue its current
 11 practice of coordinating with the State of North Carolina to consider relocating an individual nest facing
 12 inundation or other adverse factors.

13 **Turtles – Use Turtle Hatcheries.** Moving all nests or all relocated nests into one hatchery area is not
 14 fully analyzed as part of any alternative. Sea turtle nests may be moved to a guarded hatchery to provide
 15 needed protection from poaching in developing countries where participation in hatchery operations may
 16 be used as an eco-tourism opportunity. Some county or privately owned beaches in Florida or Georgia
 17 may use hatcheries for sea turtle eggs in some circumstances, such as to allow beach nourishment.
 18 However, county responsibilities for endangered or threatened species differ from federal, and
 19 particularly from NPS, responsibilities for these protected species. As a federal agency, the NPS has
 20 responsibilities under the ESA to protect the ecosystem as well as the species that depend on it. The
 21 purpose of the ESA is to “provide a means whereby the ecosystems upon which endangered species and
 22 threatened species depend may be conserved” (sec. 2(b)). Protecting the ecosystem is also necessary to
 23 meet the requirements of the *Organic Act*, which mandates the NPS to conserve Seashore wildlife (refer
 24 to the “Other Applicable Federal Laws, Policies, Regulations and Plans” section in chapter 1 of this
 25 document).

26 Loggerhead sea turtles, the predominant nester at the Seashore, as well as leatherback and green sea
 27 turtles are all currently listed pursuant to the ESA. Any actions that would likely reduce productivity and
 28 cause a decline in the species would not be consistent with the purpose of the Act. The revised
 29 Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008) recommends the discontinuance of the
 30 use of hatcheries as a nest management technique and states that relocating nests into hatcheries
 31 concentrates eggs in an area and makes them more susceptible to catastrophic events and predation from
 32 both land and marine predators. It also can increase the potential for disease, such as fungal problems, to
 33 spread to all nests and result in egg mortality. Using corrals also usually results in hatchlings being
 34 released in the same location.- This has the potential to increase predation in the ocean area surrounding
 35 the release site after the hatchlings reach the water. Therefore, use of hatcheries was not considered in this
 36 plan/EIS.

37 **Modify the Turtle Program**

38 During public comment on the draft plan/EIS, commenters recommended modifying the turtle program to
 39 include nest relocation (discussed above), the use of volunteers (discussed below), different predator
 40 management techniques, varying buffer sizes, and varying the type of data collected for sea turtles. Under
 41 alternative F, sea turtle management procedures at the Seashore are based on the latest scientific research,
 42 and are consistent with the most current U.S. Fish and Wildlife Service Recovery Plan for the Northwest
 43 Atlantic Population of the Loggerhead Sea Turtle (NMFS and USFWS 2008) and NCWRC guidelines
 44 (NCWRC 2006). -Both guidelines documents have been developed by scientific experts in the field of
 45 loggerhead sea turtle biology and conservation. Additional information on why these elements were not
 46 carried forward can be found in Appendix C: Concern/Response Report (see response to Concern ID
 47 24193, 24143 and 24233).

1 **Additions to the Shorebird Monitoring Program and Data Collection**

2 During public comment on the draft plan/EIS, commenters recommended additions to the Seashore's bird
 3 monitoring and data gathering procedures including recording the GPS location for banded birds, that
 4 scopes be used rather than binoculars, use of experimental design comparing bird populations in areas
 5 open or closed to vehicles, and discontinuing use of the SECN protocol for monitoring. A suggestion was
 6 also made that non-breeding surveys be designed to occur at multiple distinct tidal stages. For the
 7 following reasons, NPS would continue to do what it has been doing for the nonbreeding shorebird
 8 surveys. First, SECN is the NPS Southeast Regional Office Inventory and Monitoring Program data
 9 collection arm, and it is appropriate for the Seashore to follow their technical guidance on monitoring
 10 methodology. Second, data collection techniques do not include larger transects because the counts are
 11 not meant to count every single bird, but are designed to show trends over time. Trends over time can be
 12 monitored without counting every bird. Third, the current transects are timed transects, which means they
 13 cannot be interrupted to obtain band data. Finally, the recently signed MOU between the -USFWS and the
 14 NPS (<http://www.fws.gov/migratorybirds/Partnerships/NPSEO13186Signed%204.12.10.pdf>) commits
 15 NPS to working with its Inventory and Monitoring Program, of which SECN is a part, for migratory bird
 16 data collection.

17 **Implement a Volunteer Program to Assist with Species Protection**

18 During public comment on the draft plan/EIS, some commenters recommended the Seashore use
 19 volunteers to implement a range of species management measures such as monitoring nesting activity, a
 20 beach watch program, and vehicle escorts. The primary purpose of the NPS volunteers in parks program
 21 is to use volunteer help that is mutually beneficial to the NPS and the volunteer. The NPS recognizes the
 22 importance of encouraging stewardship through volunteer opportunities and will utilize volunteers when
 23 deemed appropriate and resources are available to run such a program. The NPS will work at integrating
 24 volunteers back into the less sensitive aspects of the species monitoring program. At this time, NPS
 25 believes that the best use of volunteers for species protection activities would be in a trained volunteer
 26 program for watching sea turtle nests that have reached their hatch windows to monitor hatchling
 27 emergence and success reaching the water, and to inform the public on ways to minimize negative
 28 impacts from artificial lighting, predation, and human disturbance. This program should enhance
 29 protection and encourage ownership/stewardship of resources among the public, and provide a beneficial
 30 situation for both the NPS and the volunteers. However, at this time, with the current controversy over
 31 ORV and protected species management, using volunteers to act as vehicle escorts or to monitor nesting
 32 activity (such as the morning sea turtle patrol) is not feasible as an alternative element because actions
 33 taken by trained park staff are so closely scrutinized and criticized and we would not want to ask
 34 volunteers to be responsible for implementing controversial on-site activities or decisions.

35 **~~hatchling minimize.~~ Create an Oversight Committee with External Experts and Scientists**

36 Creating an oversight committee with external experts and scientists under the Federal Advisory
 37 Committee Act (FACA) has been considered but dismissed as a reasonable alternative for further
 38 analysis. FACA restricts the establishment of such committees to situations "when they are determined to
 39 be essential" (FACA sec 2(b)(2)). The creation of the suggested oversight committee is not "essential." In
 40 its practical application, a FACA committee would be mostly redundant with the current NPS process of
 41 seeking scientific and technical consultation or advice as required or appropriate from species scientific
 42 experts in other agencies, organizations and academia. Additionally, the significant administrative costs in
 43 staff time and money incurred in establishing and maintaining a FACA committee are not warranted
 44 when the needed scientific advice can be obtained less expensively and more efficiently. Based on the
 45 recent NPS experience with the negotiated rulemaking committee, established under FACA, the
 46 suggested oversight committee would not be likely to provide the NPS with clear and consistent,

Alternative Elements Considered but Dismissed From Further Consideration

1 actionable; advice, and managing the committee would require a commitment of staff time that could not
 2 be sustained over the life of the plan.

3 **Open All Closed Areas after Breeding Season Is Over**

4 Commenters suggested that all closed areas should be reopened after the breeding season ends. Most
 5 closed areas would likely be reopened after the breeding season if the areas do not provide important
 6 migrating and wintering habitat for Seashore populations of protected species. Therefore, some areas may
 7 be reopened, but automatically opening all closed areas after the breeding season would be inconsistent
 8 with the Seashore's responsibility under various statutes, including its enabling legislation, the *Organic*
 9 *Act*, the ESA, the MBTA, and the *NPS Management Policies 2006*, section 4.4.2.3. The alternatives in the
 10 plan/EIS do consider various ways to address resource-based closures, but the alternatives do not allow
 11 for automatic opening after the breeding season is over if species are still present.

12 **Create New Habitat**

13 Commenters suggested various ways that habitat could be created to provide alternative areas for bird
 14 species at the Seashore. Some of these suggestions included letting ORVs drive on the vegetation to
 15 create habitat or physically creating habitat using dredge material in the sound or by other means. These
 16 suggestions were considered by the Seashore but are not carried forward in this plan/EIS for the following
 17 reasons:

- 18 • **Allow visitors in ORVs to enhance habitat by driving over vegetated areas.** It has long been
 19 documented that even a low level of ORV use can cause severe degradation of coastal vegetation
 20 (Leatherman and Godfrey 1979). The Seashore recognizes that ORV use at certain locations
 21 could be an effective way to manage the encroachment of vegetation into existing shorebird
 22 nesting habitat. However, use of ORVs to create new habitat implies a large-scale use of vehicles
 23 to remove vegetation, which is typically protected under various NPS regulations and under the
 24 Executive Orders on ORV use. While removal of vegetation by any means to create new habitat
 25 may be appropriate and beneficial in certain circumstances, such a project would need to be
 26 planned, implemented, and studied by scientists or resource managers with the appropriate
 27 expertise. Therefore, allowing visitors in ORVs to create habitat was not considered in this
 28 plan/EIS.
- 29 • **Create habitat through physical alteration or the creation of dredge islands.** The NPS
 30 considered creating habitat through various methods. Based on the experience of staff at the
 31 NCWRC, habitat-creation projects tend to be short-lived and labor intensive. Based on experience
 32 with hand pulling, herbicides, fires, and bulldozing, it was found that most of these techniques are
 33 effective for only one season before the vegetation returns. Covering areas with new dredge
 34 material has been shown to last longer, with vegetation returning after four to seven years
 35 (Cameron pers. comm. 2007). Although the NPS recognizes that creation of habitat may be viable
 36 under certain circumstances, it is not an appropriate substitute for providing adequate protection
 37 of existing habitat. If this method is employed, it would occur outside the scope of the plan/EIS
 38 and therefore was not included in the alternatives.

39 **Fence Chicks Away from the ORV Corridor**

40 Commenters suggested using barrier fencing, rather than symbolic fencing, to keep chicks away from the
 41 ORV corridors. Unfledged piping plover and American oystercatcher chicks need access to the intertidal
 42 zone and moist substrate habitat for foraging and chicks of all beach nesting bird species may utilize those

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1 same areas for thermal regulation. Fencing chicks away from these areas would essentially reduce their
2 chances of survival; therefore, this was not considered a reasonable alternative.

3 **Do Not Provide Protection to the Seabeach Amaranth**

4 Commenters suggested that seabeach amaranth is a “farmed” plant and should not be offered special
5 protection. However, the seabeach amaranth is protected as a federally listed threatened plant species.
6 Under the ESA, federal agencies are required to use their authority in furtherance of the purposes of the
7 ESA by carrying out programs for the conservation of endangered and threatened species and to ensure
8 that any agency action authorized, funded, or carried out by the agency is not likely to jeopardize the
9 continued existence of any endangered species or threatened species or result in the destruction or adverse
10 modification of designated critical habitat. Further, *NPS Management Policies 2006* state that “the
11 Service will survey for, protect, and strive to recover all species native to national park system units that
12 are listed under the *Endangered Species Act*” (NPS 2006c). The management policies also state that the
13 NPS will “successfully maintain native plants and animals by preserving and restoring the natural
14 abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal
15 populations and the communities and ecosystems in which they occur; restoring native plant and animal
16 populations in parks when they have been extirpated by past human-caused actions; and minimizing
17 human impacts on native plants, animals, populations, communities, and ecosystems, and the processes
18 that sustain them.” Not providing protection to a federally listed threatened species would be out of
19 compliance with the ESA and contrary to the *NPS Management Policies 2006*, and was therefore not
20 included in the alternatives of this plan/EIS.

21 **Give Special Consideration Only to Flora and Fauna Listed as Threatened and** 22 **Endangered**

23 Commenters suggested that only those species listed as threatened or endangered under the federal ESA
24 should be considered in this plan/EIS. As stated above, the NPS has legal responsibilities under the ESA
25 and its own policies to protect threatened and endangered species. Further, a number of laws,
26 regulations, and policies, in addition to the ESA, guide species management at the Seashore, including the
27 *Organic Act*, the MBTA, NPS regulations and policies, Executive Orders 11644 and 11989: Use of Off-
28 Road Vehicles on the Public Lands (see chapter 1), Executive Order 13186: Responsibilities of Federal
29 Agencies to Protect Migratory Birds, and others (see chapter 1). Executive Order 11644 provides that
30 areas designated for ORV use shall be located to minimize harassment of wildlife or significant disruption
31 of wildlife habitats. *NPS Management Policies 2006* section 4.4.2.3 states, in part, that the NPS will
32 inventory, monitor, and manage state- and locally listed species in a manner similar to its treatment of
33 federally listed species to the greatest extent possible. In addition, the NPS will inventory other native
34 species that are of special management concern to parks (such as rare, declining, sensitive, or unique
35 species and their habitats) and will manage them to maintain their natural distribution and abundance. The
36 combination of laws, regulations, and policies included in this section of the plan/EIS create the
37 framework in which the alternatives are developed, which includes the need to manage species that are
38 considered to be of special concern, such as state-listed species, or those addressed by the MBTA.
39 Because of these responsibilities, only considering flora and fauna listed as federally threatened or
40 endangered was not included in the plan/EIS alternatives.

41 **OTHER ISSUES**

42 **Rebuild the Dunes**

43 One commenter suggested the NPS rebuild the dunes in front of NC-12. While the NPS had engaged in
44 [addressing](#) dune rebuilding [activities](#) in the past, such as to protect NPS structures on Bodie Island, this

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1 activity is beyond the scope of this plan/EIS and could be addressed later in the general management plan
2 process that the Seashore will undertake in the future.

3 **Prohibit Gill Net Fishing**

4 Some commenters asked that the Seashore prohibit gill net fishing. Fishing activities, both commercial
5 and recreational, require a Standard Commercial Fishing License or a Recreational Commercial Gear
6 License from the state of North Carolina. The license and related state fishing regulations specify the type
7 of nets that commercial fishermen are allowed to use, which includes the use of gill nets that conform to
8 requirements for mesh size, yardage, and marking (NCDMF 2009). The type of gear used by commercial
9 fisherman is outside the scope of this plan; therefore, it was not included as an element of the plan/EIS.

10 **Provide an Area for Off-Leash Dogs**

11 Commenters suggested that dogs be allowed off leash at the Seashore, either seasonally, in certain areas
12 of the Seashore under voice control, or through the creation of a dog-training area. Currently, pets at the
13 Seashore are regulated under 36 CFR 2.15, which applies to all units of the national park system and
14 prohibits pet owners from “failing to crate, cage, restrain on a leash which shall not exceed 6 feet in
15 length, or otherwise physically confine a pet at all times.” Creation of off-leash areas would not be
16 consistent with 36 CFR 2.135 and would require its own planning process and promulgation of a special
17 regulation allowing off-leash dog use, which is outside the scope of the plan/EIS.

18 ~~promulgation of a special regulation allowing off-leash dog use, which is outside the scope of the~~
19 ~~plan/EIS. Therefore, this element was not carried forward in any alternative.~~

20 **CONSISTENCY WITH THE PURPOSES OF NEPA**

21 The NPS requirements for implementing NEPA include an analysis of how each alternative meets or
22 achieves the purposes of NEPA, as stated in sections 101(b) and 102(1). Each alternative analyzed in an
23 EIS-NEPA document must be assessed as to how it meets the following purposes:

- 24 1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding
25 generations.
- 26 2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing
27 surroundings.
- 28 3. Attain the widest range of beneficial uses of the environment without degradation, risk of health
29 or safety, or other undesirable and unintended consequences.
- 30 4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain,
31 wherever possible, an environment that supports diversity and variety of individual choice.
- 32 5. Achieve a balance between population and resource use that will permit high standards of living
33 and a wide sharing of life’s amenities.
- 34 6. Enhance the quality of renewable resources and approach the maximum attainable recycling of
35 depletable resources.

36 CEQ Regulation 1500.2 establishes policy for federal agencies’ implementation of NEPA. Federal
37 agencies shall, to the fullest extent possible, interpret and administer the policies, regulations, and public

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1 laws of the United States in accordance with the policies set forth in NEPA (sections 101(b) and 102(1));
2 therefore, other acts and NPS policies are referenced as applicable in the following discussion.

- 3 1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding
4 generations.

5 As noted in the analysis, alternatives B, C, D, E, and F provide increased protection for sensitive
6 species at the Seashore, through increased resource protection buffers and limitations on
7 recreational access. Limitations on access would not only benefit threatened, endangered, and
8 special status species, but would also provide protection to other physical resources at the
9 Seashore such as wetlands, vegetation, and other wildlife.

10 Alternative D would provide year-round SMAs that would limit recreational access in these
11 areas, particularly during the breeding season, and would offer the greatest level of species
12 protection among the action alternatives. Through these access limitations, as well as other
13 provisions such as seasonal night-driving restrictions and the implementation of a permit system
14 that would provide user education and increase awareness alternative D would fully meet the
15 purpose of fulfilling the responsibilities of each generation as trustee of the environment for
16 succeeding generations, by providing the greatest potential for the survival of sensitive species in
17 the long term, while at the same time protecting other physical resources of the Seashore.
18 Alternatives C, E, and F would meet this purpose to a large degree but not fully because of
19 greater potential for impacts to sensitive species from human disturbance as [some-shorebird](#)
20 [breeding habitat SMAs in some locations](#) would include pedestrian or ORV access corridors,
21 thereby increasing recreational access to these sensitive areas. Alternatives E and F would not
22 offer the same level of seasonal night-driving restrictions, with less hours closed each night,
23 providing a somewhat lesser level of protection than alternatives C and D. Further, providing
24 opportunities for access either through park-and-stay or SCV camping under alternative E would
25 also increase recreational access, introducing potential disturbance to protected species, as well
26 as other physical resources at the Seashore.

27 Alternative B would only meet this purpose to a moderate degree, as seasonal night-driving
28 restrictions would offer the species additional protection, but without the SMAs, the proactive
29 restriction of recreation would not be in place and could result in long-term threats to sensitive
30 species from recreational use. Alternative A would only meet this purpose to some degree as
31 there would be no seasonal night-driving restrictions and buffers would require frequent
32 adjustments to provide adequate protection, thereby not providing optimal protection for the
33 species.

- 34
35 2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing
36 surroundings.

37 All alternatives meet this purpose to some degree because the Seashore is a safe visitor
38 destination that is both esthetically and culturally pleasing. The action alternatives (alternatives
39 C, D, E, and F) increase safety by establishing a 15 mph speed limit within the entire Seashore.
40 For pedestrian user groups, the establishment of vehicle-free areas, particularly under alternative
41 D, may provide the greatest safety and esthetic benefits as pedestrian and vehicular uses would
42 be separated. However, alternative D does not establish any safety closures although most areas
43 historically closed for safety reasons would be closed under alternative D. Alternative F would
44 provide additional safety benefits by establishing right-of-way requirements and additional speed
45 limit reductions when pedestrians are present. Also under the action alternatives, the [designation](#)
46 [of establishment of ORV routes](#) and [vehicle-free non-ORV](#) areas would reduce the potential for,

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1 as well as the perception of, visitor conflict issues. Although actual visitor conflicts ~~issues may or~~
 2 may not ~~always happen~~ exist when ~~with~~ these two uses occur in the same area, providing vehicle-
 3 freedom ORV areas would eliminate the potential for conflicts in those areas and address the
 4 feeling of those who perceive there could be a conflict or other safety issue.

5 Of all the alternatives, alternative A would meet this purpose to the least degree, as it would not
 6 separate vehicular and pedestrian uses to the degree that the action alternatives would, and off-
 7 season speed limits would remain at 25 mph. Likewise, alternative B lowers speed limits, but still
 8 does not provide separation of uses and would not address any perceived safety or conflict issues
 9 associated with having ORV and non-ORV use in the same area. Although alternatives C, D, and
 10 E would meet this purpose to a large degree, alternative F would fully meet this purpose by
 11 establishing a reduced speed limit, providing some level of pedestrian and vehicular separation,
 12 and establishing right of way requirements not present in the other alternatives.

- 13 3. Attain the widest range of beneficial uses of the environment without degradation, risk of health
 14 or safety, or other undesirable and unintended consequences.

15 All alternatives offer a wide range of visitor use opportunities, including vehicular use,
 16 recreational fishing, swimming, walking, sunbathing, other general beach recreation, and
 17 commercial fishing. However, the intensity of recreational use allowed under a particular
 18 alternative could lead to resource degradation or risks to health and safety. Alternative A allows
 19 the most intense levels of ORV and pedestrian use that could potentially lead to environmental
 20 degradation and safety concerns and only meets this purpose to some degree. Alternative B
 21 provides additional protection of natural resources through the establishment of larger buffers
 22 and restrictions on night driving for sea turtle protection. However, this alternative does not
 23 directly address the level of recreational use and any safety or environmental concerns that may
 24 be associated with increasing visitor use patterns. Under alternative B, which bases closures on
 25 species behavior, there is the potential for large areas of the Seashore to be closed and these areas
 26 would vary from season to season based on protected species breeding behavior. Therefore,
 27 alternative B meets this purpose to a moderate degree due to added protection for sensitive
 28 species, but does not meet it to a larger degree because the provision of other uses of the
 29 Seashore would be unpredictable. ~~A. The action alternatives C, D, and E include the~~
 30 ~~establishment of SMAs, while alternative F relies on prenesting closures and standard buffers~~
 31 ~~when breeding activity is observed, to reduce the disturbance of habitat for sensitive species~~
 32 ~~habitat. These measures, combined with~~ increased resource protection buffers, reduced speed
 33 limits, some measure of separation of vehicular and pedestrian uses, and methods for establishing
 34 a carrying capacity ~~so as to~~ reduce the environmental and safety concerns associated with large
 35 numbers of vehicles and pedestrians in one area. Therefore, all action alternatives would meet the
 36 intent of this purpose to a moderate or large degree. However, alternative D would reduce the
 37 potential for environmental impacts and visitor conflicts by prohibiting vehicles in all SMAs
 38 year-round. Therefore, alternative D would fully meet this purpose.

- 39 4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain,
 40 wherever possible, an environment that supports diversity and variety of individual choice.

41 Because none of the alternatives would result in impacts to cultural or historic resources that
 42 would exceed minor, these topics were dismissed from further analysis in this plan/EIS. Overall,
 43 since any impacts to cultural or historic resources would not exceed minor, all alternatives would
 44 preserve important historic and cultural aspects of our national heritage in the long term and
 45 would meet this purpose to a large degree, with alternatives that restrict recreational access
 46 seasonally and at night (alternatives B, C, D, E, and F), meeting it for natural resources to a

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1 larger degree than alternative A. As discussed under criteria 1 and 2, due to use restrictions,
 2 alternatives C, D, E, and F would better protect resources, which would in turn support diversity,
 3 and due to the separation of visitor uses and addition of visitor amenities, would better support a
 4 variety of individual choices than alternatives A and B.

- 5 5. Achieve a balance between population and resource use that will permit high standards of living
 6 and a wide sharing of life's amenities.

7 Balancing population and resource use under the plan/EIS would include protecting the resources
 8 unimpaired for the enjoyment of present and future generations and providing access for visitors
 9 to experience the natural resources of the Seashore. NPS *Management Policies 2006* states that
 10 the enjoyment that is contemplated by the *Organic Act* is broad; it is the enjoyment of all the
 11 people of the United States and includes enjoyment both by people who visit parks and by those
 12 who appreciate them from afar. It also includes deriving benefit (including scientific knowledge)
 13 and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress,
 14 recognizing that the enjoyment by future generations of the national parks can be ensured only if
 15 the superb quality of park resources and values is left unimpaired, has provided that when there is
 16 a conflict between conserving resources and values and providing for enjoyment of them,
 17 conservation is to be predominant. As discussed above, alternatives C, D, E, and F would provide
 18 [species management strategies that include pre-nesting areas, standardized buffers when breeding](#)
 19 [activities are observed, SMAs, and](#) seasonal night-driving restrictions, as well as implementation
 20 of a permit system, all of which are expected to benefit the natural resources at the Seashore and
 21 would provide an amenity ([resources](#)) for visitors to experience that would permit a high
 22 standard of living. All of the alternatives evaluated would allow some level of access to the
 23 Seashore that would contribute to the sharing of these amenities. As visitation to the Seashore
 24 increases and the population of the area continues to increase, having areas with designated
 25 resource closures under the action alternatives would contribute to the protection of the
 26 Seashore's natural resources.

27 Given this, alternatives A and B would meet this purpose to some degree because they would
 28 provide the public access to share these amenities, but would not offer a high level of protection
 29 to natural resources. Without a higher level of protection, these amenities may not be available
 30 for the enjoyment of future generations.

31 Alternatives ~~C and E, and F~~ would provide access to the Seashore and the amenities therein,
 32 and offer protection of these amenities by establishing SMAs [and by implementing seasonal](#)
 33 [night-driving restrictions. In alternatives C and E, some of the SMAs would be under ML2](#)
 34 [management measures, which would provide a higher level of access and use to those areas](#)
 35 [\(including ORV and pedestrian corridors\). Alternative F would provide access to the Seashore](#)
 36 [and the amenities therein, and would protect sensitive wildlife habitat through the designation of](#)
 37 [year-round ORV routes and vehicle-free areas, the use of prenesting closures in some locations,](#)
 38 [and standard buffers \(equivalent to ML2\) in all locations, and by implementing seasonal night-](#)
 39 [driving restrictions. Under alternatives C, E, or F, a](#) However, in these alternatives, some of the
 40 ~~SMAs would be under ML2 management measures, which would provide a higher level of~~
 41 ~~access and use to those areas (including ORV and pedestrian corridors). A~~ allowing this level of
 42 use, particularly as the population grows, may not fully protect the natural resources at the
 43 Seashore. As access to certain areas of the Seashore may adversely impact some of the
 44 Seashore's natural resources, especially in light of population growth, ~~these~~ alternatives [C, E, and](#)
 45 [F](#) would only meet this purpose to a moderate degree.

Environmentally Preferable Alternative

1 Alternative D would meet this purpose to a large degree by establishing SMAs that are closed to
 2 ORV use and pets year-round, and pedestrians during the breeding season. Establishing these
 3 areas, year after year, would ensure a level of protection that would allow the natural resources to
 4 remain amenities that contribute to a high standard of living, while providing a level of access to
 5 the Seashore beaches that would ensure that the visiting public would be able to share these
 6 amenities.

- 7 6. Enhance the quality of renewable resources and approach the maximum attainable recycling of
 8 depletable resources.

9 For reasons discussed above, in varying degrees the action alternatives (alternatives C, D, E, and
 10 F) would enhance the quality of the Seashore's biological and physical resources. Alternative B
 11 also provides a greater level of protection for these resources than alternative A. The second
 12 purpose, "approach the maximum attainable recycling of depletable resources," is less relevant to
 13 an ORV management plan, as it is geared toward a discussion of "green" building or
 14 management practices. There would be no construction related to the no-action alternatives, so
 15 this purpose would not apply. The action alternatives would involve the construction of new
 16 ramps and parking areas using environmentally appropriate design standards to minimize
 17 stormwater runoff. Ramps would be constructed of a semi-permeable natural clay/shell base.

18 However, as discussed in chapter 1 of this document, each of the alternatives would require that
 19 the Seashore continue to operate under the wise energy use guidelines and requirements stated in
 20 the NPS *Management Policies 2006*; Executive Order 13123, Greening the Government Through
 21 Effective Energy Management; Executive Order 13031, Federal Alternative Fueled Vehicle
 22 Leadership; Executive Order 13149, Greening the Government Through Federal Fleet and
 23 Transportation Efficiency; and the 1993 NPS Guiding Principles of Sustainable Design and
 24 therefore would fully meet this purpose.

25 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

26 The NPS is required to identify the environmentally preferable alternative in its NEPA documents for
 27 public review and comment. The NPS, in accordance with the U.S. Department of the Interior policies
 28 contained in the Department Manual (515 DM 4.10) and CEQ's Forty Questions, defines the
 29 environmentally preferable alternative (or alternatives) as the alternative that best promotes the national
 30 environmental policy expressed in NEPA (section 101(b)) (516 DM 4.10). The CEQ's Forty Questions
 31 (Q6a) further clarifies the identification of the environmentally preferable alternative stating, "this means
 32 the alternative that causes the least damage to the biological and physical environment; it also means the
 33 alternative which best protects, preserves, and enhances historic, cultural, and natural resources."

34 Alternative D was identified as the environmentally preferable alternative because it bests protects the
 35 biological and physical environment by

- 36 • Providing SMAs in known breeding/nesting areas throughout the Seashore, all under ML1
 37 management. Specifically, these SMAs would provide the following:
 - 38 – A proactive way to protect large areas of the Seashore where protected species are known to
 39 breed and nest by prohibiting ORV use and pets in these areas year-round and only allowing
 40 pedestrian access outside of the breeding season.
 - 41 – The greatest level of spatial and temporal protection through the establishment of SMAs that
 42 are all managed under ML1 procedures year-round.

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- 1 – A benefit to wintering bird populations at the Seashore that would also utilize the large
2 vehicle-free areas provided under the SMAs for alternative D.
- 3 – Buffers around those species found breeding/nesting outside the SMAs, further offering
4 protection to protected species and species of concern at the Seashore.
- 5 – Large, year-round ORV-free areas that would benefit other protected species, including sea
6 turtles and seabeach amaranth.
- 7 – A level of predictability to ORV users at the Seashore that would be expected to decrease the
8 level of non-compliance with species management measures.
- 9 • Including seasonal night-driving restrictions in areas where ORVs are permitted that would
10 restrict nighttime use from 7:00 p.m. to 7:00 a.m. from May 1 to November 15. The seasonal
11 duration of the closures, as well as the length of the nightly closure, would offer protection to sea
12 turtles nesting and hatching during that time, and allow Seashore staff the time to record and
13 document nests each morning, decreasing the possibility of undiscovered nests.
- 14 • Minimizing the extent and location of interdunal roads, ramps, or parking lots that would be
15 added, further minimizing disturbance under this alternative, when compared to alternatives C, E,
16 and F.
- 17 • Implementing a permit system to provide ORV users with education that is expected to decrease
18 the level of non-compliance related to resource closure areas.

19 Overall, establishing SMAs that are closed year-round to ORVs and pets, and closed to pedestrians during
20 the breeding season, along with seasonal night-driving restrictions beginning at 7:00 p.m., the least
21 amount of construction of all the alternatives, and required buffers for all protected species found outside
22 the SMAs, would best protect, preserve, and enhance the Seashore's resources.

23 **NATIONAL PARK SERVICE PREFERRED ALTERNATIVE**

24 To identify the preferred alternative, the planning team evaluated each alternative based on its ability to
25 meet the plan objectives (see table 12) and the potential impacts on the environment (see chapter 4 of this
26 document). Alternative F was identified as the NPS preferred alternative. [Based on public and agency
27 comments received on the draft plan/EIS, the NPS has revised the preferred alternative as described in
28 this document \(the final plan/EIS\).](#)

29 Both alternatives D and F would ~~fully~~ meet ~~most of~~ the plan objectives ~~either fully or~~ to a large degree
30 ~~and are very close in their degree of meeting of all objectives and their relative impacts~~. In terms of
31 species protection, both alternatives would provide the necessary buffers, as well as the proactive
32 establishment of ~~prenesting areas and protection of breeding and nonbreeding shorebird habitat~~ SMAs, ~~for~~
33 ~~the management of threatened and endangered species~~. Seasonal night-driving restrictions would be
34 similar under both of these alternatives, offering comparable protection to sea turtles and foraging bird
35 species. However, alternative F was chosen as the preferred alternative because it would provide ~~not only~~
36 ~~effective resource protection but also would provide the~~ Seashore ~~visitors~~ with more ~~diverse options for~~
37 ~~access and recreational use~~ flexibility in management. ~~Providing approximately 26 miles of the Seashore~~
38 ~~that are designated VFAs year-round, while 28 miles are open to ORV use year-round (subject to~~
39 ~~resources closures), would provide for a greater diversity of visitor use~~. Although designation of all
40 SMAs as year-round ORV closures under alternative D would provide the necessary resource protection,
41 ~~the use of ML1 buffers in all SMAs would preclude all visitor access in these areas during the breeding~~
42 ~~season. If protected species do not utilize portions of the SMAs or if the~~ conditions of the Seashore
43 change and habitat changes, alternative D does not provide as much flexibility ~~for the Seashore to manage~~
44 ~~visitor access~~ as alternative F, ~~which provides for designated ORV routes that would remain open unless~~

National Park Service Preferred Alternative

1 ~~protected species activity results in a resource closure, for the NPS to respond to these conditions.~~
 2 Further, alternative F would provide additional and flexible protection to nonbreeding species through
 3 “floating” species closures each year, providing more protection for the species during this life stage than
 4 alternative D. In addition to flexibility in providing species protection, both during the breeding and
 5 nonbreeding seasons, alternative F would also provide more flexibility and range of experience for visitor
 6 use and would enhance access to both VFAs and designated ORV routes by including establishing
 7 strategically located new parking areas, pedestrian trails, interdunal routes, and ORV ramps as well as
 8 providing both ORV and non-ORV use in SMAs. Because alternative F provides for a greater variety of
 9 uses throughout the Seashore, it would have less of an impact on the socioeconomics of the area as well.
 10 As detailed in the impact analysis in chapter 4, alternative D would have greater impacts to the economy
 11 of the villages within the Seashore. In addition, alternative F also would mitigate the potential economic
 12 and visitor impacts by encouraging alternative forms of access (water taxi and beach shuttle) to certain
 13 popular areas during times when they may be open for pedestrian use, but the area of beach containing an
 14 ORV or pedestrian access ramp across the dune line access to the area may be closed due to a resource
 15 closure. By providing an alternate means for accessing these areas, beneficial economic impacts would be
 16 expected. Alternative F ~~was~~ is also selected as the NPS preferred alternative because it ~~would~~
 17 incorporate some concepts and measures that originated in or were discussed during ~~input from~~ the
 18 negotiated rulemaking process, providing more public input. For these reasons, alternative F was selected
 19 as the preferred alternative.

20 Alternatives C and E would meet the objectives from a moderate to a large degree, but to a lesser degree
 21 when compared to alternative D because of the larger areas of recreational access allowed. By allowing
 22 more access to various areas of the Seashore during the breeding season of threatened, endangered, and
 23 species of special concern, the level of protection offered to these species would be less than
 24 alternative D.

25 Alternatives A and B, on the whole, would meet the objectives from some degree to a moderate degree.
 26 These alternatives would not meet key objectives (such as those related to providing protection for
 27 threatened and endangered species and minimizing impacts to other natural resources at the Seashore) as
 28 well as the action alternatives. Because these alternatives would not meet the objectives to a large degree,
 29 they were not selected as the preferred alternative. NPS has will considered comments on this draft
 30 plan/EIS and may modified or adjusted the preferred alternative accordingly. These Any modifications
 31 or adjustments are will be disclosed in the published final EIS. A Record of Decision will follow the final
 32 EIS and will be made available to the public.

33