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 FEIS. A copy of the original DEIS showing all additions, deletions, and other changes that have been made in the preparation of this FEIS, including changes to the alternatives, is available electronically at http://~~www.~~parkplanning.gov/caha.

~~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 FEIS.~~

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.

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.

- **Alternative E: Variable Access and Maximum Management**. Alternative E would provide use areas for all types of visitors to the Seashore with a wide variety of access for both ORV and pedestrian users, but often with controls or restrictions in place to limit impacts on sensitive resources. Interdunal road and ramp access would be improved, and more pedestrian access would be provided through substantial additions to parking capacity at various key locations that lend themselves to walking on the beach.

- **Alternative F: The NPS Preferred Alternative~~Management Based on Advisory Committee Input~~**. The NPS considered a variety of concepts and measures that either originated during the negotiated rulemaking process from members of the negotiated rulemaking advisory committee (Committee) or were discussed during Committee, subcommittee, or work group sessions. Although the Committee as a whole did not reach a consensus on a recommended alternative, in creating this action alternative the NPS ~~has~~ made ~~a~~ management judgments as to which combination of concepts and measures would make an effective overall ORV management strategy. This~~used the Committee's input to create this action~~ alternative ~~, which~~ is designed to provide visitors to the Seashore with a wide variety of access opportunities for both ORV and pedestrian users. Alternative F would provide a reasonably balanced approach to designating ORV routes and vehicle-free areas and providing for the protection of park resources.~~open some areas to ORV use earlier and for a longer time than the other action alternatives.~~ To support access to both vehicle-free areas and designated ORV routes, ~~This~~ alternative F would involve the construction of new parking areas, ~~a~~ pedestrian access trails, ORV ramps, and improvements and additions to the interdunal road system. Based on public and agency comments on the draft plan/EIS, this alternative has been modified to incorporate elements from the other alternatives evaluated.

Comment [dw1]: Need to make clear that the balance between ORV routes and VFAs and NOT between recreation and resources.

Comment [mbm2]: Is this last sentence true and do we need to say it this way? Does it invite question s about which elements from which other alternatives were incorporated? Not sure I could answer such a question easily, if asked. It seems more true to say it was modified in response to comments.

ELEMENTS COMMON TO ALL ALTERNATIVES

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

Vehicle/Operator Requirements

- **Vehicle Requirements**. All vehicles operating in any area of the Seashore must comply with the following:
  - Meet all requirements to operate legally on state highways where the vehicle is registered, including any required vehicle equipment.
  - Have a valid vehicle registration, insurance, and license plate.

- **Operator Requirements**. Any person operating a vehicle in any area of the Seashore must comply with the following:
  - Observe any law applicable to vehicle use on a paved road in the state of North Carolina.
  - Hold a current driver's license (Superintendent's Compendium, Section 4.2(a)).
  - Use a seatbelt.

- **Operator and Passenger Requirements**. Any vehicle operator and/or passenger in a vehicle operating in any area of the Seashore must comply with the following:

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

- **Right-of-Way Requirements**. R~~Vehicle r~~ight-of-way between vehicles is not defined by the Seashore, and the standard driving rules must be followed.

Ramp Configuration

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

Boat Access

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

National Park Service Regulations

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

Enforcement

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

Areas of Vehicle Operation

During the shorebird and turtle breeding seasons, standard resource protection buffers would apply, which could restrict ORV access to certain areas of the Seashore. Refer to page xxx of this document for a description of access closures that occurred during the 2007-2009 seasons.

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

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

Comment [dw3]: Insert page number where this info is located.

Berger: to be done for next draft as page numbers will change when this is all compiled.

Commercial Fishing / Permitted Uses

- Commercial fishing permit holders with ORVs would be allowed to enter administrative and safety closures, but not resource closures or lifeguarded beaches. Two designated commercial fishing access points exist on the soundside of Ocracoke Island, where only vehicular access for commercial fishing is allowed.
- Kite flying, kiteboards, and ball and Frisbee tossing are prohibited within or above all bird closures.
- Commercial Use Authorization (CUA) permit holders would not need to obtain an ORV permit in addition to the CUA permit~~.~~. Customers of CUA permit holders who are operating an ORV while with the CUA holder would need to obtain an ~~the necessary permits for~~ ORV permit~~use~~.

Protected Species Management

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

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

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

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

Infrastructure

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

Comment [mbm4]: Are these relevant to the ORV plan? I'm not sure how to resolve the next comment, so I am wonder why piers and campgrounds are relevant to ORV use? (I maybe could see campgrounds being relevant since there is some discussion about "camping" in the plan, but don't see why the piers are included here since the plan has nothing to do with the piers.

Comment [mbm5]: Frisco Pier was further damaged by Hurricane Earl. It remains to be seen if and when it might ever reopen, so the footnote needs to be modified somehow to reflect that uncertainty, or this bullet needs to be DELETED if not relevant.

public. [1]~~The Frisco pier was closed for public safety reasons, due to deteriorating conditions. However, it is the intent of NPS that the pier will be reopened for public use and NPS is working with the owner/operator to develop a viable solution for renovating the pier so it can be reopened.~~

Education and Outreach

Under all alternatives, the Seashore would continue to

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

NO-ACTION ALTERNATIVES

The no-action alternative is developed for two reasons. First, a no-action alternative may represent the agency's past and current actions or inaction on an issue continued into the future, which may represent a viable alternative for meeting the agency's purpose and need. Second, a no-action alternative may serve to set a baseline of existing impacts continued into the future against which to compare the impacts of

[1] The Frisco pier was closed for public safety reasons, due to deteriorating conditions. However, ~~it is the intent of NPS that the pier will be reopened for public use and~~ NPS intends to reopen the pier and is working with the owner/operator to develop a viable solution for renovating the pier so it can be reopened.

action alternatives. For most agency decisions, one no-action alternative can serve both of these purposes. Here, however, the situation is more complex.

As stated in chapter 1, "in order to provide continued visitor access through the use of ORVs, NPS must promulgate a special regulation authorizing ORV use at the Seashore," and the purpose of this plan is to develop such a regulation. Without a special regulation, continued ORV use would conflict with NPS regulations (36 CFR 4.10). The consent decree recognizes this and sets a deadline of April 1, 2011, for the promulgation of a final special regulation. As the district court has recognized in another case, absent an ORV plan and regulation, as a legal matter ORV use is "prohibited." The NPS acknowledges that if it does not promulgate a special regulation to authorize ORV use, then ORV use would, in fact, be prohibited at the Seashore. ~~If NPS does not promulgate a regulation, continuing its past inaction, this legal prohibition would remain, and the result could be that the district court would expressly ban ORV driving on the Seashore.~~

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

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

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

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

Comment [mbm6]: We should use same wording that is used later in the "Alternative Elements Considered but Dismissed" section, rather than say the Court would shut us down if we don't prepare a regulation. The issue is that ORV use would not be legally authorized without the reg.

Comment [mbm7]: Are the Solicitors still comfortable with this explanation, given SELC's DEIS comments about the lack of a "true no action alternative" since there is not a "no ORV alternative"? Do we need to revise or add any wording to strengthen our explanation?

~~Similarly, the regulations being enforced in 2004, adopted from the 1978 draft plan, would not serve the function of a no-action alternative because it would not meet the agency's purpose and need to regulate ORVs in a manner that is consistent with applicable law, and appropriately addresses resource protection (including protected, threatened, and endangered species), potential conflicts among the various Seashore users, and visitor safety. It would also not bring the Seashore into compliance with the criteria of Executive Orders 11644 and 11989 for designation of ORV routes or meet the second purpose of a "no-action" alternative to serve to set a baseline of existing impacts continued into the future against which to compare the impacts of action alternatives.~~

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

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 selected alternative identified in the July 2007 FONSI for the 2006 Interim Strategy and the 2007 Superintendent's Compendium, as well as elements from the 1978 draft interim ORV management plan that were incorporated in Superintendent's Order 7, as amended in 2006. These actions would include providing ORV access throughout the Seashore, except in areas of temporary resource, safety, or administrative closures. Under alternative A, the entire Seashore would be designated as a route or area and would be open 24 hours a day year-round, but subject to temporary resource closures, seasonal ORV closures in front of the villages, and temporary ORV safety closures. Vehicles would be allowed on the beach overnight only if someone associated with the vehicle is actively fishing. The ORV corridor would be marked by posts placed approximately 150 feet landward from the average, normal high tide line, or if less than 150 feet of space is available, at the vegetation or the toe of the remnant dune line, except during breeding season in protected species areas. Existing ORV safety closures would be maintained and new closures established as needed to address safety conditions such as debris on the beach or narrow beaches. Narrow beaches would be reopened as the beach widens. The beach in front of Cape Hatteras Lighthouse and Buxton Woods Road would remain closed to ORV access for administrative purposes. Suitable interior habitats for piping plovers at spits and at Cape Point would be closed year-round to all recreational users to provide for resting and foraging for all species.

This no-action alternative would not require vehicles to have permits and would not involve any carrying-capacity restrictions. The speed limit would be 25 mph (unless otherwise posted) on Seashore beaches for public and private vehicles, although the speed limit in front of villages from September 16 to May 14 would be 10 mph. There would be no increase in parking facilities associated with this alternative. Under this no-action alternative, the entire Seashore would, for purposes of the rulemaking process, be a designated route or area, subject to temporary closures. Alternative A is analyzed as a baseline for comparison with the other alternatives in the plan/EIS following the requirements in 40 CFR 1502.14(d). Details of the management actions under this alternative are described in tables 8 and 9.

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

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

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

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

ACTION ALTERNATIVES

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

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

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

Ramp Configuration

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

Off Road Vehicle Access and Routes

The following would apply:

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

Seashore Management and Operations

- Based on experience with implementing ORV management since 2007, staffing at the Seashore would need to increase under any alternative to address basic functions of implementing an ~~d~~ ORV management program. These positions could likely include a coordinator for the ORV management program (management-level position), science and adaptive management coordinator, resource education ranger, and a public affairs assistant.

Comment [dw8]: SH: describe function, not position

Education and Outreach

The Seashore would

- Improve signage related to beach closures and Seashore resources so that it is more readily available and presented in a clear manner to the public.
- Work with local organizations and businesses, including real estate rental agencies and hotels/motels, to ensure wider distribution of ORV and resource protection educational information. This would include encouraging these businesses to provide information about removal of beach equipment from the beaches at night.
- Provide information about and encourage the use of turtle friendly lighting.
- Encourage the Visitors Bureau and local tackle shops to link their websites to the Seashore's website to ensure that different segments of the visiting public have up-to-date information on beach closures and, if an ORV permitting system is developed, ORV permitting information.
- Develop a user-friendly ORV educational program (e.g., video or~~,~~ DVD~~, or online~~) that could be ~~self-~~administered as part of the ORV permitting process.~~at a variety of outlets such as tackle shops, welcome centers, and NPS offices.~~
- Implement more educational programs in local schools and expand the Junior Ranger program to include more web-based options to interest youth in Seashore resources and stewardship.

Vehicle Requirements

The following requirements would apply:

- Four-wheel drive would be recommended, although two-wheel-drive vehicles would be allowed.

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

Equipment Requirements

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

Speed Limits

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

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

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

Beach Fires

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

Nighttime Beach Use

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

Commercial Fishing Vehicles

- Vehicles authorized to operate on the beach under a commercial fishing permit issued by the superintendent would be authorized to enter areas not designated for ORV use ~~Commercial~~

~~fishing vehicles would be authorized by permit to enter all ORV and pedestrian areas~~ that are not closed for resource protection, and may be authorized by special use permit to access vehicle-free~~non-ORV~~ areas and night-driving-restricted areas if there is no resource conflict.

Comment [dw9]: SH: already stated under "common to all". Delete?

Temporary Emergency Beach Closures

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

Accessibility for ~~the Disabled~~Visitors with Disabilities

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

Construction Measures

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

Species Management

- Management of protected shorebirds would be accomplished through the implementation of the species management measures described in tables 10 and 10-1 at the end of this chapter.
- Management activities during the breeding season would focus on beach-nesting bird species such as the piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-billed tern, 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.

~~Focal beach-nesting bird species for management activities during the breeding season include piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-billed tern, 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.~~

Comment [dw10]: Unless there's a compelling need to make editorial changes, I would suggest not making them at this point. It will just distract the reader and give the impression that these changes are substantive.

- Pre-nesting e~~s~~areas for focal species would be established ~~tablishment **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~~ill~~ 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.

Comment [dw11]: JW: It's not clear enough what the "focal" species are here. As revised, this refers back to the "focus" in the previous bullet, but that isn't a concrete list, since it starts with "such as." So it's not at all clear exactly which birds we're doing pre-nesting closures for!

- ~~-~~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 pre-nesting areas~~breeding 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 ~~full~~ 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 unfledged chicks from harm or disturbance. Data from various sites distributed across the plover's Atlantic Coast range indicates that larger buffers may be needed in some locations. This may include situations where plovers are especially intolerant of human presence, or where a 50 meter-radius area provides insufficient escape cover or alternative foraging opportunities for plover chicks. In cases where the nest is located less than 50 meters above the high tide line, fencing should be situated at the high tide line, and a qualified biologist should monitor responses of the birds to passersby, documenting his/her observations in clearly recorded field notes. Providing that birds are not exhibiting signs of disturbance, this smaller buffer may be maintained in such cases. On portions of beaches that

Comment [dw12]: It would be nice if we could take advantage of some of this white space to save paper.

LBG: Will address formatting in second internal FEIS that goes to the editor

Comment [mbm13]: Okay with me to reduce or eliminate indentation and/or reduce font size slightly for the text extracted from the recovery plan, if editorially appropriate.

receive heavy human use, areas where territorial plovers are observed should be symbolically fenced to prevent disruption of territorial displays and courtship. Since nests can be difficult to locate, especially during egg-laying, this will also prevent accidental crushing of undetected nests. If nests are discovered outside fenced areas, fencing should be extended to create a sufficient buffer to prevent disturbance to incubating adults, eggs, or unfledged chicks. Pets should be leashed and under control of their owners at all times from April 1 to August 31 on beaches where piping plovers are present or have traditionally nested. Pets should be prohibited on these beaches from April 1 through August 31 if, based on observations and experience, pet owners fail to keep pets leashed and under control. Kite flying should be prohibited within 200 meters of nesting or territorial adult or unfledged juvenile piping plovers between April 1 and August 31. Fireworks should be prohibited on beaches where plovers nest from April 1 until all chicks are fledged.

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

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

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

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

    A. Estimates the number of pairs likely to nest on the site based on the past monitoring and regional population trends.

AND

    B. Delineates the habitat that will be posted or fenced prior to April 1 to assure a high probability that territorial plovers will select protected areas in which to court and nest. Sites where nesting or courting

plovers were observed during the last three seasons as well as other habitat deemed most likely to be pioneered by plovers should be included in the posted and/or fenced area.

AND

C. Provides for monitoring of piping plovers on the beach by a qualified biologist(s). Generally, the frequency of monitoring should be not less than twice per week prior to May 1 and not less than three times per week thereafter. Monitors should document locations of territorial or courting plovers, nest locations, and observations of any reactions of incubating birds to pedestrian or vehicular disturbance.

AND

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

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

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

Comment [dw14]: This is directly from the PIPL plan, so this cannot be changed.

OR

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

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

AND

B. Specifies the minimum size of vehicle-free areas to be established in the vicinity of unfledged broods based on the mobility of broods observed on the site in past years and on the frequency of monitoring. Unless substantial data from past years show that broods on a site stay very close to their nest locations, vehicle-free areas should extend at least 200 meters on each side of the nest site during the first week following hatching. The size and location of the protected area should be adjusted in response to the observed mobility of the brood, but in no case should it be reduced to less than 100 meters on each side of the brood. In some cases, highly mobile broods may require protected areas up to 1000 meters, even where they are intensively monitored.

Protected areas should extend from the ocean-side low water line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side intertidal habitat exists. However, vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to plover chicks because of steep topography, dense vegetation, or other naturally-occurring obstacles. In a few cases, where several years of data documents that piping plovers on a particular site feed in only certain habitat types, the Service or the State wildlife management agency may provide written concurrence that vehicles pose no danger to plovers in other specified habitats on that site.

Timing of Vehicle Restrictions in Chick Habitat – Restrictions on use of vehicles in areas where unfledged plover chicks are present should begin on or before the date that hatching begins and continue until chicks have fledged. For purposes of vehicle management, plover chicks are considered fledged at 35 days of age or when observed in sustained flight for at least 15 meters, whichever occurs first. When piping plover nests are found before the last egg is laid, restrictions on vehicles should begin on the 26th day after the last egg is laid. This assumes an average incubation period of 27 days, and provides a 1 day margin of error. When plover nests are found after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles should begin on a date determined by one of the following scenarios:

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

OR

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

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

Essential Vehicles – Because it is impossible to completely eliminate the possibility that a vehicle will accidentally crush unfledged plover chicks, use of vehicles in the vicinity of broods should be avoided whenever possible. However, the Service recognizes that life-threatening situations on the beach may require emergency vehicle response. Furthermore, some "essential vehicles" may be required to provide for safety of pedestrian recreationists, law enforcement, maintenance of public property, or access to private dwellings not

otherwise accessible. On large beaches, maintaining the frequency of plover monitoring required to minimize the size and duration of vehicle closures may necessitate the use of vehicles by plover monitors. Essential vehicles should only travel on sections of beaches where unfledged plover chicks are present if such travel is absolutely necessary and no other reasonable travel routes are available. All steps should be taken to minimize number of trips by essential vehicles through chick habitat areas. Homeowners should consider other means of access, e.g., by foot, water, or shuttle services, during periods when chicks are present. The following procedures should be followed to minimize the probability that chicks will be crushed by essential (non-emergency) vehicles:

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

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

- **Incorporation of the 2008 Loggerhead Sea Turtle Recovery Plan**. The following elements from the Loggerhead Sea Turtle Recovery Plan were considered in development of the action alternatives:

2225. Prohibit recreational equipment on nesting beaches at night. Sea turtles prefer to nest on the mid to upper beach, protecting their nests from repeated and prolonged high tides. Recreational equipment (e.g., beach furniture, umbrellas, marine craft, tents) that are left on the beach at night can prevent nesting turtles from reaching the mid to upper beach. Therefore, at night, all recreational equipment should be completely removed from the beach by hand and stored behind the primary dune. Regulations should be developed and enforced to ensure these types of impediments to nesting are managed or eliminated.

Maintain at least the current length and quality of protected nesting beach. As of 2007, 1,581 km of nesting beach in the U.S. were identified as being within conservation lands in public (Federal, state, or local government) ownership and privately owned conservation lands (e.g., non-profit conservation foundations). Most of these lands are generally managed in a way that benefits sea turtle conservation. Public lands that have lighted development, armoring, or other profound threats to sea turtle nesting have not been included. In compiling the

list of conservation lands, human visitation was not considered a profound threat to sea turtle nesting. Therefore, public lands designated for human recreation have been included. At a minimum, the amount of nesting beach in such protected status should be maintained.

251. Develop, fully implement, and effectively enforce light management plans to address direct and indirect (e.g., sky glow, uplighting) artificial lighting on nesting beaches.

2511. Implement and enforce lighting ordinances on lands under local government jurisdiction. Where lighting ordinances have been adopted and adequately enforced, hatchling disorientation has been managed at acceptable levels. All coastal counties and communities with nesting beaches should adopt and fully enforce ordinances from March through October in Brevard through Broward counties, Florida, and from May through October elsewhere. The State of Florida's Model Lighting Ordinance [http://myfwc.com/seaturtle] should be used as a template for developing new or revising existing lighting ordinances. In addition, Port Authorities should develop and enforce lighting management plans to ensure their direct and indirect lighting does not impact nesting and hatchling turtles on nearby beaches.

61. Minimize impacts to sea turtles on nesting beaches.

6113. Use the least manipulative method to protect nests. Until such time as a management plan for protecting nests is developed, the least manipulative method should be employed to protect nests. Because the incubation environment greatly influences the developing embryo, nest relocation can involve the transfer of eggs from an appropriate environment to an inappropriate one. As a general rule, nests should only be relocated if they are low enough on the beach to be washed daily by tides or if they are situated in well documented ~~highrisk~~high-risk areas that routinely experience serious erosion and egg loss (e.g., nests laid near river mouths or beneath eroding sea walls).

Comment [dw15]: Use whatever text is directly from recovery plan.

Natural events, like storms, that accelerate beach erosion and accretion can sometimes reduce hatching success in existing nests. While damage from storm events can be severe, it is difficult to predict the precise areas where the storm is most likely to inflict damage. Because of the negative effects of relocating eggs and the unpredictability of storm events, nests should not be moved out of areas threatened by storms. Nests should not be relocated in areas where heavy foot traffic, lighting problems, or beach cleaning are a concern. Foot traffic generally is not a problem for nests, but depending on the nesting substrate, pedestrian traffic over nests near the time of emergence can cause the nests to collapse and result in hatchling mortality. Therefore, in areas where foot traffic is heavy, nests can be marked so pedestrians can avoid them. If a nest is made near a light that may misorient the hatchlings, efforts should focus on getting the light turned off or shielded (if protection is necessary, the nest should be caged). If nests are deposited on beaches that are periodically raked with mechanical equipment, beach raking should be discontinued or the nests should be marked clearly so they can be avoided by the beach cleaners.

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

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

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

614. Minimize harassment of nesting females and hatchlings. Resident and visitor use of nesting beaches can adversely affect nesting sea turtles,

incubating egg clutches, and hatchlings. Intentional and unintentional disturbance and harassment of nesting females and hatchlings is an increasing problem on many beaches. Problem areas where repeated incidents of turtle harassment have been reported should be identified, and law enforcement efforts should be focused there.

6142. Conduct public education campaigns to minimize harassment of nesting females and hatchlings. Resident and visitor use of nesting beaches can adversely affect nesting sea turtles and hatchlings. The most serious threat caused by human presence on the beach is the disturbance of nesting females. Disturbance of nesting females can cause them to leave the beach without finishing nesting and thus delay egg laying, shift their nesting beaches, and select poor nesting sites. Hatchlings rely on a store of energy and nutrients within their retained yolk sac to make their way from the nest to their offshore developmental habitat. Any delays they encounter on the beach by pedestrians may impair their ability to migrate offshore. Beachgoers should be informed through presentations and educational materials about the potential impacts to sea turtles from pedestrians on the beach and how to avoid frightening or disorientating any nesting and hatchling turtles encountered. In addition, signage at access points to the beach is recommended to further inform residents and visitors about proper nesting beach etiquette.

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

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

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

- **Establishment of Buffer Distances**. The potential impacts of human disturbance on beach-nesting birds and their chicks are well documented and described in chapter 3 of this document. A buffer is an area surrounding a sensitive resource, such as bird nests or chicks, which is restricted (or closed) to visitor access during critical life cycle stages in order to reduce human disturbance and the risk of mortality due to pedestrians and ORVs. The sensitivity of beach-nesting birds to human disturbance varies by species and can vary among individual birds of the same species depending upon the circumstances. Buffer distances for managed species are detailed in table~~s~~ 11 ~~and 11-1~~. The buffer distances identified in the action alternatives were developed after consideration of the best available science, which includes existing guidelines and recommendations, such as the Piping Plover Recovery Plan (USFWS 1996a) and the USGS Open-File Report 2009-1262 (2010) on the management of species of special concern at the S ~~2005 USGS protocols for the S~~eashore, as well as relevant scientific literature (research, studies, reports, etc.) for the respective species. In addition, buffer distances were developed using the practical knowledge gained by NPS resources management staff during two years of implementing the Interim Strategy (2006–2007) and two years implementing the consent decree (2008–2009). In 2007 under the Interim Strategy, which identified the buffer distances that would be used under alternative A, NPS staff implemented a total of 126 shorebird management actions that involved establishing, modifying, or removing fencing around resource closures. In 2009 under the consent decree, which identified the buffer distances that would be used under alternative B, NPS staff implemented a total of 202 shorebird management actions.

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

ORV Permits

- Permits would be required for vehicular use on designated ORV routes.
- There would be no limit on the number of permits issued.
- Permits would be available at designated permit issuing stations ~~and online~~.
- Permit stickers would be affixed to vehicles in a manner approved by the NPS.

Comment [dw16]: SH. Should this be three years and include the 2010 season?

- Permits could be revoked for violation of applicable Seashore regulations or terms and conditions of the permit.

ELEMENTS COMMON TO ACTION ALTERNATIVES C – E

Ramp Configuration

- New ramps would be constructed at 62 and 64.

Vehicle Requirements

The following requirements would apply:

- There would be a three-axle maximum for all vehicles.
- Trailers would be limited to no more than two axles.
- Maximum vehicle length would be 30 feet.

Beach Fires

Beach fires would be prohibited from midnight to 6:00 a.m. year-round.

Species Management

- **Management of protected shorebirds would be accomplished through the 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 more than 1 (i.e., 2 or more) of the past 5 years and are managed to reduce or minimize human disturbance. SMAs will be re-evaluated and re-designated every 5 years, or after major hurricanes, as part of the periodic review process. Two types of SMAs would be designated.
  - **Breeding Shorebird and Seabeach Amaranth SMA:** Area of suitable breeding habitat that has had multiple nests of individuals and/or multiple species of protected shorebirds, or concentrations of seabeach amaranth specimens, in more than 1 (i.e., 2 or more) of the past 5 years and is managed to minimize human disturbance during the breeding season. Focal species for Breeding Shorebird SMAs include piping plover, Wilson's plover, American oystercatcher, least tern, common tern, gull-billed tern, and black skimmer; however, there will be ongoing evaluation of the breeding shorebird species addressed by this plan, as part of the periodic review process. The following areas have been initially designated as Breeding Shorebird SMAs:
    - Bodie Island Spit: 0.2 miles south of ramp 4 to inlet.
    - Ramp 27 to ramp 30.
    - New ramp 32.5 to ramp 34.
    - Approximately 1.7 miles south of ramp 38 to north boundary of Buxton.
    - Cape Point: 0.2 miles south of ramp 44 to ramp 45.
    - South Beach: ramp 45 to new ramp 47.

- Hatteras Inlet Spit: Ocean shoreline south of the Pole Road to soundside of inlet.
- North Ocracoke Spit: Inlet to 0.25 miles northeast of ramp 59.
- 0.5 miles southwest of ramp 68 to 1.2 miles north of ramp 70.
- South Point (Ocracoke): 0.5 miles southwest of ramp 72 to inlet.

Nonbreeding Shorebird SMA: Area of suitable nonbreeding habitat 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 breeding SMAs that provide suitable nonbreeding habitat during periods of overlap between the breeding and migrating season and designated non-ORV areas that are set aside to provide pedestrians with the opportunity for a natural beach experience.

Use of ORV in SMAs would vary between alternatives, as described in table 10 at the end of this chapter. Management of piping plovers, American oystercatcher, colonial waterbirds, and Wilson's plover would be divided into different intensity levels, known as Management Level 1 (ML1) and Management Level 2 (ML2). In general, these management measures are defined as follows:

- **ML1**: An approach to shorebird protection during the breeding season that will use larger, longer-lasting buffers with less monitoring to reduce the need for more frequent monitoring and fencing changes. All areas outside of designated SMAs would be managed using ML1 measures.
- **ML2**: An approach to shorebird protection during the breeding season that will use smaller buffers and will require more frequent monitoring and fencing changes when an ORV or pedestrian access corridor is open at designated locations during the breeding season.

Comment [dw17]: Permanently delete. Not part of of the DEIS.

ADAPTIVE MANAGEMENT APPROACHES INCLUDED IN THE ACTION ALTERNATIVES

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

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

- Applying management actions.
- Monitoring consequences.
- Evaluating monitoring results against plan objectives.

- Adjusting management.
- Using feedback to make future management decisions.

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

PERIODIC REVIEW UNDER THE ACTION ALTERNATIVES

A systematic review of data, annual reports, and other information would be conducted by NPS every five~~5~~ years, after storms or events that Seashore management determines to be a major modification of habitat quantity or quality, ~~a major hurricane,~~ or if necessitated by a significant change in protected species status (e.g., listing or de-listing), in order to evaluate the effectiveness of management actions in making progress toward the accomplishment of stated objectives and desired future conditions (see chapter 1 of this document). Periodic review could result in changes to the management actions in order to improve effectiveness. When desired future conditions for resources are met or exceeded, periodic review and adaptive management may allow for more flexible management of recreational use, provided adverse impacts of such use are effectively managed and wildlife populations remain stable. Where progress is not being made toward ~~the attainment of desired future conditions~~goals, periodic review and adaptive management may result in increased restrictions on recreational use~~provide for additional management including increased appropriate restrictions on recreational use~~. Components subject to periodic review vary among the action alternatives.

Comment [dw18]: Please clarify the reason for this change.

DISCUSSION OF ACTION ALTERNATIVES

ALTERNATIVE C: SEASONAL MANAGEMENT

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

Generally, most areas where there is a seasonally designated ORV route would be open to ORVs from October 15 to March 14, primarily due to concerns about resource protection for birds and turtles during breeding and hatching/fledging periods and to minimize conflicts with high visitor use periods. Areas that

would be seasonally designated vehicle-free would include SMAs and some village beaches. These seasonal vehicle-free areas would primarily occur during periods of high visitation and high resource sensitivity—the summer and shoulder season months. The spits and points would be closed to ORVs from March 15 to October 14 to provide resource protection. A pedestrian access corridor would be provided at Bodie Island Spit, Cape Point, and South Point although the corridor could close during the breeding season as resource protection buffers and closures are established. Existing soundside ORV access areas would be retained and designated as ORV routes, including existing primitive parking and designated boat launch areas. The Seashore would maintain posts and signage defining the location of the parking areas and ORV access routes on the soundside.

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

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

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

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

Alternative C would include an ORV permit system, with no limit on the number of permits issued. Permit fees would be determined based on the recovery of NPS costs incurred in managing ORV use. Only annual permits would be available under this alternative, but these would be valid for 12 months from date of purchase so they could extend over the length of a season. To obtain the permit, ORV owners would be required to complete a short education program in person or online and pass a basic

knowledge test demonstrating their understanding of the rules and regulations governing ORV use at the Seashore, beach-driving safety, and resource closure requirements. Following completion of the test, owners would need to sign for their permits to acknowledge that they understand the rules and that all drivers of the permitted vehicles will abide by the rules and regulations governing ORV use at the Seashore. A violation of the rules and regulations by the owner or driver of an ORV could result in revocation of the vehicle permit, and the owner/permittee would not be allowed to obtain another permit for any vehicle for a specified period of time.

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

Designated routes and areas under alternative C are shown on figure 2 and described in table 7. Details of the management actions under this alternative are described in table 8 and species management strategies are described in table 10.

ALTERNATIVE D: INCREASED PREDICTABILITY AND SIMPLIFIED MANAGEMENT

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

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

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

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

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

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

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

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

Designated routes and areas under alternative D are shown on figure 2 and described in table 7. Details of the management actions under this alternative are described in table 8 and species management strategies are described in table 10.

ALTERNATIVE E: VARIABLE ACCESS AND MAXIMUM MANAGEMENT

This alternative is designed to provide visitors to the Seashore with a wide variety of access opportunities for both ORV and pedestrian users, including to the spits and points, but often with controls or restrictions in place to limit impacts on sensitive resources. During the shorebird breeding season, some ORV routes may be kept open to use for longer periods of time by providing ORV pass-through zones at some spits and points and by improving interdunal road and ramp access. More pedestrian access would be provided through substantial additions to parking capacity at various key locations that lend themselves to walking on the beach. Vehicle-free areas would be provided during all seasons for non-ORV users to experience the Seashore without the presence of vehicles. Like the other action alternatives, this alternative would manage ORV use by identifying areas that historically do not support sensitive resources and areas of lower visitor use. Most of these areas would be designated as ORV routes year-round. Areas of high resource sensitivity and high visitor use would either be designated as seasonal ORV routes, with

restrictions based on seasonal resource and visitor use, or as year-round ~~non-ORV~~vehicle-free areas. In addition, the SMAs would be reopened to ORV use approximately six weeks earlier than under alternative C (September 1 versus October 15).

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

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

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

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

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

To facilitate access to ORV routes, this alternative would extend the existing interdunal road west of ramp 45 all the way to ramp 49 and construct two new ramps (47 and 48) and build two new ramps at 62 and 64. (Note: All action alternatives involve relocating ramp 2 and building a new ramp~~s~~ at 32.5~~, 62, and 64~~).

A new ramp would be established at either 24 or 26, along with a new parking area at the selected location. Designated ORV routes would be open to ORV use 24 hours a day from November 16 through April 30. From May 1 through September 15, all potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) would be closed to non-essential ORV use from 10:00 p.m. to 6:00 a.m. to provide for sea turtle protection and allow enforcement staff to concentrate their resources during the daytime hours. From May 1 through September 15, a limited number of ORV users would be permitted to park and stay overnight at selected spits and points, under the terms and conditions of a special use permit, when such areas are not otherwise closed to protect sensitive resources. From September 16 through November 15, ORV routes with no or a low density of turtle nests remaining (as determined by the NPS) would be open between 10:00 p.m. and 6:00 a.m., subject to the terms and conditions of a required permit (see table 8 for details). This alternative also involves the addition of parking spaces at several ramp locations.

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

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

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

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

Designated routes and areas under alternative E are shown on figure 2 and described in table 7. Details of the management actions under this alternative are described in table 8 and species management strategies are described in table 10.

ALTERNATIVE F: ~~THE~~ NPS PREFERRED ALTERNATIVE~~MANAGEMENT BASED ON ADVISORY COMMITTEE INPUT~~

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

After reviewing public ~~comments~~ and agency comments, the NPS revised alternative F by adopting some of the simpler approaches from the other alternatives, e.g. instead of SMAs, using standard buffers with pre-nesting and nonbreeding closures; simpler and easier to understand hours for night-driving restrictions; ~~;~~ and using more consistent seasonal closure dates among the villages. Also in response to public and agency comment, the amount of construction was decreased, pedestrian access increased, and attention paid to increasing management efficiency and reducing costs of implementation. Designation of ORV routes was adjusted to provide balance between ORV areas and ~~vehicle-free area~~vehicle-free areas~~.~~ .

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

The year-round designation of ~~vehicle-free area~~vehicle-free areas and ORV routes, in conjunction with the species management strategies described in table 10-1, would provide for species protection during both the breeding season and the nonbreeding season. SMAs would not be designated under this alternative and one set of standard buffers, equivalent to the ML2 buffers in the other action alternatives,

would be utilized. ~~Areas of suitable habitat that have had individual PIPL, WIPL or AMOY nests, or concentrations of more than 10 CWB nests in more than one of the past five years and new habitat that is particularly suitable for shorebird nesting, such as the habitat at new inlets or overwash areas, would be posted as pre-nesting closures using symbolic fencing (string between posts) or with other closure signs by March 15 at sites involving piping plover, Wilson's plover, and/or American oystercatcher; and by April 15 at sites involving only colonial waterbirds. In addition, the SMAs could reopen to ORV use as early as July 31, which is up to four weeks earlier than under alternative E (September 1), when the shorebird breeding season is completed at each site (typically in August).~~

During the shorebird breeding season, pedestrian shoreline access below the high-tide line would be permitted in front of (i.e., seaward of) pre-nesting areas until breeding activity is observed, then standard buffers for breeding activity would apply. Pre-nesting areas would generally be closed March 15 through July 31 (or August 15 if black skimmers are present), or until two weeks after all chicks have fledged and breeding activity has ceased, whichever comes later.

~~a shoreline pedestrian access corridor would be established at~~ Bodie Island Spit would be designated as a seasonal ORV route from September 15 through March 14 and would be vehicle-free from March 15 through September 14.~~, and ORV access corridors would be established at Cape Point and South Point. These corridors would use standard resource-protection buffers and would be subject to resource closures. When unfledged chicks are present, the probability of being able to provide this access would decrease.~~

Like alternative E, alternative F also involves the development of an interdunal pedestrian trail on Bodie Island. The trail would begin at a new parking area near ramp 4~~the campground~~ and would provide access to the inlet. This new trail would also be subject to resource-protection closures. Year-round ORV routes would be designated at Cape Point and South Point, with 35-meter-wide (115-~~ft~~foot-wide) ~~wide~~ ORV corridors during the breeding season. Standard resource-protection buffers would apply to these ORV corridors. When unfledged chicks are present, the probability of being able to provide this access would decrease. Alternative F would include the construction of a short seasonal ORV route to access a new pedestrian trail to the sound on Ocracoke Island. In addition, the NPS would consider applications for commercial use authorizations to offer beach and water shuttle services and would apply for funding to conduct an alternative transportation study to evaluate the feasibility of alternative forms of transportation to popular sites, such as inlets and Cape Point.

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

Areas that would be seasonally designated as vehicle-free would include the areas in front of Ocracoke Campground and villages, except for Rodanthe north of the pier and Buxton, which would be vehicle free year-round.~~; and Ocracoke Campground.s ome SMAs that would have seasonal restrictions on ORV use.~~ The ORV open season in front of the seasonally designated villages and Ocracoke Campground would be ~~vehicle free~~ November 1 to March 31 when visitation and rental occupancy is lowest. These areas would be vehicle free April 1 to October 31 when visitation and rental occupancy is highest. When these beaches are open to ORV use, a safety closure would be implemented on portions of the beach that are not consistently at least 20 meters (66 feet) wide during normal high tides. ~~would be varied, with northern Hatteras Village beaches (Rodanthe, Waves, Salvo, and Avon) open September 16 to May 14, southern Hatteras Village beaches open December 1 to February 28/29, and Ocracoke campground and day use area beaches open November 1 to March 31. SMAs (that are designated as ORV routes) would generally be closed to ORV use March 15 through July 31, or until two weeks after all chicks have fledged and~~

Comment [dw19]: JW: Should "ORV open season" be replaced with "area"?

breeding activity has ceased, whichever comes later. ORV access would be allowed to Cape Point and South Point during the breeding season, subject to resource closures, using the standard buffer distances. Some sSpits would have a seasonally restricted ORV routes that are vehicle-free from March 15 to September 14.

To facilitate access to ORV routes, this alternative would add new ramp 25.5 located approximately 2.5 miles south of ramp 23, relocate ramp 59 to 59.5, and add a new ramp 63 located across from Scrag Cedar Road. (Note: All action alternatives involve relocating ramp 2 and building a new ramp at 32.5). New interdunal roads would facilitate access to locations that have either seasonal or year-round restrictions on ORV use. Locations for interdunal roads would include:on inland of South Beach from ramp 45 to ramp 49, with one new ramp at 47.5, and, on Hatteras Inlet Spit extending from the intersection of Pole and Spur Roads southwest toward the inlet, stopping at least 100 meters from the inletnortheast and southwest from the southern terminus of the Pole Road, and on North Ocracoke Spit from ramp 59 extending northeast toward the inlet would facilitate access to locations that have either seasonal or year-round restrictions on ORV use. Existing soundside access points would remain open, with better maintenance than currently occurs. Signage/posts would be installed at the soundside parking areas and boat launch areas to prevent damage to vegetation and other soundside resources. This alternative also involves the addition of new parking areas with associated foot trails or boardwalks to facilitate pedestrian access at a number of locationsspaces at several ramp locations.

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

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

Beach fires would be authorized year-round between the hours of 6 a.m. and 10 p.m., with a non-fee educational fire permit. From May 1 to November 15, beach fires would be permitted only in front of

~~Coquina Beach, Rodanthe, Waves, Salvo, Avon, Buxton, Frisco, Hatteras Village, and Ocracoke day use area to minimize the impacts to nesting turtles and hatchlings.~~

ORV safety closures could be designated as conditions warrant and would be evaluated for reopening by NPS law enforcement staff on a weekly basis. ORV safety closures would be applicable only to ORV access; pedestrian and commercial fishing access would generally be maintained through safety closures. Alternative F provides specific guidelines for establishing and removing safety closures. Additional ORV-driving requirements would be implemented to provide for increased pedestrian safety in all areas open to ORV use, including the village beaches when open to ORV use.

Under the carrying capacity requirement for alternative F, the maximum number of vehicles allowed on any particular ORV route would be the linear distance of the route divided by 6 meters (20 feet) per vehicle (i.e., the equivalent of 260 vehicles per mile).~~Alternative F would include a carrying capacity requirement (peak use limit) for all areas based on a physical space requirement of one vehicle per 20 linear feet for Bodie Island, Hatteras Island, and Ocracoke Island Districts, except that 400 vehicles would be allowed within a 1-mile area centered on Cape Point. The allowable number of vehicles in each area would be determined by the space requirements and the beachfront length of the area.~~ In addition, ~~The carrying capacity would~~ parking within ORV routes would be allowed, but restricted to ~~only~~ one vehicle deep.~~.~~ These measures ~~combined~~ would reduce~~prevent~~ safety concerns associated with overcrowding, such as at peak use periods during major summer holidays and weekends.

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

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

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

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

HOW ALTERNATIVES MEET OBJECTIVES

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

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

ALTERNATIVE ELEMENTS CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION

Comment [dw20]: In general, I think we've included too much in this list that can be adequately addressed in the concern response report. Also, we need to do a better job phrasing these as "considered but dismissed" statements and not just using the exact language from the concern response report.

USE AREAS, ORV MANAGEMENT, AND VISITOR USE

Modify the ORV Management Plan In Accordance with Plans Proposed~~Propsoed~~~~Developed~~ by Groups Outside the NPS

During the public comment period for the DEIS, alternative plans for the management of ORVs and wildlife at the Seashore were submitted~~.~~. ~~The NPS feels that~~ M~~m~~any of the elements in these proposals ~~plans~~ have been are~~is~~ already included in the range of alternatives considered, or have been~~were~~ incorporated into the revised alternative F (NPS preferred alternative)~~.~~. Those elements that are not included were considered but dismissed for the reasons discussed below.

Comment [dw21]: SH: for which of the reasons below?

Consider Pea Island National Wildlife Refuge when Considering Use Areas

Comment [dw22]: See Solicitor (JW) comment on this in Concern Response Report.

Many commenters suggested that Pea Island NWR (refuge) should be considered when developing this plan/EIS. Suggestions included considering Pea Island as a vehicle-free area, and conversely, as a potential area where ORVs could be used where there is not a resource conflict. Commenters felt that the refuge~~Pea Island NWR~~ should be considered a part of the baseline for analysis, and should be considered when providing appropriate visitor use. Although the 5,880-acre Pea Island NWR is located at the northern end of Hatteras Island, and is within the boundary of the Seashore, the ~~r~~refuge is administered by the USFWS. The Seashore's 1978 draft interim ORV management plan affirmed that the Refuge Manager has management responsibility for posting closures on beaches within the Refuge as he or she may find necessary to implement the regulations of the FWS. The NPS acknowledges that there are approximately 12.1 miles of vehicle~~-~~-free beaches within the refuge that are available for pedestrian use and has ; however, b~~B~~ecause the refuge~~it~~ is not administered by the NPS, the Seashore cannot direct the management of visitor use at the refuge ~~Pea Island NWR~~. The USFWS is responsible for making decisions about ORV and pedestrian access and has done so under a public planning process in the Pea Island National Wildlife Refuge Comprehensive Conservation Plan (USFWS 2006~~xb~~), as mandated by the National Wildlife Refuge Improvement Act of 1997. Through this process, ~~Currently,~~ the USFWS has determined that ORV use would not be appropriate or compatible with the mission of the refuge.

Prohibit the Use of Off-Road Vehicles

Prohibition of ORV use at the Seashore would not meet the purpose, need, and objectives of this plan/EIS. 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, provide a variety of visitor use experiences while minimizing minimize conflicts among various users, and promote the safety of all visitors…" ORV use, if effectively managed, provides convenient access for many appropriate visitor activities at some popular beach sites including, for example, activities that use vehicles to transport substantial amounts of gear for the activity. Prohibition, rather than management, of ORV use could substantially diminish such visitor experience opportunities. Therefore prohibition of all ORV use would not meet the plan need.

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

Changes in Infrastructure and Regulations of Other Jurisdictions

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

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

These suggestions would require action by the county or state. Lowering the speed limit would require a change in current state regulations. The county would be responsible for changing building codes or adding more parking and access points. Creating sound or turtle friendly lighting ordinances or occupancy restrictions for rental homes would require action of the respective counties. The NPS does not have the authority to require these jurisdictions to undertake such action. However, the NPS has worked with the communities within the Seashore on many issues, including those related to ORV management, and under all alternatives would continue to work cooperatively to encourage actions such as turtle-friendly lighting and education. Although the NPS cannot require Dare County to provide more parking or beach access, some of the alternatives evaluated in this plan/EIS address additional parking areas on Seashore land.

Implement Additional Vehicle Requirements

During public comment on the draft plan/EIS, commenters recommended additional vehicle requirements such as requiring vehicles to be oil leak free, permitting only electric vehicles, and requiring that license

plates~~s~~ be displayed properly. The Seashore does not have the capability to efficiently inspect each vehicle that enters the beach to determine if it is leaking oil. Individual vehicle inspections for leaking fluids could cause substantial traffic backups, which would adversely affect visitor experience and safety. However, all vehicles operated in the Seashore must comply with state inspection requirements, which include regulations on leaking fluids. If the NPS were to observe a vehicle leaking oil, it would be removed from the beach. The NPS is not proposing to allow only electric vehicles in the Seashore due to the limited availability of these vehicles to the general public~~.~~. Obstruction of the rear license plate is a violation of North Carolina~~C~~ law, which is enforced by NPS law enforcement staff under 36 CFR 4.2(b).~~ It would be considered a violation of Seashore regulations;~~ I~~and~~ in developing the details of the ORV permit program, the Seashore would consider whether this violation would be a basis for permit revocation.

~~**Provide Additional Facilities to Increase Accessibility**~~

~~During public comment on the draft plan/EIS, commenters recommended additional steps the NPS could implement to increase accessibility including catwalks to the beach, , allowing seniors (over 65) to have special vehicles to access the beach, ensuring that beach shuttles, if utilized, can accommodate visitors with disabilities, and the required use of noise suppressors for vehicles that are transporting visitors to the beach. The Seashore operates using the North Carolina Vehicle Code, which allows only street-legal vehicles on the beach. and tTherefore, allowing other types of vehicles as suggested (ATV, UTV, electric carts, etc.) as suggested, would not be within the keeping of this law and is outside the legal framework of this plan. The street-legal requirement for all ORVs would also address concerns regarding noise.~~

~~Additional access to the beach has already been is already addressed in the range of alternatives;, as the NPS will retrofit some existing boardwalks with accessible ramps to the extent that funding allowpermits to allow for more opportunities for visitors with disabilities to view and access the beach. In addition to the retrofitting of existing boardwalks, additional boardwalks would be considered in future planning efforts, subject to available funding. As future improvements are made -- such , such as boardwalks, potential shuttles, and other access described under the preferred alternative -- a or potential beach shuttles, accessibility issues and all applicable regulations would be considered. Additional information on how the NPS has addressed the providingsion of additional access for mobility-impaired visitors, please see Appendix C: Concern/Response Report (response to Concern ID 24106).~~

Comment [dw23]: Non street legal vehicle issue has been dealt with below. Also, because we've considered and included upgrades to boardwalks, etc., it has been considered and included, not dismissed.

Comment [dw24]: Referred to as "Comment Response Report" in chapter 5. Need to be consistent.

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

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

Assign Permits to Users Instead of Vehicles

For the alternatives that include a permit system, permits would be assigned to a particular vehicle through issuance to the registered owners of vehicles. A permit sticker would then be affixed to the vehicle, where it would be easily visible by law enforcement personnel. Another option of assigning

permits to the person only, not the vehicle, was considered, but eliminated. Verifying that people have permits that are movable between multiple vehicles would require substantially more effort by law enforcement staff, who would have to stop each driver visitor and ask to see their permit. Therefore, to assist in enforcing the permit system, permits are assigned to the registered owners and affixed to the vehicles under all alternatives.

Require a Permit for All Users of the Seashore

The idea of an entrance or admission fee for the Seashore was discussed thoroughly during the negotiated rulemaking process, and was dismissed primarily due to administrative and financial obstacles. The establishment of an entrance fee would require the NPS to install manned entrance gates in the Seashore to collect visitor fees. However, ~~However~~Additionally~~,~~ there are thousands of local residents ~~that~~who have to travel through the Seashore to gain access to their property. The logistics of collecting entrance fees from all visitors would result in delays at entrances and would impede efficient ~~restrict~~ travel along NC-12.

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

Provide Separate Permits for Different Areas of the Seashore as a means of limiting congestion

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

Additional Requirements for Permit Holders

During public comment on the draft plan/EIS, commenters recommended a range of requirements that could be included in a permit system such as having permit holders report turtle crawl activity. It was determined that requiring the public to report turtles crawls would not be enforceable and was not included in the range of alternatives. However, suggestions made for various educational components, such as watching an educational video, are included in the range of alternatives.

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

Night parking (but not camping) for ~~and~~ pedestrian beach access will be allowed at ~~the~~ roadside parking areas identified on the maps for ~~the modified~~ alternative F. Allowing vehicles to park overnight on interdunal roads or ORV ramps immediately adjacent to resource sensitive locations would be difficult to patrol and enforce.~~-~~ Additionally, it~~, and~~ could place an unrealistic expectation on visitors in such locations to strictly comply with the applicable resource protection restrictions. The NPS does not have the resources to patrol the entire Seashore ~~park~~ at night to enforce compliance.~~-~~ The ~~, and~~ plac~~ing~~ement of more ~~park~~parked vehicles on ORV routes adjacent to the beach at night would potentially result in additional compliance problems~~ that would cause the same adverse impacts as other non-essential ORVs.~~.

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 ~~behind dunes~~there is not hard, bare beach sand but is ~~instead~~rather loose sand with 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 ~~along the length of the coast for the~~ recreational activities ~~that visitors use ORVs access~~to get to~~.~~ ~~Under alternative F, as modified, certain ORV ramps, such as ramps 2 and 59, would be relocated or replaced with new ramps further down the coast to remove them from vehicle-free areas and provide more ramp access to year-round ORV areas to retain access to the beach in the event of a resource buffer/closure.~~ Some interdunal roads would be provided to allow for ORV access around designated vehicle free areas.

Provide More Interdunal Roads and Ramps

During public comment on the draft plan/EIS, commenters provided ~~a range of~~ suggestions for adding or limiting interdunal roads and ramps at the Seashore~~—~~. Overall, the NPS considered a multitude of locations for new ramps and interdunal roads ~~feels that the location of ramps and interdunal roads~~ in the range of alternatives evaluated during the planning process.~~provides for suitable access, while also protecting resources at the Seashore~~. For a more detailed discussion on this topic, ~~information~~ please refer to ~~see~~ Appendix C: Concern/Response Report (response to Concern ID 24120)~~—~~.

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 includ~~inge~~s 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 ~~and~~ considered various options for determining carrying capacity limits ~~feels~~ which are included in ~~that~~ the range of the alternatives in this plan/EIS ~~accomplishes this goal~~. 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.

Comment [dw25]: This doesn't read very well. "sand with vegetation and wildlife" doesn't make much sense.

Comment [dw26]: I don't consider this dismissed, as we incorporated this suggestions and added ramps and roads. Suggest deleting this.

Comment [dw27]: Doesn't agree with title of paragraph.

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 ~~more appropriately~~ address park management zones in the revision of the General Management Plan (GMP) for the Seashore.

Establish Two marked Travel Paths on the Beach~~, with a Decreased Speed Limit~~

~~While m~~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 F reduces the speed limit from 25 mph to 15 mph year round. Reducing the speed limit to 6 mph Seashore-wide, as was suggested, may be overly burdensome and could result in ORVs getting stuck in areas of deeper soft sand.~~

Construct an "access trail" to be put in place that runs parallel to the Sound Side Beach with Appropriate Parking Provided at Different Spots Along the Trail

Over the past several years, the Seashore has provided ORV access to the back side of Hatteras spit whenever it is would not result in ~~conflict with~~ human safety or resource impacts. s~~and, bird nesting or foraging nor , and it would not~~it ~~cause additional damage to the vegetation and general ecological attributes of the area~~. Some of the sound shoreline area is very narrow; having ~~with~~ a small strip of sand that is subject to flooding at high tide unless one drives on the vegetation.~~-~~ This~~,~~ includ~~ing~~es wetland vegetation~~,~~ ~~that~~that bounds it on the land side. Because it is problematic to access the Sound from Pole Road at other points, alternative F provides for ORV access to the Sound behind the Coast Guard Station, at Cable Crossing and at Spur Road.

Add a Public Soundside Beach on Ocracoke

NPS believes that this suggestion has merit. However, it is outside the scope of the ORV plan/EIS and was not included in the alternatives carried forward for further analysis. ~~.~~The NPS believes that it~~. It~~ would be an appropriate topic for the Seashore's upcoming GMP revision process.

Divide the Seashore by Different Recreational Uses

The purpose of the plan is to develop regulations and procedures that carefully manage ORV use/access in the Seashore ~~in order~~ 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.~~-~~ While it is recognized that individuals who use ORVs do so for a variety of purposes or to pursue different recreational interests, developing a nuanced approach to designating ORV areas based on the different individual interests would be extremely difficult and is beyond the scope of this plan. ~~. .~~Therefore, this approach was not carried forward as an element of the alternatives evaluated.~~-~~ The NPS believes that the range of alternatives evaluated in this plan/EIS ~~By~~ provide ~~offering a variety of~~various ~~designated~~ ORV routes and ~~vehicle free area~~vehicle-free areas,

Comment [dw28]: GLOBAL. Capitalize these titles or not. Seems random.

Comment [mbm29]: The heading sounds like they're asking for a shoreline trail the length of the Seashore, but the explanation that follows is specific to Hatteras Spit and does not seem to fit the heading. If the issue is that there needs to be a soundside trail system, that is more appropriately addressed in the upcoming GMP than in an ORV plan.

Comment [dw30]: Agree with Mike.

which offer visitors ~~will have~~ the opportunity to select the locations best suited for pursuing their respective interests, whether it be fishing, swimming, shell collecting, bird watching or other uses.

~~Contact Staff at Pismo Beach, California for Management Ideas~~

~~In developing the plan/EIS, NPS has considered information on management and experience at a number of other areas. However, management at the Seashore must be responsive to federal law and policy which differs from that governing state managed areas. For example, the Pismo Dunes State Vehicular Recreation Area (currently named "Oceano Dunes") was established specifically for the recreational use of ORVs and allows modification of the natural environment to enhance the recreational experience (CAL. PRC. CODE § 5090.43). The Seashore has a much different purpose and significance. Therefore, regulatory requirements and management considerations are markedly different between these two areas.~~

~~Allow Visitors to Observe Bird Life Ffrom their Vehicle, as is Done at Padre Island National Seashore~~

~~Padre Island National Seashore does not have a program that recommends visitors remain in their vehicle while observing birds or other wildlife.~~

Allow for a Greater Level of Night Driving at the Seashore

During public comment on the draft plan/EIS, commenters requested that ~~the dates~~ night driving only be restricted ~~be modified to be from~~between May 27 and~~to~~ August 25, and requested that some level of nighttime access be maintained between these dates. The dates for nighttime restrictions were set based on the sea turtle nesting season ~~in order ,~~ to reduce the chance for direct or indirect impacts to nesting sea turtles from ORV use. Overall, three nests were found prior to May 15 (two of which were leatherback nests)~~,~~ and 4 nests have been found after September 1. ~~;~~ ~~I~~It is important to note that prior to 2008, nest patrols were conducted only from June 1 through August 31 (2001–2005), or May 15 through September 15 (2006 and 2007). Any nests laid outside of that timeframe had a greater likelihood of not being found and protected by resource management staff.

The NPS believes that nighttime restrictions from May 1st ~~-~~until November 15th provide~~s~~ the proper level of protection for sea turtles. Further, the NPS believe that providing exceptions to this would have adverse impacts to the species. Direct ~~The potential~~ adverse impacts of nighttime driving were documented ~~seen~~ during~~in~~ the 2010 nesting season when an ORV driving on the beach at night – in ~~, in~~ violation of the consent decree – s~~, s~~truck and killed a nesting female loggerhead turtle during the nighttime hours between June 23rd ~~-~~and June 24th. The turtle had crawled out of the ocean and attempted to lay a nest between Ramps 70 and 72 on Ocracoke Island. The ORV hit the turtle and dragged her approximately 12 feet, causing fatal injuries. The turtle was found dead by NPS turtle patrol at 6:10 a.m. on June 24th. This particular incident~~et~~ is believed to be the first time a nesting sea turtle has been killed by an ORV at the Seashore (NPS 2010b). For these reasons, the NPS did not specifically analyze a May 27 to August 25 ~~include a shorter season for~~ nighttime driving restriction period~~s, or allowing for some night driving to occur when restrictions are in place~~.

No Restrictions on ORV Use

Unrestricted ORV use at the Seashore would not meet the purpose, need, and objectives of this plan/EIS. The purpose of this plan/EIS 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." Unrestricted ORV use would not provide for a variety of appropriate

Comment [dw31]: When is this data applicable? "Overall" doesn't provide a time frame.

Comment [dw32]: Actually, we did. See alt A.

uses and, therefore, not meet the plan/EIS need. Also, the need of the plan/EIS, including providing consistent management of ORV use, would not be addressed. Unrestricted ORV use would not meet many of the plan/EIS objectives that relate to managing ORV use. For example, the following three Visitor Use and Experience objectives would not be met if unrestricted ORV use was allowed:

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

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

SPECIES PROTECTION

Implement an Escort Program

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

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

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

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

During public comment on the draft plan/EIS, commenters recommended providing a corridor though all species resource closures and buffers. A buffer or resource closure is an area surrounding a sensitive resource, such as bird nests or chicks, which is closed to visitor access during critical life cycle stages ~~in order~~ to reduce human disturbance and the risk of mortality due to pedestrians and ORVs. Any passages, corridors, or pass-throughs that cut directly across/through a resource closure~~s~~ would essentially undermine the biological function of the closure and could ~~, for all intent and purpose,~~ render it compromised, perhaps even useless to the species it is meant to protect~~.~~ ~~and T~~therefore, this element was not included in the range of alternatives.

Comment [dw33]: SH: So why did we include it in alternative E at some locations? Need to include and distinguish.

Criteria for the Designation of SMAs

During public comment on the draft plan/EIS, commenters recommended additional criteria for the designation of SMAs. ~~s~~Such criteria ~~includes~~included ~~as~~ ~~include~~ areas of high quality habitat (even if there has not been recent breeding activity), how SMAs should be established and expanded, and the ~~usinge~~use of 10 years (rather than 5 years) of nesting history to designate these areas. Due to the fact that so much potential nesting substrate is impacted and rearranged on an annual basis – ~~e~~, ~~especially~~especially during fall and winter storms – it ~~, it~~ is believed that it is sufficient to use breeding and nesting location data from the ~~or up to~~ five~~5~~ previous years in conjunction with an annual pre-season habitat assessment. Given how much annual change there is in suitable nesting substrates on barrier islands, 10 years of nesting/breeding data would very likely capture many sites that do not presently have sufficient potential to support breeding populations. In regards to how and where SMAs are established, the NPS believes that the alternatives in this plan/EIS adequately address species protection, as further noted in Appendix C: Concern/Response Report (see response to Concern ID 24213).

Comment [dw34]: SH: it is not "adequately addressing". It's "providing a range of reasonable alternatives". Call Sandy.

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

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

Provide Captive Rearing of Piping Plovers and Turtles

Commenters suggested rearing endangered species in captivity. Wildlife managers use captive breeding/rearing of threatened or endangered species in the following circumstances: (1) to provide an opportunity to restore populations where direct translocation may risk the persistence of the donor population; or (2) as a last resort in cases where most or all of the entire remaining wild population are brought to a captive breeding facility with the goal of avoiding extinction and breeding enough individuals for eventual reintroduction into the wild (e.g., California condor) (Gilpin and Soulé 1986). The Kemp's ridley sea turtle hatchery at Padre Island National Seashore is an example of a last-resort captive rearing facility used to restore a population. None of these situations apply to piping plover or nesting loggerhead, leatherback, or green sea turtles at Cape Hatteras National Seashore, so this suggestion was not included in any of the alternatives. Furthermore, the revised Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008) recommends the use of the least manipulative method to protect nests and the discontinuance of the use of hatcheries as a nest management technique.

Relocate Bird and Turtle Nests

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

Birds. Some species of birds, such as the burrowing owl, adapt well to nest relocation, but others do not. Birds that do not relocate well typically are those that demonstrate higher levels of nest abandonment. Nest abandonment by piping plovers and American oystercatchers is a documented source of nest failure at the Seashore. Therefore, relocating nests would likely result in increased nest abandonment and failure. In addition, moving nests into one area would not be feasible. Plovers and oystercatchers are solitary

rather than colonial nesters (i.e., they nest away from others of their species). Plovers sometimes nest near tern colonies to benefit from the aggressive behavior of terns protecting their colonies; however, they typically do not nest with other plovers. Since the purpose of the strategy is species protection, and moving nests would reduce these species' ability to reproduce, moving nests was eliminated from further analysis.

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

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

Comment [dw35]: SH: Is this development of the hatchling or development of the embryo? Just a question for Spence or Britta.

In addition, handling eggs can result in increased hatch failure. When relocating nests, there is always a risk of disrupting the membranes inside the eggs, which can kill the embryos. Typically, a blanket policy of routinely relocating all or most turtle nests is seen as part of an intensive management effort to keep the species from going extinct, whereas allowing for natural breeding and nesting is the preferred option whenever available. The revised Loggerhead Sea Turtle Recovery Plan (NMFS and USFWS 2008) recommends the use of the least manipulative method to protect nests and states that as a general rule, nests should only be relocated if they are low enough on the beach to be washed daily by tide or if they are situated in well documented high-risk areas that routinely experience serious erosion and egg loss. Currently in North Carolina, the state permits sea turtle nest relocations for research or when there is an imminent threat and potential loss of the nest due to erosion or frequent flooding, but not to accommodate recreational uses. Nests in some states may be moved to avoid damage from beach nourishment or in highly developed urban areas (e.g., along some urban areas of Florida's Atlantic Coast). None of these special conditions apply at the Seashore. Consequently, routine relocation of all nests to allow for recreational access is not considered in this plan/EIS. However, the NPS would continue its current practice of coordinating with the State of North Carolina to consider relocating an individual nest facing inundation or other adverse factors.

Turtles – Use Turtle Hatcheries. Moving all nests or all relocated nests into one hatchery area is not fully analyzed as part of any alternative. Sea turtle nests may be moved to a guarded hatchery to provide needed protection from poaching in developing countries where participation in hatchery operations may be used as an eco-tourism opportunity. Some county or privately owned beaches in Florida or Georgia may use hatcheries for sea turtle eggs in some circumstances, such as to allow beach nourishment.

However, county responsibilities for endangered or threatened species differ from federal, and particularly from NPS, responsibilities for these protected species. As a federal agency, the NPS has responsibilities under the ESA to protect the ecosystem as well as the species that depend on it. The purpose of the ESA is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" (sec. 2(b)). Protecting the ecosystem is also necessary to meet the requirements of the *Organic Act*, which mandates the NPS to conserve Seashore wildlife (refer to the "Other Applicable Federal Laws, Policies, Regulations and Plans" section in chapter 1 of this document).

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

Modify the Turtle Program

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

Comment [dw36]: Citation?

Additions to the Shorebird Monitoring Program and Data Collection

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

working with its Inventory and Monitoring Program, of which SECN is a part, for migratory bird data collection.

Implement a Volunteer Program to Assist with Species Protection

During public comment on the draft plan/EIS, commenters recommended the Seashore use volunteers to implement a range of species management measures such as monitoring nesting activity, a beach watch program, and vehicle escorts. The NPS recognizes the importance of encouraging stewardship through volunteer opportunities. At this time, NPS believes that the best use of volunteers would be in- a trained volunteer program for watching sea turtle nests that have reached their hatch windows ~~in order~~ to monitor ~~hatching~~hatchling emergence success and success reaching the water, and to ~~provide for the minimization of~~minimize negative impacts from artificial lighting, predation, and human disturbance. This program should enhance protection and encourage ownership/stewardship of resources among the public. However, at this time, the NPS believes that it would be more appropriate to use staff -to conduct morning turtle patrols, although volunteers -may be allowed to ride along with NPS turtle patrol staff. Given the strong opinions between the various groups that use the Seashore, the NPS would also not want to place its volunteers in situations that might put them in conflict with the public.

Comment [dw37]: SH: "more appropriate" isn't the question here. Why isn't this in the range of alternatives fully analyzed?

Create an Oversight Committee with External Experts and Scientists

NPS will seek technical advice as appropriate from other agencies with the relevant scientific expertise, such as the USFWS and individual advice and review from other species experts, but does not intend to form a committee under the Federal Advisory Committee Act (FACA) to advise on management~~.~~. NPS believes that this will be more efficient and effective than establishing a formal panel or committee under FACA.

Comment [dw38]: What was the suggestion that we are dismissing? Need to explain why this is not a reasonable alternative to analyze.

Open All Closed Areas after Breeding Season Is Over

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

Create New Habitat

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

- **Allow visitors in ORVs to enhance habitat by driving over vegetated areas**. It has long been documented that even a low level of ORV use can cause severe degradation of coastal vegetation (Leatherman and Godfrey 1979). The Seashore recognizes that ORV use at certain locations could be an effective way to manage the encroachment of vegetation into existing shorebird nesting habitat. However, use of ORVs to create new habitat implies a large-scale use of vehicles to remove vegetation, which is typically protected under various NPS regulations and under the

Executive Orders on ORV use. While removal of vegetation by any means to create new habitat may be appropriate and beneficial in certain circumstances, such a project would need to be planned, implemented, and studied by scientists or resource managers with the appropriate expertise. Therefore, allowing visitors in ORVs to create habitat was not considered in this plan/EIS.

- **Create habitat through physical alteration or the creation of dredge islands**. The NPS considered creating habitat through various methods. Based on the experience of staff at the NCWRC, habitat-creation projects tend to be short-lived and labor intensive. Based on experience with hand pulling, herbicides, fires, and bulldozing, it was found that most of these techniques are effective for only one season before the vegetation returns. Covering areas with new dredge material has been shown to last longer, with vegetation returning after four to seven years (Cameron pers. comm. 2007). Although the NPS recognizes that creation of habitat may be viable under certain circumstances, it is not an appropriate substitute for providing adequate protection of existing habitat. If this method is employed, it would occur outside the scope of the plan/EIS and therefore was not included in the alternatives.

Fence Chicks Away from the ORV Corridor

Commenters suggested using barrier fencing, rather than symbolic fencing, to keep chicks away from the ORV corridors. Unfledged piping plover and American oystercatcher chicks need access to the intertidal zone and moist substrate habitat for foraging and chicks of all beach nesting bird species may utilize those same areas for thermal regulation. Fencing chicks away from these areas would essentially reduce their chances of survival; therefore, this was not considered a reasonable alternative.

Do Not Provide Protection to the Seabeach Amaranth

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

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

Commenters suggested that only those species listed as threatened or endangered under the federal ESA should be considered in this plan/EIS. As stated above, the NPS has legal responsibilities under the ESA and its own policies to protected threatened and endangered species. Further, a number of laws, regulations, and policies, in addition to the ESA, guide species management at the Seashore, including the

Organic Act, the MBTA, NPS regulations and policies, Executive Orders 11644 and 11989: Use of Off-Road Vehicles on the Public Lands (see chapter 1), Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, and others (see chapter 1). Executive Order 11644 provides that areas designated for ORV use shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. NPS *Management Policies 2006* section 4.4.2.3 states, in part, that the NPS will inventory, monitor, and manage state- and locally listed species in a manner similar to its treatment of federally listed species to the greatest extent possible. In addition, the NPS will inventory other native species that are of special management concern to parks (such as rare, declining, sensitive, or unique species and their habitats) and will manage them to maintain their natural distribution and abundance. The combination of laws, regulations, and policies included in this section of the plan/EIS create the framework in which the alternatives are developed, which includes the need to manage species that are considered to be of special concern, such as state-listed species, or those addressed by the MBTA. Because of these responsibilities, only considering flora and fauna listed as federally threatened or endangered was not included in the plan/EIS alternatives.

OTHER ISSUES

Rebuild the Dunes

One commenter suggested the NPS rebuild the dunes in front of NC-12. While the NPS had engaged in ~~addressing~~ dune rebuilding activities in the past, such as to protect NPS structures on Bodie Island, this activity is beyond the scope of this plan/EIS and could be addressed later in the general management plan process that the Seashore will undertake in the future.

Prohibit Gill Net Fishing

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

Provide an Area for Off-Leash Dogs

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

~~Currently, pets at the Seashore are regulated under 36 CFR 2.135, which applies to all units of the national park system and prohibits pet owners from "failing to crate, cage, restrain on a leash which shall not exceed 6 feet in length, or otherwise physically confine a pet at all times." Creation of off-leash areas would not be consistent with 36 CFR 2.135 and would require promulgation of a special regulation allowing off-leash dog use, which is outside the scope of the plan/EIS. Therefore, this element was not carried forward in any alternative.~~

CONSISTENCY WITH THE PURPOSES OF NEPA

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

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

2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

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

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

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

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

CEQ Regulation 1500.2 establishes policy for federal agencies' implementation of NEPA. Federal agencies shall, to the fullest extent possible, interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in NEPA (sections 101(b) and 102(1)); therefore, other acts and NPS policies are referenced as applicable in the following discussion.

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

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

   Alternative D would provide year-round SMAs that would limit recreational access in these areas, particularly during the breeding season, and would offer the greatest level of species protection among the action alternatives. Through these access limitations, as well as other provisions such as seasonal night-driving restrictions and the implementation of a permit system that would provide user education and increase awareness alternative D would fully meet the purpose of fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations, by providing the greatest potential for the survival of sensitive species in the long term, while at the same time protecting other physical resources of the Seashore. Alternatives C, E, and F would meet this purpose to a large degree but not fully because of greater potential for impacts to sensitive species from human disturbance as ~~some~~ shorebird breeding habitat~~SMAs~~ in some locations would include pedestrian or ORV access corridors, thereby increasing recreational access to these sensitive areas. Alternatives E and F would not offer the same level of seasonal night-driving restrictions, with less hours closed each night, providing a somewhat lesser level of

protection than alternatives C and D. Further, providing opportunities for access either through park-and-stay or SCV camping under alternative E would also increase recreational access, introducing potential disturbance to protected species, as well as other physical resources at the Seashore.

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

2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

All alternatives meet this purpose to some degree because the Seashore is a safe visitor destination that is both esthetically and culturally pleasing. The action alternatives (alternatives C, D, E, and F) increase safety by establishing a 15 mph speed limit within the entire Seashore. For pedestrian user groups, the establishment of ~~vehicle-free area~~vehicle-free areas, particularly under alternative D, may provide the greatest safety and esthetic benefits as pedestrian and vehicular uses would be separated. However, alternative D does not establish any safety closures although most areas historically closed for safety reasons would be closed under alternative D. Alternative F would provide additional safety benefits by establishing right-of-way requirements and additional speed limit reductions when pedestrians are present. Also under the action alternatives, the designation of ~~establishment of~~ ORV routes and vehicle-~~-~~free~~non-ORV~~ areas would reduce the potential for, as well as the perception of, visitor conflict issues. Although actual visitor conflict~~s issues may or~~ may not always happen~~exist~~ when~~ith~~ these two uses occur in the same area, providing vehicle-~~-~~free~~non-ORV~~ areas would eliminate the potential for conflicts in those areas and address the feeling of those who perceive there could be a conflict or other safety issue.

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

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

All alternatives offer a wide range of visitor use opportunities, including vehicular use, recreational fishing, swimming, walking, sunbathing, other general beach recreation, and commercial fishing. However, the intensity of recreational use allowed under a particular alternative could lead to resource degradation or risks to health and safety. Alternative A allows the most intense levels of ORV and pedestrian use that could potentially lead to environmental degradation and safety concerns and only meets this purpose to some degree. Alternative B provides additional protection of natural resources through the establishment of larger buffers

and restrictions on night driving for sea turtle protection. However, this alternative does not directly address the level of recreational use and any safety or environmental concerns that may be associated with increasing visitor use patterns. Under alternative B, which bases closures on species behavior, there is the potential for large areas of the Seashore to be closed and these areas would vary from season to season based on protected species breeding behavior. Therefore, alternative B meets this purpose to a moderate degree due to added protection for sensitive species, but does not meet it to a larger degree because the provision of other uses of the Seashore would be unpredictable. A ~~The a~~ction alternatives C, D, and E include the establishment of SMAs, while alternative F relies on prenesting closures and ~~the designation of year-round and seasonal ORV routes and vehicle-free areas, along with~~ standard buffers when breeding activity is observed, to reduce the disturbance of habitat for sensitive species ~~and to provide for the separation of vehicular and pedestrian uses~~. These measures, combined with increased resource protection buffers, reduced speed limits, some measure of separation of vehicular and pedestrian uses, and methods for establishing a carrying capacity ~~so as~~ to reduce the environmental and safety concerns associated with large ~~number~~ numbers of vehicles and pedestrians in one area. Therefore, all action alternatives would meet the intent of this purpose to a moderate or large degree. However, alternative D would reduce the potential for environmental impacts and visitor conflicts by prohibiting vehicles in all SMAs year-round. Therefore, alternative D would fully meet this purpose.

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

Because none of the alternatives would result in impacts to cultural or historic resources that would exceed minor, these topics were dismissed from further analysis in this plan/EIS. Overall, since any impacts to cultural or historic resources would not exceed minor, all ~~alternative~~ alternatives would preserve important historic and cultural aspects of our national heritage in the long term and would meet this purpose to a large degree, with alternatives that restrict recreational access seasonally and at night (alternatives B, C, D, E, and F), meeting it for natural resources to a larger degree than alternative A. As discussed under criteria 1 and 2, due to use restrictions, alternatives C, D, E, and F would better protect resources, which would in turn support diversity, and due to the separation of visitor uses and addition of visitor amenities, would better support a variety of individual choices than alternatives A and B.

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

Balancing population and resource use under the plan/EIS would include protecting the resources unimpaired for the enjoyment of present and future generations and providing access for visitors to experience the natural resources of the Seashore. NPS *Management Policies 2006* states that the enjoyment that is contemplated by the *Organic Act* is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress, recognizing that the enjoyment by future generations of the national parks can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. As discussed above, alternatives C, D, E, and F would provide species management strategies that include pre-nesting areas, standardized buffers when breeding activities are observed, ~~SMAs,~~ and seasonal night-driving restrictions, as well as implementation of a permit system, all of which are expected to benefit the natural resources at the Seashore and

would provide an amenity (resources) for visitors to experience that would permit a high standard of living. All of the alternatives evaluated would allow some level of access to the Seashore that would contribute to the sharing of these amenities. As visitation to the Seashore increases and the population of the area continues to increase, having areas with designated resource closures under the action alternatives would contribute to the protection of the Seashore's natural resources.

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

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

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

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

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

However, as discussed in chapter 1 of this document, each of the alternatives would require that the Seashore continue to operate under the wise energy use guidelines and requirements stated in the NPS *Management Policies 2006*; Executive Order 13123, Greening the Government Through

Effective Energy Management; Executive Order 13031, Federal Alternative Fueled Vehicle Leadership; Executive Order 13149, Greening the Government Through Federal Fleet and Transportation Efficiency; and the 1993 NPS Guiding Principles of Sustainable Design and therefore would fully meet this purpose.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

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

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

- Providing SMAs in known breeding/nesting areas throughout the Seashore, all under ML1 management. Specifically, these SMAs would provide the following:
  - A proactive way to protect large areas of the Seashore where protected species are known to breed and nest by prohibiting ORV use and pets in these areas year-round and only allowing pedestrian access outside of the breeding season.
  - The greatest level of spatial and temporal protection through the establishment of SMAs that are all managed under ML1 procedures year-round.
  - A benefit to wintering bird populations at the Seashore that would also utilize the large vehicle-free areas provided under the SMAs for alternative D.
  - Buffers around those species found breeding/nesting outside the SMAs, further offering protection to protected species and species of concern at the Seashore.
  - Large, year-round ORV-free areas that would benefit other protected species, including sea turtles and seabeach amaranth.
  - A level of predictability to ORV users at the Seashore that would be expected to decrease the level of non-compliance with species management measures.
- Including seasonal night-driving restrictions in areas where ORVs are permitted that would restrict nighttime use from 7:00 p.m. to 7:00 a.m. from May 1 to November 15. The seasonal duration of the closures, as well as the length of the nightly closure, would offer protection to sea turtles nesting and hatching during that time, and allow Seashore staff the time to record and document nests each morning, decreasing the possibility of undiscovered nests.
- Minimizing the extent and location of interdunal roads, ramps, or parking lots that would be added, further minimizing disturbance under this alternative, when compared to alternatives C, E, and F.
- Implementing a permit system to provide ORV users with education that is expected to decrease the level of non-compliance related to resource closure areas.

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

NATIONAL PARK SERVICE PREFERRED ALTERNATIVE

To identify the preferred alternative, the planning team evaluated each alternative based on its ability to meet the plan objectives (see table 12) and the potential impacts on the environment (see chapter 4 of this document). Alternative F was identified as the NPS preferred alternative. Based on public and agency comments received on ~~alternative F as described in~~ the draft ~~ORV management plan/environmental impact statement (~~plan/EIS~~)~~, the NPS has revised the preferred alternative as described in this document (the final plan/EIS). A Record of Decision will follow the final EIS and will be made available to the public.

Comment [dw39]: This seems out of place

~~An interdisciplinary team, working with senior park and NPS managers,~~NPS considered the public comments throughout the planning process, cost efficiency, how effectively the alternatives would meet the stated purpose, need, and objectives of the plan, and the environmental benefits and adverse impacts for each alternative. Collectively, these factors were evaluated to arrive at the NPS preferred alternative.

Comment [dw40]: This may be unnecessary. Fix or delete.

Both alternatives D and F would ~~fully~~ meet most of the plan objectives either fully or to a large degree ~~and are very close in their degree of meeting of all objectives and their relative impacts~~. In terms of species protection, both alternatives would provide the necessary buffers, as well as the proactive establishment of pre-nesting areas and protection of nonbreeding shorebird habitat~~SMAs~~, ~~for the management of threatened and endangered species~~. Seasonal night-driving restrictions would be similar under both of these alternatives, offering comparable protection to sea turtles and foraging bird species. However, alternative F was chosen as the preferred alternative because it would provide not only effective resource protection but also would provide ~~the~~ Seashore visitors with more diverse options for access and recreational use~~flexibility in management~~. Providing approximately 26 miles of the Seashore that are designated vehicle-free areas (VFAs) year-round, while 28 miles are open to ORV use year-round (subject to resources closures), would provide for a greater diversity of visitor use. Although designation of all SMAs as year-round ORV closures under alternative D would provide the necessary resource protection, the use of ML1 buffers in all SMAs would preclude all visitor access in these areas during the breeding season. ~~i~~If protected species do not fully utilize portions of the SMAs or if ~~the~~ conditions of the Seashore change and habitat changes, alternative D does not provide as much flexibility for the Seashore to manage visitor access as alternative F, which provides for designated ORV routes ~~areas that are open to ORV use~~that would remain open unless protected species activity results in a resource closure.~~, until a resource closure is warranted~~. ~~for the NPS to respond to these conditions.~~ ~~Further, alternative F would provide additional and flexible protection to nonbreeding species through "floating" species closures each year, providing more protection for the species during this life stage than alternative D.~~ In addition to ~~flexibility in~~ providing species protection~~,~~ both during the breeding and nonbreeding seasons, alternative F would also provide more flexibility and range of experience for visitor use and would enhance access to both ~~vehicle free areas~~VFAs and designated ORV routes by~~, including~~ establishing new parking areas, pedestrian trails, interdunal routes, and ORV ramps~~as well as providing both ORV and non-ORV use in SMAs~~. Because alternative F provides for a greater variety of uses throughout the Seashore, it would have less of an impact on~~of~~ the socioeconomics ~~resource~~ of the area as well. As detailed in the impact analysis in chapter 4, alternative D would have greater impacts to the economy of the villages within the Seashore. In addition to the measures described above, alternative F also would mitigate the potential economic and visitor impacts by encouraging alternative forms of access (water taxi and beach shuttle) to certain

Comment [dw41]: What measures?

popular areas during times when they may be open for pedestrian use, but the beach to access them may be closed due to a resource closure, By providing an ~~alternative~~alternate means for accessing these areas, beneficial economic impacts would be expected. Alternative F was also selected as the NPS preferred alternative because it ~~would~~ incorporates concepts and measures that originated in or were discussed during~~input from~~ the negotiated rulemaking process ~~as well as concepts and suggestions provided during comment on the draft plan/EIS~~, providing more public input. For these reasons, alternative F was selected as the preferred alternative.

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

Alternatives A and B, on the whole, would meet the objectives from some degree to a moderate degree. These alternatives would not meet key objectives (such as those related to providing protection for threatened and endangered species and minimizing impacts to other natural resources at the Seashore) as well as the action alternatives. Because these alternatives would not meet the objectives to a large degree, they were not selected as the preferred alternative.

~~NPS has will considered comments on this draft plan/EIS and may modifiedy or adjusted the preferred alternative accordingly. TheseAny modifications or adjustments are will be disclosed in the published final EIS. A Record of Decision will follow the final EIS and will be made available to the public.~~

Comment [dw42]: Confusing. If these areas are closed, how is an alternative transportation method going to access them?

Comment [dw43]: It was selected as the preferred alternative before the comment period. Also, public/agency comments were incorporated into Alt-F because it was already the preferred alternative, no?

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From: Doug Wetmore
To: lfox@louisberger.com; Sandra Hamilton/DENVER/NPS@NPS
Subject: chapter 2 text
Date: 09/16/2010 11:40 AM
Attachments: 02a_Chapter-2_1st_Draft_FEIS_Text_090710[1].mbm_dw_sh.doc

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Hi Lori.

Use this version of Chapter 2 text instead of the last one I sent. It includes all of Jason W's comments.

02a_Chapter-2_1st_Draft_FEIS_Text_090710[1].mbm_dw_sh.doc

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