

0023225

**From:** [Mike Murray](#)  
**To:** [Doug Wetmore](#)  
**Subject:** Fw: revised ORV documents  
**Date:** 02/22/2012 02:04 PM  
**Attachments:** [CAHA SM Table.v03.13.09.doc](#)  
[CAHA ORV Alts A-F Matrix.Park edits.v03.13.09.doc](#)

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See below.

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----- Forwarded by Mike Murray/CAHA/NPS on 02/22/2012 03:59 PM -----

**Sandra  
Hamilton/DENVER/NPS**

03/13/2009 05:41 PM

To: Mike Murray/CAHA/NPS@NPS  
cc: "Wetmore, Doug" <[dwetmore@louisberger.com](mailto:dwetmore@louisberger.com)>, Jami Hammond/Atlanta/NPS@NPS, [lfox@louisberger.com](mailto:lfox@louisberger.com)

Subject: Re: revised ORV documents 

Thanks, Mike.

Sorry to add to everyone's stress. I thought we were leaving alts A - E as they are on PEPC, except for those few items that need clarification or that are internally conflicting between the tables. And I thought we were including the additional proposals generated in committee discussion, such as self-contained camping, in the new Alt F.

Alts C - E have already gone through WASO level approval before being released to the committee/public and I have concerns about changing them now. I've only skimmed the new table, but if there are enough changes, and we can't include them in Alt F, then maybe we could consider making your revised E a new alt G. All this has budget and time implications and we should discuss as a group before going any further.

If everyone copied on this email (plus anyone from the park you want to include, Mike) will let me know when you could be available for a call Tues - Friday next week, I'll set one up. Thanks.

Sandy

Sandy Hamilton

0023226

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**Mike  
Murray/CAHA/NPS**

To Sandra Hamilton/DENVER/NPS@NPS  
cc lfox@louisberger.com, "Wetmore, Doug"  
<dwetmore@louisberger.com>, Jami  
Hammond/Atlanta/NPS@NPS

03/13/2009 03:52 PM EST

Subject revised ORV documents

Sandy,

Here are two revised documents: 1) Species Management Table - new name to go with "Species Management Areas" (SMAs) and SM1 and SM2 protocols; and 2) ORV Alternatives Matrix. Had trouble with the imbedded table formatting in the latter document (e.g., the vertical text direction in the left hand column keeps changing itself back to horizontal; some of the rows kept overlapping each other, I'd fix it, then it would do it again on its own, etc.), so I gave up on trying to deal with formatting and tried to focus on the content. Hopefully, it is readable and Doug can clean up the formatting without losing any content. Left the revisions in Track Changes, so it is pretty messy unless you look at it in Final.

We've made revisions in the Species Management Table in a way to eliminate the need for the Alternative E Site Specific Plans for Bodie Island Spit, Cape Point, and South Point Ocracoke. For example, based on environmental stakeholder and wildlife agency feedback during the RegNeg, we eliminated the reduced buffers for pass-through corridors and identified it as an adaptive management issue to determine if reduced pass-through buffers are effective. Other aspects of the site specific plans (locations of access corridors during prenesting, vegetation management, social attraction for CWB, etc.) are now being addressed in the general species management table (e.g., as adaptive management issues) and therefore do not need to be described specifically for each site.

Also, made some revisions in the Alternative Matrix to incorporate as much language from the RegNeg as possible. Added some concepts to Alternative E that came up in the RegNeg (self-contained vehicle camping, park and stay at the spits and points during the night driving restriction, and differing treatment of village beaches for north and south villages), so that the concepts are included for consideration.

Will work on Routes and Areas Table over the weekend.



CAHA SM Table.v03.13.09.doc



CAHA ORV Alts A-F Matrix.Park edits.v03.13.09.doc

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## ORV Management Alternatives Matrix\*\*

Park edits 3/131/09

Cape Hatteras National Seashore  
 ORV Management Plan/Environmental Impact Statement

Management Activity	Alternative A—No Action, Continuation of Management under IPSMS	Alternative B – No Action, Continuation of Management Under Consent Decree	Alternative C – Seasonal Management	Alternative D – Increased Predictability and Seasonal Management	Alternative E – Variable Access and Maximum Management	Alternative F
<b>ORV Routes, Areas, and Corridors</b>	<p>All areas of the Seashore are potentially open to ORV access. Refer to Routes and Areas Table.</p> <p>The ORV corridor will 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 as noted in the Interim Protected Species Management Strategy. The corridor width will fluctuate over time due to the dynamic nature of beach and surf. (Superintendent's Order #7).</p>	<p>Same as alternative A, except:</p> <p>In all locations not in front of the villages that are open to ORV use, NPS shall provide an ORV-free zone in the ocean backshore at least 10 m wide, wherever there is sufficient beach width to all an ORV corridor of at least 20 m above the mean high tide line, from March 15 to November 30.</p>	<p><u>General: ORV access would be prohibited in all areas of the Seashore except where ORV routes are specifically designated. Refer to Routes and Areas Table.</u></p> <p><u>An ORV route would be a designated location where ORV travel may be authorized by the Superintendent, but may be temporarily closed to ORV use to protect park resources, provide for visitor safety, or prevent user conflicts.</u></p> <p><u>An ORV corridor would be the actual physical demarcation of the route in the field, generally using carsonite posts.</u></p> <p><u>Corridor Marking: ORV corridors along the ocean beach or sound shoreline would be posted on the seaward side of the toe of dune or vegetation line and would extend to the high tide line (seaward side not posted). Where the ocean beach is at least 30 m wide above the high tide line, the corridor would be posted 10 m seaward of the toe of the dune. ORV routes through vegetated areas, such as interdunal roads and ramps, would be posted on both sides of the corridor.</u></p> <p><u>Seasonal Designation: Access to some ORV routes varies seasonally as indicated in Routes &amp; Areas Table. Seasonal ORV closures of Species Management Areas (SMAs) and village beaches would occur March 15-October 14.</u></p>	<p><u>Same as alternative C, except:</u></p> <p><u>There would be no seasonal designation of routes (i.e., there would only be year-round designations).</u></p>	<p><u>Same as alternative C, except:</u></p> <p><u>Seasonal Designations: Would occur as indicated in Routes and Areas Table. Seasonal ORV closures of SMAs would occur March 15 – August 31 and of village beaches would occur as described in next section of this table.</u></p> <p><u>Site Specific Measures: When prenesting closures are implemented at Bodie Island Spit, Cape Point and South Point Ocracoke, an initial ORV corridor would be established. Refer to Site Specific Plans for these sites. Upon the first observation of breeding activity, the standard buffers will apply, which depending upon the circumstances may close the access corridor.</u></p>	<p><u>Same as alternative C, except:</u></p> <p><u>Seasonal Designations: Would occur as indicated in Routes and Areas Table. Seasonal ORV closures of SMAs would occur March 15 – July 31 and of village beaches would occur as described in next section of this table.</u></p> <p><u>Site Specific Measures: When prenesting closures are implemented at Cape Point and South Point Ocracoke, an initial ORV corridor not more than 50 m wide would be established. Upon the first observation of breeding activity, the standard buffers will apply, which depending upon the circumstances may close the access corridor.</u></p>

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>Village Beaches</b>	<p>"Village beaches," as identified below, are seasonally closed to ORV use from May 15 through September 15:</p> <ul style="list-style-type: none"> <li>- Bodie Island, Ramp 1 to 0.6 miles south of Coquina Beach</li> <li>- Beaches fronting the villages of Rodanthe, Waves, Salvo, and Avon</li> <li>- Beach fronting Buxton south to Ramp 43</li> <li>- Beaches fronting the villages of Frisco and Hatteras</li> <li>- Ocracoke Island from 0.5 miles South of Ramp 67 to 0.25 miles North of Ramp 70</li> </ul>	<p>Same as alternative A, except:</p> <ul style="list-style-type: none"> <li>- Beach fronting Buxton south to 0.4 mile north of Ramp 43 is seasonally closed (Ramp 43 to 0.4 mile north is open to ORVs)</li> </ul>	<p>Village beaches would be closed to ORV use, as described below:</p> <ul style="list-style-type: none"> <li>- Bodie Island from Ramp 1 to approx. 0.5 miles south of Coquina Beach and the beach fronting Buxton south to 0.4 miles north of Ramp 43 would be non-ORV year-round.</li> <li>- Beaches fronting Rodanthe, Waves, Salvo, Avon, Frisco, Hatteras Village, and Ocracoke Island from 0.5 miles South of Ramp 67 to 0.25 miles North of Ramp 70 would be closed to ORVs March 15 – Oct 14.</li> </ul>	<p>All village beaches would be closed to ORV use year-round.</p>	<p>Village beaches would be closed to ORV use, as described below:</p> <ul style="list-style-type: none"> <li>- Bodie Island from Ramp 1 to approx. 0.5 miles south of Coquina Beach and the beach fronting Buxton south to 0.4 miles north of Ramp 43 would be non-ORV year-round.</li> <li>- Northern Hatteras Island village beaches (fronting Rodanthe, Waves, Salvo, and Avon) would be closed to ORVs May 15 - Sept 15</li> <li>- Southern Hatteras Island village beaches (fronting Frisco, Hatteras) would be closed to ORV use year-round</li> <li>- Ocracoke Island from 0.5 miles South of Ramp 67 to 0.25 miles North of Ramp 70 would be closed to ORV March 15 – Oct 31</li> </ul>	<p>Village beaches would be closed to ORV use, as described below:</p> <ul style="list-style-type: none"> <li>- Bodie Island from Ramp 1 to approx. 0.5 miles south of Coquina Beach and the beach fronting Buxton south to 0.4 miles north of Ramp 43 would be non-ORV year-round</li> <li>- Northern Hatteras Island village beaches (fronting Rodanthe, Waves, Salvo, and Avon) would be closed to ORVs May 15 - Sept 15</li> <li>- Southern Hatteras Island village beaches (fronting Frisco, Hatteras) would be closed to ORVs March 1 - November 30</li> <li>- Ocracoke Island from 0.5 miles South of Ramp 67 to 0.25 miles North of Ramp 70 would be closed to ORV use when campground is open (approx. April 1 - October 31)</li> </ul>
	<b>ORV Access</b>	<p><u>Oceanside Access</u></p> <p>ORV access is provided via 17 oceanside ramps and access points located off NC-12.</p> <p>Ramps are numbered and identified on the Seashore's ORV route map as official vehicle access routes.</p> <p>Seashore staff maintains ramps and signage.</p>	<p>Same as alternative A</p>	<p><u>Oceanside Ramps</u></p> <p>[See ORV Routes and Areas Table for details.] Sections of ocean beaches and ramps and interdunal roads would be designated as ORV routes as indicated for this alternative in the Routes and Areas Table.</p> <p><u>Oceanside Ramps</u></p> <p>[See ORV Routes and Areas Table for details.]</p>	<p>Sections of ocean beaches and ramps and interdunal roads would be designated as ORV routes as indicated for this alternative in the Routes and Areas Table.</p> <p><u>Oceanside Ramps</u></p> <p>[See ORV Routes and Areas Table for details.]</p>	<p><u>Oceanside Ramps</u></p> <p>[See ORV Routes and Areas Table for details.] Sections of ocean beaches and ramps and interdunal roads would be designated as ORV routes as indicated for this alternative in the Routes and Areas Table.</p>
<p><u>Soundside Access</u></p> <p>ORV access is provided via 18 soundside access points located off NC-12.</p> <p>Seashore staff maintains ramps and signage.</p>		<p>Same as alternative A</p>	<p><u>Soundside Ramps</u></p> <p><del>Existing soundside ORV access points would be designated as ORV routes and ramps would remain open with sufficient maintenance for clear passage and route signage to prevent impacts to vegetation.</del></p> <p><del>Signage/posts would be installed at the primitive parking areas and boat launch areas to prevent damage to vegetation and other soundside resources.</del></p>	<p><u>Soundside Ramps</u></p> <p>Same as alternative A.</p> <p>Same as alternative A.</p>	<p><u>Soundside Ramps</u></p> <p>Same as alternative A.</p> <p>Same as alternative A.</p>	<p><u>Soundside Ramps</u></p> <p>Soundside ORV access ramps to designated boat launch areas and Pole Road access to Cable Crossing and Spur Road would be designated as ORV routes and remain open with sufficient maintenance for clear passage and route signage to prevent impacts to vegetation.</p> <p><del>open</del>—The remaining soundside ramps would be closed to ORV use and small parking areas would be constructed to provide pedestrian access to the water.</p>

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<u>Interdunal Roads</u>			<u>Interdunal Roads</u>		<u>Interdunal Roads</u>	
One lane, interdunal routes have been designated as follows:						
<i>Bodie Island Ranger District</i> <input type="checkbox"/> None.	Same as alternative A	Same as alternative A, plus: <input type="checkbox"/> Existing interdunal roads would be maintained as needed to provide access to ORV areas. Pull-outs or road widening would be provided where appropriate to provide safe passage.	Same as alternative A	Same as alternative A	Same as alternative C, plus: <i>Bodie Island Ranger District</i> <input type="checkbox"/> Same as alternative A	Same as alternative C
<i>Hatteras Island Ranger District</i> <input type="checkbox"/> Cape Point between Ramp 44 to Ramp 45 <input type="checkbox"/> Hatteras Inlet Spit from Ramp 55 to the inlet (includes Pole Road and Spur Road).	Same as alternative A	Same as alternative A, plus: <input type="checkbox"/> Extend interdunal road west of Ramp 45 to new Ramp 49. Establish new Ramps 47 and 48 off of interdunal road <input type="checkbox"/> Make Pole Road two lanes wide	Same as alternative A	Same as alternative A	Same as alternative C, plus: <input type="checkbox"/> Extend interdunal road west of Ramp 45 to Ramp 49. Establish new Ramp 47 off of interdunal road.	Same as alternative C, plus: <u>Hatteras Inlet Spit:</u> - Re-route Pole Road toward the sound on west side of the Overwash Fan to provide natural barrier to bird nesting area south of road. - Establish new interdunal road parallel to the beach, with SW and NE extensions, from the southern terminus of Pole to provide access to False Point and inlet.
<i>Ocracoke Island Ranger District</i> <input type="checkbox"/> None.	Same as alternative A	Same as alternative A	Same as alternative A	Same as alternative A	Same as alternative A	Establish interdunal road parallel to the beach from Ramp 59 for 0.3 miles NE toward the inlet

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### ORV Management Alternatives Matrix\*\* Park edits 3/13/09

Hours of Allowable ORV Operation on Beach	All areas of the seashore open 24 hours a day year round.	<p>November 16 – April 30: All beaches open to ORV use 24 hours a day.</p> <p>May 1 – November 15: Beaches open from 6:00 a.m. to 10:00 p.m.; and closed from 10:00 p.m. – 6:00 a.m.; except that from September 16 to November 15 ORV use is allowed from 10:00 p.m. – 6:00 a.m. subject to terms and conditions of a permit.</p>	<p>November 16 through April 30: Designated ORV routes and areas open to ORV use 24 hours a day.</p> <p>May 1 – November 15: All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) closed to non-essential ORV use from <u>1 hour after sunset until turtle patrol has checked the beach in the morning (by approximately ½ hour after sunrise), 7:00 p.m. to 7:00 a.m.</u></p>	<p><del>November 16 through April 30: Designated ORV routes and areas open to ORV use 24 hours a day.</del></p> <p><del>May 1 – November 15: All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) closed to non-essential ORV use from 7:00 p.m. to 7:00 a.m. Same as alternative C</del></p>	<p><del>November 16 – April 30: Designated ORV routes and areas open to ORV use 24 hours a day</del></p> <p><del>May 1 – September 15: All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) closed to non-essential ORV use from 10:00 p.m. until 6:00 a.m. Same as alternative B, except:</del></p> <p><del>May 1 – September 15: "Park and stay" overnight would be allowed with a permit at selected spits and points, if not otherwise closed to ORVs and/or visitors due to bird closures, with the following limits on the number of vehicles at each site: 15 vehicles per spit; 25 each at Cape Pt and South Pt. Terms and conditions: no departure during hrs of night driving prohibition, except 911 escape with escort; self-contained toilet required; designated parking pens with SM2 buffers; and "steward" present at all locations.</del></p> <p><del>ORV and pedestrian access to Bodie Island Spit, Cape Point, and South Point Ocracoke would be subject to additional time constraints when chick protection closures are in effect.</del></p> <p><del>September 16 – November 15: Only ORV routes and areas with no or low density of turtle nests remaining would be re-opened to night driving between 10:00 p.m. and 6:00 a.m., subject to terms and conditions of permit.</del></p> <p><del>September 16 – November 15: ORV routes and areas with no or low density of turtle nests remaining (as determined by NPS) open between 10:00 p.m. and 6:00 a.m. subject to terms and conditions of permit.</del></p> <p><del>ORV and pedestrian access subject to additional time constraints prescribed by the Site Specific Plans applicable to Bodie Island Spit, Cape Point, and South Point Resource Areas.</del></p>	<p>Same as alternative C, except:</p> <p>September 16 – November 15: Selected ORV routes with no or low density of turtle nests remaining would be re-opened for night driving, subject to terms and conditions of an ORV permit.</p>
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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>ORV Routes</b>	<p>The ORV corridor will 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 as noted in the Interim Protected Species Management Strategy. The corridor width will fluctuate over time due to the dynamic nature of beach and surf. (Superintendent's Order #7)</p>	<p>Same as alternative A, except: In all locations not in front of the villages that are open to ORV use, NPS shall provide an ORV-free zone in the ocean backshore at least 10 m wide, wherever there is sufficient beach width to allow an ORV corridor of at least 20 m above the mean high tide line, from March 15 to November 30.</p>	<p>ORV <b>beach routes</b> (corridors?) would be a designated area seaward from the toe of dune or vegetation line to high tide line.</p>	<p>Same as alternative C.</p>	<p>September 1 — March 14: ORV beach routes would be a designated area seaward from the toe of dune or vegetation line to high tide line. March 15 — August 31: ORV beach routes would be a designated area from 10 meters from the toe of the dune to the existing tide line in areas open to ORV use. Such backshore closures would be implemented only when there is sufficient beach width to allow an ORV corridor of at least 20 meters above the mean high tide line.</p>	
<b>ORV Use Areas</b>	<p>All areas of the Seashore are open to ORV access. Refer to Routes and Areas Table.</p>	<p>Same as alternative A.</p>	<p>ORV access would be prohibited in all areas of the Seashore except where routes and areas are specifically designated. Access to ORV routes and areas varies seasonally. No ORV access provided to points and spits from March 15-October 14. Refer to Routes and Areas Table</p>	<p>ORV access would be prohibited in all areas of the Seashore except where routes and areas are specifically designated. Refer to Routes and Areas Table.</p>	<p>ORV access would be prohibited in all areas of the Seashore except where routes and areas are specifically designated. Access to ORV routes and areas varies seasonally. Limited ORV access provided to designated points and spits at certain times during the breeding season. Refer to Routes and Areas Table and Site Specific Plans for Bodie Island Spit, Cape Point, and South Point Resource Areas.</p>	

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## ORV Management Alternatives Matrix\*\*

Park edits 3/13/09

<p><b>ORV Safe Safety Closures</b></p>	<p><del>Safety closures apply only to ORV safety.</del> ORV safety closures established as needed to address safety conditions such as debris on the beach or narrow beaches. Narrow beaches are reopened as the beach widens. Safety closures applicable only to ORV access; pedestrian access is maintained.</p> <p>Existing ORV safety closures include:</p> <ul style="list-style-type: none"> <li>▪ Ramp 1 to Ramp 2</li> <li>▪ 1.8 miles south of Ramp 38 to 0.4 mile north of Ramp 43.</li> <li>▪ Buxton to Lighthouse Beach</li> <li>▪ Northern boundary of Frisco to Hatteras Village</li> <li>▪ September 16 – May 14: Hatteras Village</li> <li>▪ 1.5 miles north of Ramp 67 to 1 mile south of Ramp 59</li> </ul>	<p>Same as alternative A.</p>	<p><del>An ORV Safety Closure would be implemented in the event of a clear and imminent threat of significant bodily injury or death; and/or damage to personal property, including vehicles and their contents. Triggers that could justify a safety closure include, but are not limited to:</del></p> <ul style="list-style-type: none"> <li>- <del>Deep beach cuts that block the beach from dune to surf with no obvious way around</del></li> <li>- <del>Obstacles, such as exposed stumps, shipwrecks, or debris that cannot be safely bypassed or that block the entire width of the beach and cannot be easily removed</del></li> <li>- <del>Severe beach slope that puts vehicles in an unsafe gradient position and increases the chances of the loss of vehicular control</del></li> <li>- <del>A high concentration of pedestrian users coupled with a narrow beach</del></li> </ul> <p><del>Triggers do not include:</del></p> <ul style="list-style-type: none"> <li>- <del>A narrow beach by itself</del></li> <li>- <del>High tides which block access through portions of beaches occur periodically and predictably, and are an obvious, easily avoidable hazard</del></li> <li>- <del>Hazards blocking only a portion of the beach, where safe passage is available around the hazard.</del></li> </ul> <p><del>ORV Safety closures established in areas open to ORV use as needed to address ORV and pedestrian safety considerations, including debris on the beach, narrow beaches, and congested areas. Safety closures would preclude ORV access, while pedestrian and commercial fishing access would be maintained through all most safety closures.</del></p> <p><del>NPS law enforcement staff will monitor ORV safety closures on a weekly basis. Sufficient reduction or elimination of the conditions prompting the closure, so there is no longer an imminent hazard, would constitute the trigger for re-opening a closure. Safety closures would be reopened when/if conditions improve as determined by monitoring every two weeks by Seashore law enforcement.</del></p>	<p>Safety closures would not be established. ORV drivers would need to determine conditions and safety and would drive at own risk.</p>	<p>Same as alternative C, plus: <del>For village beaches that are open to ORV use during the winter season, the village beaches must be at least 30 m (100 ft) wide from the toe of the dune seaward to mean high tide line in order to be open to ORV use.</del></p>	<p>Same as alternative C</p>
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## ORV Management Alternatives Matrix\*\*

Park edits 3/13/09

<b>Pedestrian Safety</b>	<p><u>36 CFR § 4.20 RIGHT OF WAY</u></p> <p><u>An operator of a motor vehicle shall yield the right of way to pedestrians, (saddle and pack animals, and vehicles drawn by animals). Failure to yield the right of way is prohibited.</u></p> <p><u>36 CFR § 4.22 UNSAFE OPERATION</u></p> <p><u>(b) The following are prohibited:</u></p> <p><u>(3) Failing to maintain that degree of control of a motor vehicle necessary to avoid danger to persons, property or wildlife.</u></p> <p><u>No additional measures apply.</u></p>	Same as alternative A	<p><u>Same as alternative A, plus the following measures would apply:</u></p> <ul style="list-style-type: none"> <li><u>- Vehicles must yield to pedestrians on all routes</u></li> <li><u>- When approaching or passing a pedestrian(s) on the beach, ORVs shall move to the landward side of the available ORV driving in order to yield the wider portion of the beach corridor to the pedestrian(s).</u></li> <li><u>- ORVs shall slow to 5 mph (or the slowest possible speed to maintain traction without exceeding the overall speed limit) when traveling within 10 meters (30 ft) or less of pedestrians at any location on the beach at any time of year.</u></li> <li><u>- Pedestrians should not block access ramps and should use pedestrian ramps/boardwalks where available. If a pedestrian walkover is not available, pedestrians should walk to the side of ORV ramps, not in the tire tracks.</u></li> </ul>	Same as alternative C	<p><u>Same as alternative C, plus:</u></p> <p><u>For village beaches that are open to ORV use during the winter season, the village beaches must be at least 30 m (100 ft) wide from the toe of the dune seaward to mean high tide line in order to be open to ORV use.</u></p>	Same as alternative C
<b>Administrative ORV Closures</b>	<p>Beach in front of Cape Hatteras Lighthouse closed to ORV access.</p> <p>Buxton Woods road closed to ORV access.</p>	Same as alternative A-	<p>No administrative closures would be established. <u>ORV routes would be designated as described in the Routes and Areas Table. (Buxton Woods road is a non-ORV area.)</u></p>	Same as alternative C-	Same as alternative C-	Same as alternative C
<b>Ramp Characteristics</b>	<p><u>Ramp width and construction details vary. Current practice is to use shell/clay base material to provide firm driving surface where ramps crosses dune line</u></p>	Same as alternative A	<p><u>Preferably, each ORV route would have an access ramp at either end of the route.</u></p> <p><u>Ramps would be 2-lanes wide with shell/clay base</u></p> <p>Standard regulatory signs and information boards at all ramps</p> <p>Gates at all ramps and access points</p> <p>Designated air down area with hardened surface (e.g., shell/clay base)</p>	Same as alternative C-	<p>Same as alternative C-, plus for "high use" ramps (to be determined); add toilet facility</p>	Same as alternative C

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>Wintering Closures</b>	Suitable interior habitats at spits and at Cape Point closed year-round to all recreational users to provide for resting and foraging for all species. For example, at present, such suitable habitats include ephemeral ponds and moist flats at Cape Point, Hatteras Spit, Ocracoke, and Bodie Island Spit. Actual locations of suitable foraging and resting habitat may change periodically due to natural processes.	Same as alternative A	Based on an annual wintering habitat assessment of the Resource Areas (RA) conducted per the guidelines of the Resource Protection Measures Table. Wintering closures are established within the respective RAs, while allowing an access corridor (pedestrian or pedestrian/ORV), the exact terminus and configuration to be determined by NPS resource management staff based on the annual habitat assessment.	Same as alternative C	Same as alternative C	
<b>Resource Protection Buffers</b>	As identified in the Interim Strategy	As identified in the Interim Strategy, as modified by the Consent Decree.	SM1 and SM2 as described in the Resources Protection Measures Table. Implement SM1 at all locations, except implement SM2 at areas designated in Routes and Areas Table (Bodie Island Spit, Cape Point, and South Point).	SM1 as described in the Resources Protection Measures Table. Implement alternative SM1 at all locations.	SM1 and SM2 as described in the Resources Protection Measures Table. Implement SM1 at all locations, except implement SM2 at areas designated in Routes and Areas Table (Bodie Island Spit, Cape Point, North Ocracoke Spit, and South Point).	
ORV buffers are established for observed breeding behavior. See Resources Protection Measures Table for SM1 and SM2 alternatives.						
<b>ORV Permit Requirements</b>	No ORV permits required.	Night Driving Permit required for ORV use from 10:00 p.m. – 6:00 a.m. September 16 – November 15.	ORV Vehicle permit required.	Same as alternative C. Vehicle permit required.	Same as alternative C. Vehicle permit required.	Same as alternative C
<b>ORV Permit Distribution</b>	n/a	Available in-person at various locations within the Seashore and on-line. To follow Seashore guidelines to be developed	Same as alternative B, except: Specific locations and on-line methodology will change. Available in-person at various locations and on-line.	Same as alternative C.	Same as alternative C.	Same as alternative C
<b>ORV Permit Issuance Requirements</b>	n/a	ORV owner must sign permit to acknowledge understanding of the rules and must carry when beach driving during the restricted period. Night driving permit application process has an educational component and the permit contains restriction on light use.	ORV owner must complete educational program and read the rules and regulations governing ORV use at the seashore and complete a written or on-line basic knowledge test exam to receive permit. Permittee would sign for their permit to acknowledge understanding of the rules in acknowledgement that they understand the rules and that all drivers will abide by the rules and regulations governing ORV use at the seashore, including beach driving safety, and resource closure requirements.	ORV owners must sign for the permit in acknowledgement that they understand the rules and that all drivers will abide by the rules and regulations governing ORV use at the seashore, including beach driving safety, and resource closure requirements. Same as alternative C, except: <u>No basic knowledge test required</u>	Same as alternative C.	Same as alternative C
<b>ORV Permit Number Limits</b>	n/a	No limit on night driving permits	No limit	Same as alternative C.	Same as alternative C.	Same as alternative C

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>ORV Permit Types</b>	n/a	Night driving permit for Sept 16 – Nov 15	Annual permits would be available that would be valid for 12 months from date of purchase so as to span seasonal use.	Annual permits would be available. Valid for calendar year.	Annual and short-term permits (e.g., weekly) <u>would be available, valid from date of purchase. A separate park-and-stay permit and self-vehicle (SCV) camping permit would be required for those activities under this alternative.</u>	<u>Annual and short-term permits (e.g., weekly) would be available, valid from date of purchase.</u>
<b>ORV Permit Fees</b>	n/a	None	<u>There would be an ORV permit fee, subject to cost recovery</u>	Same as alternative C, <u>except: (although fee would be lower than alternative C due to decreased management costs under this alternative)</u>	Same as alternative C, <u>except: There would be a fee for the respective permits, subject to cost recovery. Fee for short-term permit would be less than fee for annual permit. Fees subject to cost recovery, with lower price for short-term or off-season permit (although fee would be higher than alternative C due to increased management costs under this alternative)</u>	Same as alternative C, <u>except: Fee for short-term permit would be less than for annual permit</u>
<b>ORV Permit Form</b>	n/a	<u>PNight driving permit is a brochure that, when in use, is to be placed on the dash in full view to follow Seashore guidelines</u>	Permit <u>is issued to vehicle owner, along with a sticker to be</u> affixed to vehicle in a manner approved by the NPS.	Same as alternative C-	Same as alternative C-	<u>Same as alternative C</u>
<b>ORV Permit Revocation</b>	n/a	<u>Permit may be revoked for violation of applicable park regulations or terms and conditions of the permit. Night driving permit to follow Seashore guidelines</u>	<u>A permit may be revoked for violation of applicable park regulations or terms and conditions of the permit. Same as alternative B</u>	Same as alternative <u>BC-</u>	Same as alternative <u>BC-</u>	<u>Same as alternative B</u>
<b>Beach Parking on the Beach</b>	Parking within routes is allowed in any configuration, <u>as long as it does not obstruct traffic.</u>	Same as alternative A.	Same as alternative A-	Parking within ORV routes is allowed, but only one vehicle deep. Stacking of vehicles in more than one row would be prohibited.	Same as alternative A-	<u>Same as alternative A</u>

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>Vehicle Carrying Capacity Determination</b>	<del>Vehicle carrying capacity would not be determined. None</del>	Same as alternative A-	<p>Carrying capacity would be established for all areas <del>open to ORV use (to be determined)</del> based on the <del>miles of beach open at any particular location or linear feet of beachfront</del> and the following physical space requirements ("miles" refers to miles of beach open to ORV use):</p> <p><u>All locations, except Cape Point:</u></p> <ul style="list-style-type: none"> <li>- <del>Bodie Island Ranger District</del> 260 vehicles/mile (20 feet/vehicle)</li> <li><u>Cape Point:</u></li> <li>- 400 vehicles allowed within a 1 mile area centered on Cape Point.</li> </ul> <p>Carrying capacity is applicable year-round, with the focus being on peak use periods.</p> <p>Temporary exceptions to carrying capacity limits may be approved for events operating under a special use permit.</p>	Same as alternative A-	<p>Carrying capacity would be established for all areas based on their linear feet of beachfront and the following physical space requirements:</p> <p><del>Bodie Island Ranger District</del></p> <ul style="list-style-type: none"> <li>*260 vehicles/mile (20 feet/vehicle)</li> </ul> <p><del>Hatteras Island Ranger District</del></p> <ul style="list-style-type: none"> <li>*260 vehicles/mile (20 feet/vehicle);</li> <li>except:</li> <li>*Same as alternative C Cape Point— 400 vehicles allowed within a 1 mile area centered on Cape Point.</li> </ul> <p><del>Ocracoke Island Ranger District</del></p> <ul style="list-style-type: none"> <li>*175 vehicles/mile (30 feet/vehicle)</li> </ul> <p>Exceptions to carrying capacity limits may be approved for events operating under a special use permit.</p>	Same as alternative C
<b>Temporary Emergency Beach Closures</b>	Temporary emergency closures established per Superintendent's Compendium and NPS policy.	<p>In addition to beach closure restrictions under the Consent Decree, NPS retains the authority to implement a temporary emergency beach closure if any of the following conditions are observed:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> ORV traffic backing up on the beach access ramps, either on- or off-beach bound, which threatens to impede traffic flow</li> <li><input type="checkbox"/> ORV traffic on the beach is parked in such a way that 2-way traffic is impeded</li> <li><input type="checkbox"/> Multiple incidents of disorderly behavior are observed or reported</li> </ul>	<p>The NPS retains the authority to implement a temporary emergency beach closure if any of the following conditions are observed:</p> <ul style="list-style-type: none"> <li>- <del>Carrying capacity is exceeded.</del></li> <li>- ORV traffic backing up on the beach access ramps, either on- or off-beach bound, which threatens to impede traffic flow</li> <li><input type="checkbox"/> ORV traffic on the beach is parked in such a way that 2-way traffic is impeded</li> <li><input type="checkbox"/> Multiple incidents of disorderly behavior are observed or reported</li> </ul>	Same as alternative C-	Same as alternative C-	Same as alternative C

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## ORV Management Alternatives Matrix\*\*

Park edits 3/13/09

Seasonal Element related to Carrying Capacity Temporary Use of Non-ORV Areas	n/a	n/a	<p><u>Under the terms and conditions of a permit, the Superintendent would have the discretion to authorize the following:</u></p> <ul style="list-style-type: none"> <li>- <u>Temporary emergency use of non-ORV areas for ORV access if needed to by-pass sections of NC Highway 12 that are closed for repairs.</u></li> <li>- <u>Temporary non-emergency use of non-ORV areas for ORV access to areas traditionally used by fishing tournaments that were established prior to January 1, 2009.</u></li> <li>- <u>Temporary non-emergency use of non-ORV areas for ORV access to transport mobility impaired individuals to join their family or friends on a beach that is otherwise closed to ORVs. ORV use would be limited to the shortest, most direct distance between the nearest designated ORV route and the location of the gathering.</u></li> </ul> <p><u>Temporary use by <i>nonessential</i> vehicles would not be permitted within resource closures. Applicable March 15—October 14.</u></p>	n/a Same as alternative C	Focus is on peak use periods during breeding season, but may be implemented any time need arises. Same as alternative C	Same as alternative C
Periodic Review of Carrying Capacity	n/a	n/a	<p><u>Visitation, crowding, and safety monitored periodically to determine if implementation of carrying capacity is warranted. Once implemented, carrying capacity limits would be reviewed every 2 years.</u></p>	n/a	Same as alternative C.	
Areas of Implementation	n/a	n/a	<p><u>Would apply to all areas in the seashore. Carrying capacity requirements only implemented if increased visitation results in crowding threshold being met.</u></p>	n/a	Same as alternative C.	

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### ORV Management Alternatives Matrix\*\* Park edits 3/13/09

Off-Road Vehicle Requirements	<p>All vehicles operating in all areas of the Seashore must:</p> <ul style="list-style-type: none"> <li>Have a valid vehicle registration, insurance, and license plate.</li> </ul> <p>Vehicles must be street legal. ATVs prohibited from beach driving.</p> <p><u>Recommend "air down" of tires prior to driving on beach.</u></p>	Same as alternative A-	<p><u>Vehicle Characteristic Requirements would be as follows:</u></p> <ul style="list-style-type: none"> <li>All vehicles must be registered, licensed, and insured and comply with inspection regulations within the state, country or province where the vehicle is registered</li> <li>Four-wheel drive vehicles are allowed</li> <li>Two wheel drive vehicles are allowed after the operator obtains a special use permit</li> <li>Motorcycles and all-terrain vehicles (ATVs) are prohibited</li> <li>The Superintendent will determine the appropriateness of new vehicle technology for ORV use at the Seashore, which must be consistent with the vehicle requirements listed herein</li> </ul>			
			<p>Maximum of three axles for vehicles (does not include the axles on towed trailers)</p>	Same as alternative C-	<p>Same as alternative C-, except:</p> <ul style="list-style-type: none"> <li>Motorcycles are prohibited on the ocean beachfront, but allowed at the soundside ORV access areas</li> </ul>	Same as alternative C
			<p>Maximum of two axles for towed trailers</p>			
			<p>Maximum vehicle length is thirty (30) feet (does not include the additional length of a towed trailer).</p>			
			<p>Tires must be USDOT listed and/or approved</p>			
			<p><u>ORV Right of Way Requirements would be as follows:</u></p> <ul style="list-style-type: none"> <li>ORVs must yield right of way to pedestrians at all times</li> <li>An ORV exiting the beach via a Ramp or Interdunal Road has the right of way until reaching state-regulated roads</li> <li>When traveling parallel to the ocean or sound, the ORV with the water to its right side has the right of way</li> </ul>			

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## ORV Management Alternatives Matrix\*\*

Park edits 3/13/09

<b>Equipment Requirements and Recommendations</b>	None/a	n/a Same as alternative A	<p><u>Required Equipment:</u> ORVs would be required to carry the following equipment.</p> <ul style="list-style-type: none"> <li>- A low-pressure tire gauge effective down to 5 psi</li> <li>- A shovel</li> <li>- A jack</li> <li>- A jack support</li> <li>- Trash bag or container</li> <li>- A flashlight</li> <li>- Copy of the current ORV regulations and map.</li> </ul> <p><u>Recommended Equipment:</u> The following equipment is highly recommended but not required.</p> <ul style="list-style-type: none"> <li>- A full size spare tire</li> <li>- First aid kit</li> <li>- Fire extinguisher</li> <li>- Tow strap with loop ends, no hooks, with a rating capacity at or above the GVW of item being recovered or moved, unless vehicle is equipped with an operable electric or hand winch.</li> </ul> <p><u>Equipment Requirements:</u></p>	Same as alternative C-	Same as alternative C-	Same as Alternative C
<b>Tire Pressure</b>	Recommend "air down" of tires prior to driving on beach.	Same as alternative A	<p><u>When driving on designated ORV routes, tire pressure must be lowered sufficiently to maintain adequate traction within posted speed limit. 20 psi recommended for most vehicles. The softer the sand, the lower the pressure needed. When you return to paved roads, inflate the tires to normal as soon as possible.</u></p>	Same as alternative C	Same as alternative C	Same as alternative C
<b>Speed Limits</b>	<p>25 mph (unless otherwise posted) on park beaches for public and private vehicles.</p> <p>Speed limit in front of villages during off season (September 16 – May 14) on park beaches posted at 10 mph.</p> <p>Emergency vehicles exempt when responding to a call.</p>	<p>15 mph (unless otherwise posted) on park beaches May 15 – September 15</p> <p>25 mph (unless otherwise posted) September 16-May 14</p>	<p>15 mph year-round, (unless otherwise posted, except:-</p> <ul style="list-style-type: none"> <li>- Emergency vehicles exempt when responding to a call-</li> </ul>	Same as alternative C-	Same as alternative C-	Same as alternative C

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>Essential Vehicles</b>	Essential vehicles are allowed in non-ORV areas, and within resource closures subject to guidelines in Essential Vehicles section of Appendix G of the USFWS Piping Plover, Atlantic Coast Population, Revised Recovery Plan (USFWS 1996a). To the extent practicable, emergency response vehicle operators will consult with trained resources management staff regarding protected species before driving into or through resource closures; however, prior consultation may not always be practical.	Same as alternative A	Same as alternative A	Same as alternative A	Same as alternative A	Same as alternative A
<b>Non-ORV Areas</b>	None designated. Temporary and long-standing non-ORV areas closed to ORV use occur as a result of seasonal (village) closures, safety closures, and resource closures.	Same as alternative A	Non-ORV areas would be designated in the ORV Routes and Areas Table.	Same as alternative C	Same as alternative C	Same as alternative C
<b>Parking Areas for Non-ORV Access</b>	Parking is currently provided in 3264 park-maintained park lots throughout the Seashore, totaling approximately 1,000 spaces.	Same as alternative A	<p>Preferably, each non-ORV area would have sufficient parking, boardwalks, or trails for access.</p> <p>New parking areas for the respective Action Alternatives would be identified in the Routes and Areas Table.</p> <p>Any new parking areas to be located near Non-ORV Areas and located away from eroding areas or potential inlet areas. Exact location of new parking areas would be determined based on engineering/compliance requirements, and would follow environmentally appropriate design.</p>	Same as alternative C	Same as alternative C	Same as alternative C
<b>Non-ORV Parking Area Characteristics</b>	None	Same as alternative A	<p>Establish standards/amenities for non-ORV parking areas. Could include:</p> <ul style="list-style-type: none"> <li>Each new parking area adjacent to non-ORV areas site would have a boardwalk or other appropriate pedestrian route for crossing the dune.</li> <li>New parking areas with 50-100? (to be determined) or more parking spaces would have waste receptacles and toilet facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Same as alternative C Each site would have a boardwalk or other appropriate pedestrian route for crossing the dune.</li> </ul>	<ul style="list-style-type: none"> <li>Each site would have a boardwalk or other appropriate pedestrian route for crossing the dune.</li> <li>Same as alternative C Parking areas with 50? 100? (to be determined) (SANDY TO CHECK WITH DSC) or more parking spaces would have waste receptacles and toilet facilities.</li> </ul>	Same as alternative C

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

Alternative Transportation	Alternative transportation is not provided at the Seashore. <u>None</u>	Same as alternative A.	Refer to Routes and Areas Table Same as Alternative A	Same as alternative A Refer to Routes and Areas Table	Refer to Routes and Areas Table Designate and post boat landing zone ("drop-off") near inlet at Bodie Island Spit and South Point Ocracoke, that could be used to drop off pedestrians if/when inlet shoreline is not otherwise closed to protect park resources. NPS to encourage water shuttle for this purpose; however, drop-off point is subject to closure on short notice if needed to protect park resources.	Same as alternative A
Restroom Facilities	Existing porta-potties located throughout the seashore.	Same as alternative A.	To be determined	To be determined	To be determined	
Pets	Per 36 CFR § 2.15, the following are prohibited: Possessing a pet in an area closed to the possession of pets by the Superintendent. Failing to crate, cage, restrain on a leash which shall not exceed six feet in length, or otherwise physically confine a pet at all times. Pets are prohibited in all resource closures. Pets are prohibited, even if on a leash, from the landward side of the posts delineating the ORV corridor at the spits (Bodie, Hatteras, Ocracoke) and Cape Point.	Same as alternative A.	Same as alternative A, except: - Pets prohibited within 100 m of any resource closure during the breeding season or within any Nonbreeding Shorebird SMA. <del>that pets, even if on a leash, are prohibited in Resource Areas from March 15 – October 15.</del>	Same as alternative C, except: - Same as alternative C, except pets prohibited in Resource Areas year-round.	Same as alternative C, except: - The 100m buffer for any resource closure would preclude pets in the access corridors at Bodie Island Spit, Cape Point, and South Point Ocracoke once pre-nesting closures are implemented until the end of the breeding season. A, except pets prohibited in Resource Areas March 15 – August 31. Pets prohibited in ORV pass-through zones.	Same as alternative C, except: - The 100m buffer for any resource closure would preclude pets in the access corridors at Bodie Island Spit, Cape Point, and South Point Ocracoke once pre-nesting closures are implemented until the end of the breeding season.
Beach Fires	Per 36 CFR § 2.13, the Superintendent has authorized beach fires year-round. Permitted per, with the following restrictions: - 36 CFR 2.13. Fires prohibited 12:00 midnight to 6:00 AM year-round per Superintendent's Compendium Section 2.13. - Fires prohibited within resource closures	Same as alternative A, plus: - ground fires prohibited within 100 meters yards of resource closures for sea turtle nests protection areas.	Same as Alternative B, except: - May 1 – November 15, fires permitted only in front of Coquina Beach, Rodanthe, Waves, Salvo, Avon, Buxton, Frisco, Hatteras Village, and Ocracoke Day Use area - Non-fee educational fire permit required for beach fires year-round. - Beach fire policy would be subject to Periodic Review	Same as alternative C.	Same as alternative C.	Same as alternative C

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

Camping/Nighttime Beach Use	<p>Per 36 CFR § 1.4, <u>Camping is defined as the erecting of a tent or shelter of natural or synthetic material, preparing a sleeping bag or other bedding material for use, parking of a motor vehicle, motor home or trailer, or mooring of a vessel for the apparent purpose of overnight occupancy, as defined in 36 CFR § 1.4, is prohibited on seashore beaches per</u></p> <p>Per 36 CFR § 2.13, <u>camping is prohibited on Seashore beaches in the Superintendent's Compendium.</u></p> <p><u>In areas open to ORV use, Superintendent's Compendium § 2.10(a)-ORVs are allowed on the beach overnight if someone associated with the vehicle is actively fishing.</u></p> <p><u>ORVs allowed on beach overnight only if someone associated with the vehicle is actively fishing.</u></p> <p><u>ORVs allowed on all areas of the seashore 24 hours a day, year round.</u></p> <p><u>*Camping means the erecting of a tent or shelter of natural or synthetic material, preparing a sleeping bag or other bedding material for use, parking of a motor vehicle, motor home or trailer, or mooring of a vessel for the apparent purpose of overnight occupancy. (36 CFR § 1.4)</u></p>	<p><u>Camping, as defined in 36 CFR § 1.4, is prohibited on seashore beaches per Superintendent's Compendium § 2.10(a). Same as alternative A, except::</u></p> <p><u>- During turtle nesting season, night driving is restricted. See allowable hours of ORV operations for this alternative. See allowable hours of ORV operations for this alternative.</u></p>	<p><u>Camping, as defined in 36 CFR § 1.4, is prohibited on seashore beaches per Superintendent's Compendium § 2.10(a). Same as alternative A, except::</u></p> <p><u>- See allowable hours of ORV operations for this alternative.</u></p> <p><u>Unattended beach equipment (i.e., chairs, canopies, volleyball nets, water sports gear, etc.) is prohibited on the Seashore at night. Turtle patrol and law enforcement will tag equipment found at night. Owners have 24 hrs to remove equipment before it will be removed by NPS staff.</u></p>	<p><u>Same as alternative A, except::</u></p> <p><u>See allowable hours of ORV operations for this alternative.</u></p> <p><u>Same as alternative C.</u></p>	<p><u>Same as alternative A, except:</u></p> <p><u>See allowable hours of ORV operations for this alternative.</u></p> <p><u>Self-Contained Vehicle (SCV) camping would be authorized as follows:</u></p> <ul style="list-style-type: none"> <li><u>- The following campgrounds and use limits would be designated for SCV camping from Nov 1 to March 31: Oregon Inlet (100 spaces); Cape Point (100 spaces); and Ocracoke (50 spaces)</u></li> <li><u>- SCV permits would be required, in addition to an ORV permit, and would be available in weekly or seasonal increments</u></li> <li><u>- There would be a 7 consecutive day/ 6 night stay limit during any one visit and a limit of one visit per month</u></li> <li><u>- SCVs would be required to have a self-contained toilet and a separate permanently installed holding tank for both black and grey water, each with a min. capacity of 3 days waste</u></li> <li><u>- Holding tanks must be dumped at an appropriate facility every 72 hours during a visit</u></li> </ul> <p><u>Same as alternative C</u></p>	<p><u>Same as alternative A, except::</u></p> <p><u>See allowable hours of ORV operations for this alternative</u></p>
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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

<b>Commercial Fishing Vehicles</b>	Commercial fishing at the Seashore is authorized and managed under a special use permit in accordance with 36 CFR § 7.58(b). Commercial fishing vehicles are considered <i>non-essential vehicles</i> and are not authorized to enter resource closures. Permitted commercial fishermen are authorized by permit to enter other areas that are closed to recreational ORV use, including all ORV and pedestrian areas seasonal closures and safety closures; but are not authorized to enter administrative closures at lifeguarded beaches, that are not closed for resources protection. Treated as <i>non-essential vehicles</i> and may not enter resource closures.	Same as alternative A, plus: - are subject to night driving restriction in consent decree.	Same as alternative A, plus may be authorized by special use permit to access non-ORV areas and night driving restricted areas if there is no resource conflict. <b>To be determined.</b> Same as alternative A, except: - Commercial fishermen would not be required to obtain an ORV permit that would be required for recreational ORVs - Commercial fishing vehicles would be authorized to enter non-ORV areas, except for full resource closures and lifeguarded beaches - In areas outside of existing resource closures, the Superintendent would be able to modify, subject to terms and conditions of the fishing permit, the night driving restrictions for commercial fishermen who are actively engaged in authorized commercial fishing activity and can produce fish house receipts from the past thirty (30) days.	Same as alternative C	Same as alternative C	Same as alternative C
<b>Periodic Review</b>	None	Same as alternative A	A systematic review of data, annual reports, and other information would be conducted by NPS every 5 years, or after a major hurricane, to evaluate the effectiveness of management actions in making progress toward the accomplishment of stated objectives. Periodic Review could result in changes to the management actions in order to improve effectiveness.	Same as alternative C	Same as alternative C	Same as alternative C
<b>Law Enforcement (LE)</b>			To be determined. Need to develop "LE1" and "LE2" enforcement measures and staffing levels to complement the SM1 and SM2 Resources Protection Measures (i.e., an SM1 site needs LE1 enforcement coverage; and SM2 site needs LE2)	To be determined. Need to develop "LE1" enforcement measures and staffing levels to complement the SM1 Resources Protection Measures	To be determined. Need to develop "LE1" and "LE2" enforcement measures and staffing levels to complement the SM1 and SM2 Resources Protection Measures (i.e., an SM1 site needs LE1 enforcement coverage; and SM2 site needs LE2)	
<b>Staffing</b>			To be determined	To be determined	To be determined	

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## ORV Management Alternatives Matrix\*\* Park edits 3/13/09

Materials			To be determined	To be determined	To be determined	
<b>Resource Protection Measures</b>						
Resource Protection During Breeding Season	<p><u>ORV buffers are established for shorebird prenesting areas and observed breeding behavior, sea turtle nests, and seabeach amaranth as described in the Interim Strategy Finding of No Significant Impact (FONSI).</u></p>	<p><u>ORV buffers are established for shorebird prenesting areas and observed breeding behavior, sea turtle nests, and seabeach amaranth as described in the Interim Strategy FONSI, as modified by the Consent Decree.</u></p>	<p><u>Breeding Shorebird Species Management Areas (SMA) would be identified and ORV buffers would be established for shorebird prenesting areas and observed breeding behavior, sea turtle nests, and seabeach amaranth as described in the Species Management Table. SMAs would be subject to Periodic Review.</u></p> <p><u>Would implement SM1 at all locations, except implement SM2 at Bodie Island Spit, Cape Point, and South Point Ocracoke.</u></p>	<p><u>Same as alternative C, except: Would implement SM1 at all locations</u></p>	<p><u>Same as alternative C, except: Would implement SM1 at all locations, except implement SM2 along with site specific plans at Bodie Island Spit, Cape Point, and South Point Ocracoke</u></p>	<p><u>Same as alternative C, except: Would implement SM1 at all locations, except implement SM2 at Cape Point and South Point Ocracoke</u></p>
Resource Protection During Nonbreeding Season	<p><u>Suitable interior habitats at spits and at Cape Point closed year-round to all recreational users to provide for resting and foraging for shorebirds. Suitable habitats include ephemeral ponds and moist flats at Cape Point, Hatteras Spit, Ocracoke, and Bodie Island Spit. Actual locations of suitable foraging and resting habitat may change periodically due to natural processes.</u></p>	<p><u>Same as alternative A</u></p>	<p><u>Nonbreeding resource closures would be established at the points and spits based on an annual habitat assessment.</u></p> <p><u>Year-round non-ORV areas along the ocean shoreline outside of the villages, as identified in the Routes &amp; Areas Table for the respective Action Alternatives, would be managed as Nonbreeding Shorebird SMAs.</u></p> <p><u>See Species Management Table.</u></p>	<p><u>Same as alternative C</u></p>	<p><u>Same as alternative C</u></p>	<p><u>Same as alternative C, plus:</u></p> <ul style="list-style-type: none"> <li>- <u>"Floating" 1.5 miles of ocean shoreline habitat between Salvo and Avon (in addition to Ramp 27-30), based on habitat assessment and nonbreeding surveys.</u></li> <li>- <u>"Floating" 1.5 miles of ocean shoreline between Ramp 45 and Ramp 49, based on habitat assessment and nonbreeding surveys. Access to be provided via interdunal road or upper beach route (where 50 m buffer can be maintained).</u></li> <li>- <u>"Floating" 1.0 miles of ocean shoreline between Ramp 72 and inlet, based on annual habitat assessment and nonbreeding surveys. Upper beach corridor will be used to by-pass to the 1.0 mile shoreline area.</u></li> </ul> <p><u>"Floating" nonbreeding shorebird areas would be subject to Periodic Review.</u></p>

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**ORV Management Alternatives Matrix\*\***  
**Park edits 3/13/09**

\*This matrix is designed to display differences among alternatives, and actions common to all alternatives are not included in it. Actions common to all alternatives can be viewed on pp. xx-xx.

**DRAFT CAHA ORV ResProt Tables.1002v092508\_rev1**

\*\*\*Draft Deliberative Document — Not for Release\*\*\* CAHA Species Management Table rev03/10/09

<b>Survey Time and Frequency</b>	<u>Piping Plover</u>	<u>American Oystercatcher</u>	<u>Colonial Waterbirds</u>
<b>All Bird Species</b>	<p><u>Species Management 1 (SM1): Minimum of 8-10 Total biological field personnel. Will require larger longer lasting buffers with less monitoring and will alleviate the need for constant monitoring.</u></p> <p><u>Species Management 2 (SM2): Maximum of 20-22 total biological field personnel. Buffers will be customized at the spits and points towards bird presence and movement.</u></p>		

<p><b><u>CAHA Species Management Table</u></b>  <u>Common to all Action Alternatives</u></p>	
<b><u>Definitions</u></b>	<p><b><u>Breeding Behavior:</u></b> Shorebird behavior that includes, but is not limited to, territorial behavior, courtship, mating, scraping, confirmed scrapes, and other breeding or nest building activities.</p> <p><b><u>Human Disturbance:</u></b> Any human activity that changes the contemporaneous behavior of one or more individuals of breeding or nesting Colonial Waterbirds, Piping Plover, Wilson's Plover, or American Oystercatcher. Behaviors indicating disturbance include defensive displays, alarm calls, flushing or leaving a nest or feeding area, and diving or mobbing pedestrians, dogs, or vehicles.</p> <p><b><u>Periodic Review:</u></b> A systematic review of data, habitat conditions and other information to be conducted by NPS every 5 years, or after a major hurricane, to evaluate the effectiveness of management actions in making progress toward the accomplishment of stated objectives. Periodic Review could result in changes to the management actions in order to improve effectiveness.</p> <p><b><u>Pre-Nesting Closure:</u></b> A kind of Resource Closure in which an area of suitable habitat is proactively closed to ORVs and pedestrians at the start of the shorebird breeding season to provide undisturbed habitat for bird breeding activities to occur.</p> <p><b><u>Research Area:</u></b> Area of suitable habitat set aside on a temporary or long-term basis (such as a study site or control plot) as part of a research project authorized by NPS under a research permit.</p> <p><b><u>Resource Closure:</u></b> Any area posted as closed to all public entry in order to protect wildlife, such as breeding and foraging shorebirds and bird and turtle nests, or vegetation from human disturbance.</p> <p><b><u>Species Management Area (SMA):</u></b> Area of suitable habitat that has 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 one (i.e., two or more) of the past five years and is managed to reduce or minimize disturbance. Currently designated SMAs are listed at the end of this table. SMAs will be re-evaluated and re-designated every 5 years, or after major hurricanes, as part of the Periodic Review process.</p> <p>- <b><u>Breeding Shorebird SMA:</u></b> 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 one (i.e., two or more) of the past five years and is managed to minimize human disturbance during the breeding season.</p>

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# DRAFT CAHA ORV ResProt Tables.1002v092508\_rev1

\*\*\*Draft Deliberative Document—Not for Release\*\*\* CAHA Species Management Table rev03/10/09

Nonbreeding Shorebird SMA: Area of suitable nonbreeding habitat that has had concentrated foraging by migrating/wintering shorebirds in more than one (i.e., two or more) of the past five years and is managed to reduce to 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.

**Species Management 1 (SM1)**: 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.

**Species Management 2 (SM2)**: An approach to shorebird protection during the breeding season that will use smaller buffers and require more frequent monitoring and fencing changes when an ORV or pedestrian access corridor is open at designated locations during the breeding season.

## Shorebirds

Management Activity	Piping Plover (PIPL)	American Oystercatcher (AMOY) and Wilson's Plover (WIPL)	Colonial Waterbirds (CWB): includes - Least Terns (LETE) - Common Terns (COTE) - Gull-billed Terns (GUTE); and - Black Skimmers (BLSK)
<b>Pre-Nesting Surveys</b>	<p>By March 1: <del>Evaluate</del> all potential breeding habitats will have been evaluated and recommend PIPL pre-nesting closures will be recommended based upon that habitat evaluation. <del>These closures will be installed by March 15.</del></p> <p>March 15 – July 15  <del>S</del> survey pre-nesting closures recent breeding areas (last three years) 3 three times per week (or every other day).  <del>Outside of pre-nesting closures, survey</del> suitable habitat 2 times per week; increase to 3 times per week once birds are present. Survey potential new and or former habitat two times per week.                      Survey for Wilson's plover during piping</p>	<p>March 15 – July 15  <del>S</del> survey pre-nesting closures recent breeding areas (last three years) two times per week.  <del>Outside of pre-nesting closures,</del> survey suitable habitat 2 times per week; increase to 3 times per week once breeding pairs are present. Turtle patrol will take over monitoring after July 15<sup>th</sup>.                      If an AMOY nests in a pre-nesting closure at one of the points or spits in an area which requires an expanded buffer (e.g., nest inside pre-nesting closure but buffer not adequate) and the nest is over-washed or</p>	<p>May 1 – July 15                      Survey pre-nesting closures 3 times per week. <del>Outside of pre-nesting closures, survey suitable</del> habitat 2 times per week; increase to 3 times per week once breeding pairs are present. <del>survey recent breeding areas (last three years) two times per week. Turtle patrol will take over monitoring after July 15<sup>th</sup>.</del></p> <p>If a colony is established in a pre-nesting closure at one of the points or spits in an area which requires an expanded buffer (e.g., colony inside pre-nesting closure but buffer not adequate) and the colony is over-washed or predated, the buffer expansion shall be removed to the established pre-nesting closure.</p>

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	<p>plover surveys. The PIPL pre-nesting areas will be surveyed 3 times per week if piping plovers are present in the area. To mitigate disturbance to nesting birds, surveys may need to be curtailed. Pre-nesting buffers will not be modified in cases where the beach erodes into the buffered habitat.</p>	<p>predated, the buffer expansion shall be removed to the established pre-nesting closure.</p>	
<p><b>Pre-Nesting Closure Buffers</b></p>	<p><u>All Species:</u> All designated Breeding Shorebird SMAs will be posted as pre-nesting closures using symbolic fencing by <b>March 15</b> at sites involving PIPL, WIPL, and/or AMOY; and by <b>April 15</b> at sites involving only CWB. Configuration of specific pre-nesting closures will be based on annual habitat assessment. Pre-nesting closures will be reduced to become Nonbreeding Shorebird SMAs (as described later in this table), if no breeding activity is seen in the area by <b>July 31</b>, or two weeks after all chicks have fledged, whichever comes later. Pre-nesting closures will not be modified in cases where the beach erodes into the buffered habitat. ORVs, pedestrians, and pets are prohibited within all resource closures. Pets are prohibited within 100 m of all pre-nesting closures.</p> <p><u>SM1:</u> Pre-nesting closures at the points, spits, South Beach and resource area closures will not allow ORV or pedestrian access. SM1: Areas designated as SM1 will not allow ORV or pedestrian access during the pre-nesting period.</p> <p><u>SM2:</u> Areas designated as SM2 may have a narrow ORV (where permitted) or pedestrian access corridor until breeding activity is observed. The ORV access corridor will generally be no more than 50 m wide above the high tide line. An SM2 pedestrian access corridor will generally be below the high tide line and in no case greater than 10 m above the high tide line. Pets, kite flying, ball and Frisbee tossing are prohibited in the access corridors while the pre-nesting closure is in effect. Upon the first observation of breeding activity, the standard buffers (Table 1) will apply, which depending upon the circumstances may close the access corridor.</p> <p><u>SM2 Sites:</u> Bodie Island Spit, Cape Point and South Point Ocracoke are designated as SM2 sites. (The specifics of whether ORV access would be allowed vary between alternatives E and F. See Routes &amp; Areas Table.) Designate an ORV and/or pedestrian access corridor. For Bodie Island Spit, the access corridor would follow the eastern ocean shoreline to the inlet. For Cape Point, the corridor would be from Ramp 44 south along the ocean shoreline. For South Point, the corridor would be from Ramp 72 south along the ocean shoreline which may include a pass through or boat delivery system (water taxi) to designated points and spits. Outside of corridor, prohibit pedestrian access to breeding areas beyond the resource area closures. Delineate the corridor with posts placed up to 100 feet above the high tide line or as designated in a site specific plan (e.g., Bodie Island Spit, Cape Point, and South Point). No pets would be allowed in the pass through corridors or at the points and spits. At other resource area closures no ORV or pedestrian corridors would be designated, due to the narrow beach width of these areas.</p>		

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Pre-nesting closures may be modified at anytime as long as minimum buffers are maintained around breeding birds of all species:

In February or March of each year, NPS natural resource staff will conduct an annual assessment of piping plover breeding habitat to plan pre-nesting closures in recent breeding areas that are adapted to current habitat and physiographic conditions. Recent breeding areas will be closed by posting symbolic fencing by **March 15**. Closures will be removed if no breeding activity is seen in the area by June 15 or when area has been abandoned for a 2-week period, whichever comes later.

SM1: Pre-nesting closures with recent breeding activity would be installed by **March 15**. Closures will be removed if no breeding activity is seen in the area by July 15 or when area has been abandoned for a 2-week period, whichever comes later.  
SM2: Pre-nesting closures will not be established prior to the bird's arrival.

SM1 & SM2: Pre-nesting closures will not be established for CWB.  
  
Note: CWBs do not return to exactly the same location every year making it difficult to establish a pre-nesting closure for them under SM1. Also, most will be in Resource Areas.

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**Courtship/Mating Surveys:**

Survey pre-nesting closures 3 times per week. Outside of pre-nesting closures, survey suitable habitat 3 times per week once breeding pairs are present. If species are observed exhibiting territorial or courtship behavior during two separate observations in recent breeding habitat, observe three times per week. If scrapes are observed in the absence of courtship behavior, survey three times per week. Survey potential new habitat two times per week.

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		<p><del>history, closures will be installed when one observation of scraping or territorial behavior have been documented or if a scrape is being maintained. Based on bird behavior and suitable habitat, a 150 meter pedestrian/ORV buffer or a 75 meter buffer ORV pass through buffer will be established around the bird activity.</del></p> <p><del>For observed breeding activity outside of pre nesting closures by pairs of unknown nesting history, closures will be installed In newly occupied habitat, closures will be installed when three separate observations of scraping or territorial behavior have been documented or if a scrape if being maintained. Based on bird behavior and suitable habitat, A 150-meter buffer will be established around all the areas of activity. a 150 meter pedestrian/ORV buffer or a 75 meter buffer ORV pass through buffer will be established around the area(s) of activity.</del></p> <p><del>Designate an ORV orand pedestrian accesspass through corridor as identified for each alternative in the Use Areas Table. Pets restricted as identified for each alternative in the Alternatives Matrix, to allow access to points and spits. Outside of corridor,</del></p>	
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		<del>prohibit pedestrian access to breeding areas beyond the resource area closures.</del>	
<b>Nesting Surveys:</b>	<p><del>Conduct "walk through" to look for nests every 3 days.</del></p> <p><del>Once nests are found, observe nests daily from a distance that does not disturb the birds, based on professional judgment. Approach nests once per week to observe and record data.</del></p>	<p><del>Observe nests at least three times per week from a distance.</del></p> <p><del>SM1: Observe nests at least three times per week from a distance. For incubating birds that cannot be observed from a distance, check nests on a weekly basis (or as staff is available).</del></p> <p><del>SM2: Observe nests daily from a distance that does not disturb the birds, based on professional judgment. For incubating birds that cannot be observed from a distance, check nests every three days.</del></p>	<p><del>Colonies will be surveyed by foot during the "peak" nesting period which is during the last week of May and the first week of June.</del></p> <p><del>Observe colonies at least three times per week from a distance.</del></p> <p><del>SM1: Observe colonies at least 3 times per week from a distance. For incubating birds that cannot be observed from a distance, check colonies on a weekly basis.</del></p> <p><del>SM2: Observe nests daily from a distance that does not disturb the birds, based on professional judgment. For incubating birds that cannot be observed from a distance, check colonies every 3 days.</del></p> <p><del>All: Colonies will be surveyed by foot during the "peak" nesting period which generally is during the last week of May and the first week of June, but could be later, especially for BLSK.</del></p>
<b>Nesting Buffers:</b>	<p><del>All species: The park retains the discretion to expand buffers under SM1 and SM2 depending on staffing and bird behavior.</del></p> <p><del>In unprotected areas, a closure will be established immediately when a nest (with egg(s) is found.</del></p> <p><del>All Species: The park retains the discretion to expand nest buffers under SM1 and SM2 depending on staffing and bird behavior.</del></p>		

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unprotected areas, a closure will be established immediately when a nest with egg(s) is found. Prior to hatching, vehicles may pass by such areas along designated vehicle corridors established along the outside edge of nesting habitat provided buffers adequate to prevent human disturbance are maintained. When nests or chicks occur in the immediate vicinity of paved roads, parking lots, campgrounds, buildings, and other facilities, NPS retains the discretion to provide resource protection to the maximum extent possible while still allowing those facilities to remain operational. NPS shall not reduce buffers to accommodate ORV ramp access. Buffers will remain in place for 2 weeks after a nest is lost to determine if pair will re-nest, if no other species nesting in area. Outside of pre-nesting areas, closures will be removed if no breeding activity is seen in the area for two weeks, or 2 weeks after all chicks have fledged, whichever comes later. After August 1, closures will be removed if all nesting is complete.

~~SM1 & SM2~~ SM1 & SM2: Establish 75-50 meter buffer/closure around piping plover nest(s) occurring outside existing closures. Buffer will be increased in 50 m increments if human disturbance occurs.

~~If flushing off nest due to human disturbance occurs, buffer will be increased. If disturbance is observed expand closures using flexible increments dependent on observed bird behavior (until reaction).~~ If the buffer falls within the intertidal zone a full-beach closure will result.

~~Designate an ORV or pedestrian access corridor as identified for each alternative in the Use Areas Table. Pets restricted as identified for each alternative in the Alternatives Matrix.~~

~~Establish buffer/closure based on adult's reaction to human disturbance.~~

~~SM1: Establish 300 m buffer/closure around nest(s). Buffer will be the same as for courtship and mating — 300 meters.~~

~~SM2: Establish 150 m buffer/closure around nest(s). Buffers around nests will be a minimum of 150-150 meters for pedestrians or 75 m for an ORV pass through. If flushing off nest due to human disturbance occurs, b Buffer will be increased in 50 m using flexible increments if human disturbance occurs dependent on observed bird behavior.~~

~~If the buffer falls within the intertidal zone a full-beach closure will result.~~

~~For nests that occur inside a pre-nesting closure and requires a buffer expansion of the pre-nesting area, if the nest is lost to overwash or predation, the buffer expansion may be removed to the original pre-nesting closure after 2 weeks with no breeding activity. Designate an ORV and pedestrian pass through corridor to allow access to points and spits. Outside of corridor, prohibit pedestrian access to~~

~~SM1 & SM2: Install closures immediately when a nest is located. Establish a buffer/closure based on adult's reaction to human disturbance.~~

~~SM1: Buffer will be the same as for courtship and mating — 300 meters.~~

~~SM2: Establish 100 m buffer/closure around LETE nests or colony. Buffers around nests or colony for pedestrians will be a minimum of 10-100 meters for least terns; and 200 meters buffer/closure around nests or colony if if the colony contains e any COTE, GUTE, or BLSK common terns, gull-billed terns or black skimmers are present. ; or, for an ORV pass-through, a minimum of 50-75 meters for LETE and 100 meters if other CWB present. around the nest or colony. If the buffer If flushing off nest(s) due to human disturbance occurs, buffer will be increased using flexible increments dependent on observed bird behavior. Buffer will be increased in 50 m increments if human disturbance occurs.~~

~~If the buffer falls within the intertidal zone a full-beach closure will result.~~

~~For a colony that occurs inside a pre-nesting closure and requires a buffer expansion of the pre-nesting area, if the nest is lost to overwash or predation, the buffer expansion may be removed to the original pre-nesting closure after 2 weeks with no breeding activity. If the colony contains common terns, gull-billed terns or black skimmers,~~

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Comment [d5]: The majority of buffers specified by USGS and used by other nesting beaches only reference single studies without those studies being replicated by other researchers.

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		<p><del>breeding areas beyond the resource area closures. Designate an ORV or pedestrian access corridor as identified for each alternative in the Use Areas Table. Pets restricted as identified for each alternative in the Alternatives Matrix.</del></p>	<p><del>a 200 meter buffer will be established.</del></p> <p><del>Designate an ORV and pedestrian pass through corridor to allow access to points and spits. Outside of corridor, prohibit pedestrian access to breeding areas beyond the resource area closures.</del></p> <p><del>Designate an ORV or pedestrian access corridor as identified for each alternative in the Use Areas Table. Pets restricted as identified for each alternative in the Alternatives Matrix.</del></p> <p><del>SM1 &amp; SM2: Closures will be removed when areas have been abandoned for a two week period. After August 1 the 2-week removal period will no longer be required for closure removal.</del></p>
<p><b>Adult Foraging Surveys &amp; Buffer:</b></p>	<p><del>Survey suitable breeding habitat 3 times per week to monitor for adults with an associated scrape or nest territory foraging outside of an existing closure. If observe foraging outside an existing closure, survey the site daily. If observe For breeding adults (with an associated scrape or nest territory) foraging outside of a closure on <u>two</u> consecutive surveys, <u>establish or</u> expand the buffer using flexible increments based on observed bird behavior to include foraging site. <del>if the foraging area is associated with a pre-nesting closure.</del> These closures are intended to provide foraging opportunities close to breeding sites. <u>Remove closure if no foraging observed for a 2-week period during the breeding season.</u></del></p>	<p>No additional buffers/closures.</p>	<p>No additional buffers/closures.</p>

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	<u>or when associated breeding activity has concluded.</u>			Formatted
Unfledged Chicks Surveys:	<p><del>SM1: Observe brood once daily.</del></p> <p><del>SM2: Observe brood at least 1 hour each in am and pm daily. Have monitor(s) present during periods of ORV or pedestrian access.</del></p> <p><del>All: Observations end once chicks have fledged. Chicks are considered fledged at 35 days or are observed in sustained flight of &gt;15 m.</del></p>	<p><del>SM1: Observe brood at a minimum every other day.</del></p> <p><del>SM2: Observe brood once daily for at least ½ hour.</del></p> <p><del>All: Observations end once the chicks have fledged. -AMOY cChicks are considered fledged if they have been observed to be proficient in flying or observed in sustained flight of &gt;30 m. WIPL chicks are considered fledged if they are observed in sustained flight of &gt;15 m.</del></p>	<p><del>SM1: Observe colony every other day.</del></p> <p><del>SM2: Observe colony daily.</del></p> <p><del>All: Colonies will be surveyed by foot during the "peak" hatching period which should fall 21 days after initial nest counts.</del></p> <p><del>A follow-up survey (perimeter count) by foot should be conducted during the "peak" fledge which should fall 20 days after hatch counts.</del></p> <p><del>-days after hatch counts.</del></p> <p><del>SM1: Observe colony weekly.</del></p> <p><del>SM2: Observe colony at two-three day intervals.</del></p> <p><del>(Staff feels that higher frequency observations do not add to overall data)</del></p> <p><del>Observations end after no unfledged chicks have been observed on three consecutive surveys occasions. Closure can be removed after all chicks have fledged.</del></p>	Formatted
	Unfledged Chick Buffers:	<p><del>SM1: Establish a minimum 1000 meter buffer on either side of the nest when unfledged chicks are present. brood based on observation of bird behavior and terrain conditions at site (Insert language from Appendix G). No ORV or pedestrian access until all chicks have fledged.</del></p> <p><del>SM2: Establish a 1000 m ORV buffer and where permitted a 300 m pedestrian buffer on either side of</del></p>	<p><del>SM1: Establish a 300 meter buffer around nest when unfledged chicks are present. If chicks move outside of the buffer, it will be adjusted to include an additional 200 m from the chick(s) location. Closure will be removed 2 weeks after fledging.</del></p> <p><del>SM2: Establish a 200 meter buffer around the unfledged chick(s) location. Include foraging and roosting habitat from the ocean (low water line) to the dune (or sound shoreline, if accessible). Adjust/increase buffer as needed when chicks are mobile. Buffer moves with</del></p>	<p><del>SM1: Establish 300 m buffer around nests of colony. If chicks move outside of the buffer, it will be adjusted to include an additional 200 m from the chick(s) location.</del></p> <p><del>Same as courtship and mating — 300 meters. If chicks move outside of the buffer, it will be adjusted to include an additional 200 meters from the chick(s) location outside of the closure.</del></p> <p><del>SM2: Establish a 200 meter buffer around the chick(s) location. -Adjust buffer as needed when chicks are mobile.</del></p> <p><del>Points and spits would only be accessible from 7 a.m. - 7 p.m. as long as unfledged chicks are</del></p>



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~~the nest when unfledged chicks are present. Buffer moves with chicks.~~

~~All: The buffer should extend the prescribed distance on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting area of protected habitat (2x the prescribed distance) for PIPL chicks should extend from the ocean-side low water line to the sound-side low water line or to the farthest extent of dune habitat if no sound-side intertidal habitat exists. SM2: \*For the first two weeks after hatching establish a 1000 meter buffer for ORVs and pedestrians on either side of brood. Based on observed behavior (i.e., mobility of the brood) and the capability to intensively observe mobility and behavior, at the discretion of park management, the buffer can be reduced after the first two weeks to no less than 500 m for ORVs and 200 m for pedestrians. It will be up to the discretion of the Park whether or not the area can be opened to pedestrians. If the chicks are highly mobile the 1000 meter buffer may need to be maintained. Buffer moves with chicks. pr~~

~~chicks.~~

~~ORV access will not be allowed until WIPL chicks have fledged or 2 weeks after AMOY chicks have fledged (observed flight of 30 meters); a pedestrian corridor may be established prior to 2 week requirement for access to the points and spits.~~

~~Points and spits would only be accessible 7 a.m. – 7 p.m. during daylight hours as long as unfledged chicks are in the area and if buffers can be maintained. The 7 a.m. opening may be delayed until the chicks have been located.~~

~~in the area and if buffers can be maintained. The 7 a.m. opening may be delayed until the chicks have been located.~~

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	be located:		
	<p>All Species: <u>Vehicles and/or pedestrians may be allowed to pass through portions of the protected area that are considered inaccessible to chicks because of steep topography, dense vegetation, or other naturally-occurring obstacles. Reopen access corridor outside of pre-nesting area</u> after chicks fledge (except for AMOYs where the area will remain closed for an additional 2 weeks). <u>Closures can be removed after July 31 or 2 weeks after all breeding activity has ceased or chicks have fledged, which ever is later.</u></p>		
<b>Breeding Data Collected</b>	<p>GPS will be used to document nest locations. Record the following data: <u>(List)</u></p> <ul style="list-style-type: none"> <li>- Presence and abundance of birds</li> <li>- Locations where territorial or courtship behavior occurs to include scrape locations.</li> <li>- Estimate where adult and chick foraging occurs. Chicks should never be disturbed to obtain this information.</li> </ul>	<p>GPS will be used to document nest locations. Record the following data: <u>(List)</u></p> <ul style="list-style-type: none"> <li>- Presence and abundance of birds</li> </ul>	<p>GPS will be used to document colony locations. Record the following data: <u>(List)</u></p> <ul style="list-style-type: none"> <li>- Presence and abundance of birds</li> </ul>
<b>Nonbreeding Survey</b>	<p>NPS will monitor presence, abundance, and behavior of migrating and wintering shorebirds from July through May using the <u>SECN protocol. Survey sites will include all Nonbreeding Shorebird SMAs. NPS will submit the equivalent of International Shorebird Survey (ISS) data to NCWRC on an annual basis.</u></p>		
<b>Nonbreeding Shorebird SMAs</b>	<p>All Species: <u>Nonbreeding Shorebird SMAs will be established for migrating/wintering shorebirds at various locations throughout the Seashore. Such closures will be installed no later than when breeding season closures are removed at the same location(s). Pets will be prohibited within 100 m of all Nonbreeding Shorebird SMAs.</u></p> <p><u>Points and Spits: An annual habitat assessment will be conducted after all birds have fledged from the area. Nonbreeding resource closures will be established at the points and spits based on habitat used by wintering PIPLs in the past 3 years, the presence of birds at the beginning of the migratory season, and suitable habitat types based on the results of the annual survey. Actual locations of suitable foraging and roosting habitat may change periodically due to natural processes. Access to the inlet shoreline where permitted will be maintained by a corridor TBD by NPS Resources Management staff based on the annual habitat assessment.</u></p> <p><u>Ocean Shoreline Areas: In addition to the resource closures at the points and spits described above, NPS will establish non-ORV areas along the ocean shoreline for migrating and wintering shorebirds (open to pedestrians, unless closed for breeding birds or</u></p>		

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	<p>other reasons) that will provide relatively less disturbed foraging, resting, and roosting areas for migrating and wintering birds. These may include wider sections of beach with an upper beach ORV corridor that has a buffer of at least 50 m above the high tide line; and/or sections of beach that have been designated as “non-ORV” for other reasons such as to provide pedestrians with opportunities for a natural beach experience. The following activities are generally compatible with migrating/wintering shorebird use of these areas: fishing, beach walking, birding, kayaking, kite boarding, paddle boarding, photography, picnicking, sailing, shelling, stargazing, sunbathing, surfing, swimming, wildlife viewing and wind surfing. If monitoring determines that any single activity or collection of activities is negatively impacting shorebird use of a specific location, NPS may implement additional restrictions on compatible uses. The location(s) of all ocean shoreline Nonbreeding Shorebird SMAs will be subject to Periodic Review.</p>
<p><b><u>Adaptive Management Initiatives</u></b></p>	<p>The following adaptive management initiatives related to shorebirds or shorebird habitat have been identified:</p> <ul style="list-style-type: none"> <li>- <u>PIPL chick fledge rate: Develop an adaptive management study to evaluate the Interim Strategy performance target of one (1) fledged chick per breeding pair, as well as the productivity rates identified in the recovery plan, to determine if these rates provide for a growing population or are attainable at the Seashore over the long term.</u></li> <li>- <u>PIPL chick buffer distance: As stated in the PIPL recovery plan, where several years of data documents that piping plovers on a particular site feed in only certain habitat types, FWS may provide written concurrence that vehicles pose no danger to plovers in other specified habitats on that site. NPS to develop an adaptive management study to evaluate whether a reduced ORV or pedestrian buffer distance (i.e., less than that stated in the plan) after a certain time period, such as two weeks after chicks have hatched, would be adequate to prevent disturbance of PIPL chicks by ORVs and/or pedestrians using adjacent areas during daylight hours.</u></li> <li>- <u>Pass-through buffers for all species: Develop an adaptive management study(s) to evaluate whether a reduced buffer distance is adequate to prevent disturbance caused by ORVs driving past PIPL, AMOY, or CWB nest sites, if all other recreation (e.g., pedestrians, pets, etc.) is prohibited within the reduced buffer; and to determine if a reduced buffer is adequate to prevent disturbance caused by pedestrians walking below the high tide line past PIPL, AMOY, or CWB nest sites.</u></li> <li>- <u>CWB social attraction: As a pilot project, develop an adaptive management study to evaluate the effectiveness of using CWB decoys and audio-attraction to establish or re-establish CWB colonies in suitable habitat.</u></li> <li>- <u>Vegetation management: As a pilot project, develop an adaptive management study to evaluate methods for managing vegetation and improving habitat and wildlife access to available habitat in the Cape Point dredge pond area.</u></li> </ul>
<p><b><u>Research</u></b></p>	<p>In addition to the Species Management procedures outlined in this table, through the issuance of a research permit NPS may authorize qualified biologists or ornithologists associated with recognized academic or research institutions to conduct additional scientific research on the respective species that will add to the existing knowledge of shorebird species or improve resource protection within the Seashore. Establishment of Research Area(s) may be authorized under such a permit.</p>
<p><b><u>Implementation of Adaptive Management &amp;</u></b></p>	<p>Should adaptive management initiatives and other research provide information that NPS believes is an adequate basis for management changes, such changes would be evaluated and considered for implementation as part of the 5-year Periodic Review</p>

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<b>Research Initiatives</b>	process.		
<b>Non-breeding / Wintering Survey</b>	NPS will monitor presence, abundance and behavior of migrating and wintering PIPL, AMOY, WIPL, and REKN at the points and spits. Surveys will begin after the last PIPL chick has fledged on the seashore and end on March 1 the following year. Surveys will be conducted three times per month at pre-established locations based on a habitat assessment conducted at the beginning of the winter survey season.		
<b>Non-breeding / Wintering Buffers</b>	Annual habitat assessment will be conducted after all birds have fledged from the area. Winter closures will be based on habitat used by wintering PIPLs in the past 3 years, the presence of birds at the beginning of the migratory season, and suitable habitat types based on the results of the annual survey. All winter closures will be installed no later than Sept 15 <sup>th</sup> . Actual locations of suitable foraging and resting habitat may change periodically due to natural processes. Access will be maintained to inlet via the ocean shoreline. (Exact terminus and configuration of access corridor TBD by NPS resources management staff based on an annual habitat assessment).	No closures.	No closures.
<b>Data Collected</b>	GPS will be used to document nest locations. Record locations where territorial/courtship behavior occurs to include scrape locations. Estimate where adult and chick foraging occurs. Chicks should never be disturbed to obtain this information. Record presence and abundance of birds.	GPS will be used to document nest locations. Record presence and abundance of birds.	GPS will be used to document colony locations. Record presence and abundance of birds.

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**Sea Turtles (a minimum of 7 field personnel is required to meet the daily monitoring requirements on the Park's 67 miles of shoreline)**

<b>Management Activity</b>	<b>Sea Turtles</b>
<b>Survey Time and Frequency</b>	<p>Sea turtle patrol will begin on May 1, unless leatherback nests have been reported within the state, in which case CAHA will follow the direction of NCWRC. Patrol will continue until September 15, or two weeks after the last sea turtle nest or crawl is found, whichever is later.</p> <p>Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches <u>generally</u> before onset of <u>heavy</u>-public ORV use. Daily surveys for nests end September 15, or two weeks after the last sea turtle nest or crawl was found, whichever is later. Periodic monitoring (e.g., every two to three days) for unknown nesting and emerging hatchlings will continue, especially in areas of high visitation from that date until November 15.</p> <p>Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed washed ashore or following severe storm events. Nest observations stop when all nests have hatched or excavation indicates that the nest was not viable.</p> <p>Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.</p>
<b>Data Collected</b>	<p>Follow the North Carolina Wildlife Resources Commission Handbook and record:</p> <ul style="list-style-type: none"> <li>-Turtle species</li> <li>-Nest vs. false crawl</li> <li>-Location (physical description and GPS location)</li> <li>-If nest needs to be relocated and, if so, why and where (new physical description and GPS location), number of eggs relocated, and time of day</li> <li>-Necessary protective measures for nest and hatchlings</li> <li>-Information regarding any post hatching nest excavation and analysis</li> </ul> <p>Examine all nests after hatching to determine productivity rates. Excavate nests in the evening a minimum of 72 hours after hatching event. In cases where hatching events or dates were unknown, unearth nest cavities 80–90 days after the lay date. Any live hatchlings found during excavations will be released <u>at dusk or after</u> dark on the same day as excavation.</p> <p>For strandings the following will be recorded: species, location, measurements, and signs of human interactions. Samples and photos will be collected when necessary. Necropsies will be conducted when possible.</p>
<b>Nest Closures/ Buffers</b>	<p>Establish a buffer approximately 10 meters by 10 meters with symbolic fencing and signage around nest. Closure size may be modified due to environmental conditions at the nest site.</p> <p>Approximately 50– 55 days into incubation, closures expanded to the surf line. The width of the closure based on the type and level of use in the area of the beach where the nest was laid:</p>

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	<p>a. <u>V</u>ehicle-free areas with little or no pedestrian traffic – 25 meters wide (total width);</p> <p>b. <u>V</u>illages or other areas with high levels of day use – 50 meters wide (total width);</p> <p>c. <u>A</u>reas with ORV traffic – 105 meters wide (total width).</p> <p>Opposite the surf line on the landward side of the closure, expand the closed area to 15 meters where possible, but no less than 10 meters <u>landward</u> from the nest. Traffic detours behind the nest area clearly marked with signs and reflective arrows.</p> <p>Where present within closure, vehicle tracks manually smoothed with rakes or a steel mat attached to an ATV, so as not to impede hatchlings attempting to reach the surf.</p> <p>Use light filtering fence behind nests nearing hatch dates to block light pollution from the villages and vehicles operating on the beach after dark.</p> <p>If multiple nests are located near each other (within 150 feet), and have similar hatch dates (14 days), then closures will encompass all nests in the area, and will not be removed until all nests within the closure have hatched.</p>
<p><b><u>Nest Watch Program</u></b></p>	<p><u>Establish a cadre of trained volunteers to “watch” nests that have reached their hatch windows in order to monitor hatchling emergence success and success at reaching the water, and to provide for the minimization of negative impacts from artificial lighting, predation, and human disturbance. Due to the number of nests that may be ready to hatch and the availability of volunteers, it may be necessary for NPS turtle staff to prioritize which nests are watched on any particular night. Priority will be given to watching the nests that are most likely to be negatively impacted by manageable factors.</u></p>
<p><b><u>Nest Relocation</u></b></p>	<p>By April 15th, areas deemed unsuitable for turtle nests (i.e. high erosion rate) will be identified by Park staff. Maps and descriptions of these areas will be analyzed by NCWRC prior to nesting season.</p> <p>When a nest is found, <u>designated NPS staff will assess</u> need for nest relocation and follows relocation guidance identified in the NCWRC handbook.</p> <p>If it is determined the nest will not be relocated, it will be immediately protected with a symbolic fencing and signs and will measure approximately 10 meters by 10 meters in size. Closure size may vary at the discretion of staff due to the environmental factors at a nest location.</p> <p>If a nest is threatened by an imminent storm event, NPS will consult with NCWRC to determine appropriate action.</p>
<p><b><u>Strandings</u></b></p>	<p><u>Respond to sea turtle strandings in a timely manner, and report all information, pictures, and signs of human interaction to NCWRC. Necropsies of strandings will be done when possible.</u></p>
<p><b><u>Light Restrictions</u></b></p>	<p><u>From May 1 through November 15:</u></p> <ul style="list-style-type: none"> <li>- <u>Beach fires are permitted only in front of Coquina Beach, Rodanthe, Waves, Salvo, Avon, Buxton, Frisco, Hatteras Village, and Ocracoke Day Use area. Fires are prohibited within 100 meters of a sea turtle nest closure.</u></li> <li>- <u>Portable lanterns, auxiliary lights, and powered fixed lights of any kind shining for more than 5 minutes at a time are prohibited on Seashore ocean beaches</u></li> </ul>

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<b>Night Driving Restrictions</b>	From May 1 to November 15, all non-essential vehicle use is restricted or prohibited as described in the respective alternatives.
<b>Light Management</b>	<p>By May 1, 2012, install <del>Establish</del> turtle friendly lighting fixtures on all standards and/or reduce light for all Seashore (NPS) structures visible from the ocean beach (except where prevented by other overriding lighting requirements, such as lighthouses which serve as aids to navigation) and-</p> <p><del>Encourage concessioners to install turtle friendly lighting fishing piers operated by NPS concessioners.</del></p> <p>Develop educational material to inform visitors about their impact on the success of sea turtle nests.</p> <p><del>Work with FWS, NCWRC, and Dare County to encourage development of a turtle friendly lighting ordinance and/or turtle friendly lighting education program for villages within the Seashore on Hatteras Island.</del></p>
<b>Adaptive Management Initiatives</b>	<p>The following adaptive management initiatives for sea turtles have been identified:</p> <ul style="list-style-type: none"> <li>- <del>Develop an adaptive management study to evaluate the level of human disturbance that might be caused, if any, by designating night driving routes to select points and spits, and to develop management tools to minimize impacts to an acceptable level.</del></li> <li>- <del>Develop an adaptive management study to determine ways to increase the number of hatchlings that emerge and reach the water.</del></li> <li>- <del>Develop an assessment tool to measure ambient artificial lighting along the length of the Seashore, which can be used to re-assess conditions after any management actions are taken to reduce artificial lighting.</del></li> </ul>
<b>Research</b>	<p>In addition to the Species Management procedures outlined in this table, through the issuance of a research permit NPS may <del>authorize qualified biologists associated with recognized academic or research institutions to conduct additional scientific research on the respective species that will add to the existing knowledge of sea turtles or improve resource protection within the Seashore. Establishment of Research Area(s) may be authorized under such a permit. Support research efforts looking at the sex ratios of sea turtles.</del></p> <p>Respond to sea turtle strandings in a timely manner, and report all information, pictures, and signs of human interaction to NCWRC.</p> <p><del>Necropsies of strandings will be done when possible.</del></p>
<b>Implementation of Adaptive Management &amp; Research Initiatives</b>	Should adaptive management initiatives and other research provide information that NPS believes is an adequate basis for management changes, such changes would be evaluated and considered for implementation as part of the 5-year Periodic Review process.

## Seabeach Amaranth

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<u>Management Activity</u>	<u>Seabeach Amaranth</u>
<b>Survey Time and Frequency</b>	<p>August  <u>Conduct</u> an annual survey of potential habitat <del>will be conducted</del>. Some bird closure areas may not be surveyed due to the potential to disturb nesting birds. Some areas may not be surveyed until just prior to re-opening an area to ORV traffic.</p> <p>July– September                      Before opening any species closure or identifying alternate ORV corridors, survey for seedlings/plants.</p> <p>End observations when all plants have died back.</p>
<b>Data Collected</b>	Record location of all individual plants or plant clusters using a GPS and note if the plant is located in an area open or closed to recreational use.
<b>Buffers</b>	<p><del>June 1</del> <u>April 15</u> – November 30</p> <p><u>Identify suitable habitat at points and spits and delineate with symbolic fencing by June 1 if such areas are not already protected within shorebird prenesting closure(s).</u></p> <p>If a plant/seedling is found outside of an existing closure, <del>the Seashore will</del> erect symbolic fencing with signage creating a 10 meter by 10 meter buffer around the plant. If plants are located next to each other, the area will be expanded to create one enclosure protecting several plants.</p> <p>If a SBA is found during the survey prior to reopening a bird closure to ORV and pedestrian use, the Seashore will protect the SBA as described above and reopen the areas of the bird closure where no plants exist.</p> <p>Areas reopened if no plants are present by September 1. Where plants occur, the closed areas will be reopened after the plants have <del>senesced</del>, <u>typically around December 1.</u></p>
	<b><u>All Species</u></b>
<b>Periodic Review</b>	<u>A systematic review of data, annual reports, and other information would be conducted by NPS every 5 years, or after a major hurricane, to evaluate the effectiveness of management actions in making progress toward the accomplishment of stated objectives. Periodic Review could result in changes to the management actions in order to improve effectiveness.</u>

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**Shorebird / Waterbird Buffer Summary**

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<u>Species</u>	<u>Breeding Behavior/ Nest Buffer</u>	<u>Unfledged Chicks</u>
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	<u>SM1 / SM2</u>	<u>SM1 / SM2</u>
<u>Piping Plover</u>	<u>75 m / 75 m</u>	<u>1000 m / 1000 m (ORV); 300m (Pedestrian)</u>
<u>Wilson's Plover</u>	<u>300 m / 150 m</u>	<u>300 m / 200 m</u>
<u>American Oystercatcher</u>	<u>300 m / 150 m</u>	<u>300 m / 200 m</u>
<u>Least Terns</u>	<u>300 m / 100 m</u>	<u>300 m / 200 m</u>
<u>Other Species CWB</u>	<u>300 m / 200 m</u>	<u>300 m / 200 m</u>

Common to All Action Alternatives

Breeding Shorebird SMAs (designated SMAs will be subject to Periodic Review):

- Bodie Island Spit: 0.2 miles south of Ramp 4 to inlet (est.1.9 miles)
- Ramp 27 to Ramp 30 (est. 2.1 miles)
- Ramp 32.5 to Ramp 34 (est. 1.5 miles)
- Approximately 2.0 miles south of Ramp 38 to north boundary of Buxton (est. 1.7 miles)
- Cape Point: 0.2 miles south of Ramp 44 to Ramp 45 (est. 2.2 miles)
- South Beach: Ramp 45 to Ramp 47 (est. 1.7 miles)
- Hatteras Inlet Spit: Ocean shoreline south of Pole Road to sound-side of inlet (est. 0.8 miles)
- North Ocracoke Spit: Ramp 59 to inlet (est. 1.4 miles)
- 0.5 miles south of Ramp 68 to 1.2 miles north of Ramp 70 (est. 1.0 mile)
- South Point Ocracoke: 0.5 miles south of Ramp 72 to inlet (est. 2.6 miles)

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Nonbreeding Shorebird SMAs (designated SMAs will be subject to Periodic Review)

- Ramp 1 to new Ramp 2 approximately 0.4 mile south of Coquina Beach (est. 1.5 miles)

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- Bodie Island Spit: Sound shoreline and interior habitat(s), based on annual habitat assessment and nonbreeding surveys. Access to northeast corner of Bait Pond to be maintained by 10 m wide access corridor next to (south of) the dune line.
- Ramp 27 to Ramp 30 (est. 2.1 miles): ocean shoreline habitat
- “Floating” 1.5 miles of ocean shoreline habitat between Salvo and Avon (in addition to Ramp 27-30), based on habitat assessment and nonbreeding surveys
- Cape Point: suitable interior habitat, such as upper beach roosting areas and ephemeral pools, based on annual habitat assessment and nonbreeding surveys
- South Beach: “Floating” 1.5 miles of ocean shoreline between Ramp 45 and Ramp 49, based on habitat assessment and nonbreeding surveys. Access to be provided via interdunal road or upper beach route (where 50 m buffer can be maintained).
- Hatteras Inlet Spit: Sound shoreline of overwash fans; and inlet shoreline and 1.0 mile of ocean shoreline north of inlet, based on annual habitat assessment and nonbreeding surveys. Oceanside access to be provided via interdunal road or upper beach route, and soundside access via Spur Road.
- North Ocracoke Spit: Sound, inlet and ocean shoreline, based on annual habitat assessment and nonbreeding surveys
- Mid-Ocracoke Island: Designated year-round non-ORV areas of ocean shoreline between Ramp 59 and Ramp 70
- South Point Ocracoke: Sound shoreline, portion (min. 50%) of inlet shoreline, interior habitat(s), and “floating” 1.0 miles of ocean shoreline between Ramp 72 and inlet, based on annual habitat assessment and nonbreeding surveys. . Upper beach corridor will be used to by-pass to the 1.0 mile shoreline area.

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