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CAHA # 2827



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cc "Otto, Dana" <dotta@louisberger.com>, "Van Dyke, Nancy" <nvandyke@louisberger.com>, "Wetmore, Doug" <dwetmore@louisberger.com>  
bcc  
Subject Reg-Neg Alts Comparison - Discussion Draft

Hi Sandy,

For our call tomorrow, attached is our working draft of the reg-neg alts comparison. Red text is what we believe we need to discuss if we have covered it or not. Bold and italic are questions for the park. One thing we do want to discuss is how to address page 40 till the end. These are the UFWDA and Audubon species tables. We are running into challenges in making a judgment call on some of these items, something we can discuss a little further tomorrow. For now I just wanted you to see our progress with this and to confirm it is the type of product you were looking for, this is not the final deliverable, but something to get feedback so we get you the deliverable you need for this important task.

Also, we have attached Mike's last map mark up and the UFWDA maps, which were also compared as part of this, for easy reference.

Talk to you tomorrow,  
Lori

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Alternative Elements from the CAHA Negotiated Rulemaking Committee Final Report\_D41609.doc



UFWDA maps from CAHARegNegFinalReport\_3-30-09.pdf CAHA ORV Alts Maps.v040109.pdf

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Alternative Elements from the CAHA Negotiated Rulemaking Committee Final Report

Element	Addressed in Alternatives to Date	If Yes, where?
<b>Comments from the Coalition of National park Service Retirees</b>		
NPS should inventory similar problems at other locations in the system and set some sort of process in motion to negotiate or otherwise resolve the issues between now and 2016.		This comment is out of scope for this plan/EIS
Examine the merits of “capping” visitation while developing specific carrying capacity methods and begin public education on this subject.		Carrying capacity is addressed in alternatives C, D, and E.
<b>North Carolina Wildlife Resources Commission</b>		
<p><i>Recommended Goals for Sea Turtle Recovery:</i>            200 nests annually 2% or greater increase in nests annually, based on past 5-year average            Less than 3 sea turtles nest takes a year due to night driving            Less than 5 night driving violations a year associated with T and E species            Increase annual loggerhead nests 2% or greater from the last 5 years average            Reduce takes per year on individual sea turtles or eggs associated with night driving activities            Document on average less than 10 resource violations associated with night driving a year</p>		<p>The current range of alternatives does not include performance measures for sea turtle recovery.</p>
<p><i>Performance objectives:</i> Reduced lighting county-wide: Year 3 = 25% reduction from baseline; Year 5= 50% reduction from baseline; Year 10 = 75% reduction from baseline.</p>		<p>Not specifically, although light restrictions are part of all alternatives. Includes installing turtle friendly lighting fixtures on all NPS structures visible from the ocean beach and fishing piers operated by NPS concessioners and working 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.</p> <p>All alternatives.</p>
<p><i>Night driving – First year of implementation:</i>            Unrestricted night driving from Nov. 16th through April 30th, subject to resource closures.            • No night driving May 22nd through Sept. 15th between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).</p>		<p>Alternatives C, D, E, and F contain some form of night driving, lantern, and beach fire restrictions. <b>No phased implementation in the current range of alternatives.</b></p> <p>Alt-F closes night driving during these hours May 1</p>

Element	Addressed in Alternatives to Date	If Yes, where?
<ul style="list-style-type: none"> <li>• Restricted night driving from May 1st through May 21st and again starting Sept. 16<sup>th</sup> through Nov. 15th between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel), subject to the following conditions:               <ul style="list-style-type: none"> <li>o Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.</li> <li>o Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).</li> <li>o Headlights only on during transit and not shining into bird nesting areas.</li> <li>o Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)</li> <li>o NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.</li> </ul> </li> </ul> <p>“Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).</p>	<p>through September 15.</p> <p>Alt-B, E and F require a permit for night driving Sept 16-Nov 15. <b>No alternative requires a night driving permit from May 1 through May 21, although Alts B, C, E, and F do not allow ANY night driving May 1 through September 15.</b></p> <p>Alt-B permit has educational requirement. Details of night driving permits not available for other alternatives.</p>	<p>“Park and stay” option available under Alt-E</p>
<p><i>Night Driving: Third year of implementation if beachfront lighting is reduced 25% county-wide from baseline:</i></p> <p>Unrestricted night driving from Nov. 1st through April 30th, subject to resource closures.</p> <ul style="list-style-type: none"> <li>• No night driving May 22nd through Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).</li> <li>• Restricted night driving from May 1st through May 21st, and again from the Tuesday after Labor Day through October 31st between 1 hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition. Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.               <ul style="list-style-type: none"> <li>o Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).</li> <li>o Headlights only on during transit and not shining into</li> </ul> </li> </ul>	<p>Alternatives C, D, and E contain some form of night driving, lantern, and beach fire restrictions.</p> <p>Alt F prohibits night driving May 1 – Nov 15 from 1 hour after sunset until all beaches have been cleared in the morning.</p> <p><b>No alternative requires a night driving permit from May 1 through May 21, although Alts B, C, E, and F do not allow ANY night driving May 1 through September 15. No alternative uses the dates May 22 – Labor Day.</b></p> <p>Alt-B permit has educational requirement. Details of night driving permits not available for other alternatives.</p>	

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<p>bird nesting areas.</p> <ul style="list-style-type: none"> <li>o Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)</li> <li>o NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.</li> <li>• “Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).</li> </ul>		
<p><i>Night Driving: Fifth year of implementation if beachfront lighting is reduced 50% county-wide from baseline:</i>            Unrestricted night driving from Nov. 1st through April 30th, subject to resource closures.</p> <ul style="list-style-type: none"> <li>• No night driving the Tuesday after Memorial Day through the Friday before Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).</li> <li>• Restricted night driving from May 1st through Memorial Day, and again from the Saturday before Labor Day through October 31st between 1 hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition.</li> <li>o Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.</li> <li>o Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).</li> <li>o Headlights only on during transit and not shining into bird nesting areas.</li> <li>o Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)</li> <li>o NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.</li> <li>• “Park and stay” option available at Bodie Island spit, one location at Ramp 23, 30, or 38, Cape Point, Hatteras Inlet Spit, and South Point Ocracoke (subject to resource closure).</li> </ul>	<p>Same as above, plus:</p> <p><b>No alternative requires a permit from May 1 through Memorial Day, although Alts B, C, E, and F do not allow ANY night driving May 1 through September 15. No alternative uses the dates “Tuesday after Memorial Day through Friday before Labor Day” or “Saturday before Labor Day through October 31<sup>st</sup>”, although alternatives B, C, E, and F require permits from September 16-November 15.</b></p>	

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<p><i>Night Driving: Tenth year of implementation if beachfront lighting is reduced 75% county-wide from baseline:</i>                      Unrestricted night driving from Nov. 1st through April 30th, subject to resource closures.</p> <ul style="list-style-type: none"> <li>• No night driving the Tuesday after Memorial Day through the Friday before Labor Day between 1 hour after sunset until all beaches have been cleared in the morning by NPS personnel (or authorized personnel).</li> <li>• Restricted night driving from May 1st through Memorial Day, and again from the Saturday before Labor Day through October 31st between 1 hour after sunset until all North Carolina Wildlife Resources Commission beaches have been cleared by NPS personnel (or authorized personnel), subject to the following condition.                             <ul style="list-style-type: none"> <li>o Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.</li> <li>o Night driving permitted only on designated ORV routes to Bodie Island spit, Cape Point, Hatteras Inlet Spit and South Point Ocracoke (subject to resource closure).</li> <li>o Headlights only on during transit and not shining into bird nesting areas.</li> <li>o Other light restrictions as previously identified (i.e. no campfires, lanterns etc.)</li> <li>o NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of violations.</li> </ul> </li> <li>• “Park and stay” option available throughout CHNS subject to resource closures.</li> </ul>	<p><b>Further definition needed as to what constitutes a NCWRC beach</b></p> <p>Same as above, plus:</p> <p><b>No alternative requires a nightdriving permit from May 1 through Memorial Day, although Alts B, C, E, and F do not allow ANY night driving May 1 through September 15.</b></p> <p><b>No alternative uses the dates “Tuesday after Memorial Day through Friday before Labor Day” or “Saturday before Labor Day through October 31<sup>st</sup>”, although alternatives B, C, E, and F require permits from September 16-November 15.</b></p>	
<p>Data for the park to collect:                      Conduct assessment to determine baseline lighting conditions (number of lights visible from the beach) throughout Dare County by 2010. May be able to use “Night Skies” data as part of baseline.</p> <p>Continue to monitor number of sea turtle nests as in the past. Track % increases or decreases. Baseline is set using past 5–yr. average.</p> <p>Establish scientifically defensible methods to track sea turtle “takes” and resource violations and monitor these</p>		<p>Yes</p> <p>Night lighting baseline data being collected as part of this process for all alternatives. All alternatives require sea turtle nest counts and tracking violations.  <b>No details available on how the baseline is set are included in the range of alternatives.</b></p>

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for use in relaxing night driving restrictions.		
<b>U.S. Fish and Wildlife Service</b>		
Use of adaptive management as part of ORV management	Yes.  Night driving times subject to periodic review in alternatives C, E, and F. Alternative D establishes periodic review for limits on “park and stay” and SCV camping. Carrying capacity limits subject to periodic review under alternatives C, E, and F. Other ORV management policies subject to periodic review under alternatives C, E, and F. All alternatives involve adaptive management techniques for species management.	
Use of buffers presented in the USGS protocols	Species buffers at least as protective as protocols are provided in all action alternatives.	
Have an objective of 30 nesting PIPL pairs	<b>Not specifically stated in current range of alternatives</b>	
Have an objective of 1.5 fledged chicks per PIPL pair	Contained in all action alternatives, per recovery plan. Described in SM tables.	
Assess the extent to which human disturbance influences productivity relative to other factors	Scientific literature on disturbance was used in analysis of all alternatives. Analysis of human disturbance is also contained in the adaptive management initiatives for all action alternatives.	
Have an objective to minimize disturbance of non-breeding PIPL by human activity with CAHA and minimize predation of non-breeding PIPL within CAHA	All alternatives provide surveys and closures to protect non-breeding PIPL.	
Goal for loggerheads: 200 nests per year with a 2 % annual rate of increase	<b>The current range of alternatives does not contain specific goals for number of nests and desired increases.</b>	
Goal for SBA: implement management control to promote and protect the occurrence of SBA, at a minimum, at three of the four identified sites (Bodie island spit, Cape Point, Hatteras Inlet spits, and Ocracoke Inlet spits)	All alternatives promote and protect SBA per the species management methods, but <b>do not specify a goal for particular locations for SBA occurrence.</b>	
<i>PIPL Pre-nesting:</i> All suitable piping plover nesting and courtship habitat should be identified and delineated on or before 15		

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<p>March each year. Pre-nesting areas should include the areas of moist soil habitat, permanent and ephemeral ponds or pools, ocean backshore, dunes, dry sand flats, overwashes, blowouts, and the ocean tidal zone.</p> <p>All vehicular access into or through posted nesting habitat should be prohibited.</p> <p>Conduct monitoring at least once every two days from 15 March to 15 April, and then daily from 16 April to 15 July, to determine if any birds are exhibiting pre-nesting and/or breeding behavior.</p> <p>The pre-nesting areas should remain in place until the later of 15 July or two weeks after the last shorebird (e.g., least tern, black skimmer, American oystercatcher, or Wilson's plover chick) within the area has fledged and no other nesting activities by any species are observed, as determined by two consecutive monitoring events conducted over at least two days.</p> <p>All unposted sites should be posted immediately upon detection of breeding behavior (i.e., within the same day), including but not limited to territorial behavior, courtship, mating, scrapes, or other nest-building activities.</p> <p>(in ref to SM1/SM2 tables) the distinction between “recent breeding area” and “all potential habitat.” We do not understand the practical difference, and recommend that “all potential habitat” be treated the same.</p> <p>We also recommend that instead of stating that pre-nesting closures will be “removed” following cessation of nesting activity, that they will be “rolled back” to become “non-breeding buffers”.</p> <p>As applied to specific sites within CAHA, we recommend the following modifications to the proposed SM2</p>	<p>Pre-nesting closures start March 15 in alts B, C, D, E, and F.</p> <p>Yes, in SM1 areas in all action alts and all SMAs in alt D. SM2 allows an ORV corridor, but <b><i>need to confirm with the park if it's actually through the closure or around the closure.</i></b></p> <p>No. No alternative has daily monitoring before nests.</p> <p>Yes. Alts B, C, D, E, F use these dates.</p> <p>All action alts require buffers based on bird behavior and Alt B requires it to be done the same day.</p> <p>Alts C, D, E, and F require evaluation of all potential breeding habitat and use the “non-breeding buffer” terminology.</p>	



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<p>procedures. At Bodie Island, much of the best foraging habitat is the wet sand and ephemeral pools near the inlet. Maintenance of a corridor around the entire inlet would result in a high probability of disturbance of pre-nesting birds in the inlet area.</p> <p>We would recommend that baseline management be to terminate the corridor at the point of the inlet/ocean interface beginning March 15.</p> <p><b>Also, it appears possible to maintain a narrow access corridor to the northwest corner of the "bait pond".</b></p> <p>At South Beach, recommend as baseline management conditions the opening of a back dune road with parking and walk-overs.</p> <p>At Hatteras Inlet, we recommend as the baseline management condition establishment of a high beach corridor from where the spur roads empties onto the ocean beach to the vicinity of the inlet, in order to provide some undisturbed ocean intertidal foraging habitat.</p> <p><b>At South Ocracoke, similar to Bodie Island spit, we recommend as the baseline management condition that you terminate the corridor at the point of the inlet/ocean interface beginning March 15.</b></p> <p><i>PIPL Nesting:</i> A 50 meter-radius around nests above the high tide line should be delineated with warning signs and symbolic fencing and all non-essential access (pedestrian and vehicles) prohibited. However, we strongly encourage the NPS to evaluate whether this buffer is sufficient to protect the nests and whether such a buffer will allow them to meet stated goals.</p> <p><b>We also recommend that the NPS reference Assateague Island National Seashore's Piping plover Management Plan (1993) for additional information on increasing nest site buffers.</b></p> <p>Prior to hatching, vehicles may pass by plover nests along</p>	<p><b>NPS alternative maps terminate routes at points, and do not address soundside areas as a continuation of the route – discuss with park implications for the range of alternatives. Applies to all highlighted yellow to the left on this page, unless noted. Also need park's input as to where on the ground the commenter is referring to.</b></p> <p><b><i>Did the park want to incorporate interdunal road to the bait pond?</i></b></p> <p><b>No alternatives address back dune road at South Beach with walkovers.</b></p> <p>Hatteras Inlet suggestion addressed in alt F</p> <p><b><i>At South Ocracoke, need to clarify where corridor terminates under park alts.</i></b></p> <p><b><i>Need clarification as to what occurs at ASIS</i></b></p>	

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<p>designated vehicle corridors established along the outside edge of plover nesting habitat as long as a 50 meter buffer remains between the vehicle corridor and the nest.</p> <p>Vehicles may also park outside delineated nesting habitat, if beach width and configuration and tidal conditions allow. Vehicle corridors or parking areas should be moved, constricted, or temporarily closed if territorial, courting, or nesting plovers are disturbed by passing or parked vehicles or if disturbance is anticipated because of unusual tides or expected increases in vehicle use during weekends, holidays, or special events.</p> <p>Only persons engaged in rare species monitoring, management, or research activities should enter posted areas. These areas should remain fenced as long as viable eggs are present. Fencing around nests should be expanded in cases where the standard 50 meter-radius is inadequate to protect incubating adults or eggs from harm or disturbance.</p> <p>In cases where the nest is located less than 50 meters above the high tide line, fencing should be situated at the high tide line, and a qualified biologist should monitor responses of the birds to passersby, documenting his/her observations in clearly recorded field notes.</p> <p>If nests are discovered outside fenced areas, fencing should be extended to create a 50 meter buffer to prevent disturbance to incubating adults, eggs, or unfledged chicks.</p> <p>A notable difference between the above and SM1/SM2 is the closure that results from a nest buffer that falls within the intertidal zone. We commend your proposal to implement a full beach closure under such circumstances and do not necessarily advocate for less should you feel that a complete closure is warranted. However, we note that a less restrictive (to access) buffer that extends to the high tide line is a potentially plausible alternative that can be explored as sufficiently protective using Adaptive Management.</p>	<p>Alts C, D, E, and F require a 75m buffer. Alt B requires a 50m buffer.</p> <p>All alternatives allow vehicles to park outside posted closures. Alts B, C, D, and E require restrictions on corridors based on bird behavior and disturbance.</p> <p>Alts B, C, D, E, and F allows for expansion of buffer area. Alt B uses the 50m standard radius.</p> <p>Fencing at high tide line is not included in the range of alternatives. Not allowed to get by at low tide.</p> <p>Alts C, D, E, and F require a 75m buffer. Alt B requires a 50m buffer.</p> <p>See above. Alternatives do not include less restrictive buffer.</p>	

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<p>Another potentially significant difference between the above and SM1/SM2 is the distinction between “nests occurring outside existing closures” and those occurring within existing closures. We recognize that a 50 meter nest buffer likely will be encompassed within the existing closure, but we recommend that nests be evaluated to ensure at least a 50 meter buffer around the nest is maintained.</p>	<p>Alts C, D, E, and F require 75 meter buffer and Alt B requires a 50m buffer.</p>	
<p><i>Unfledged PIPL Chicks:</i>            Sections of beaches where unfledged piping plover chicks are present should be temporarily closed to all vehicles not deemed essential. Areas where vehicles are prohibited should include all dune, beach, and intertidal habitat within the chicks' foraging range.</p> <p>A vehicle free area should extend 1000 meters on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting 2000 meter-wide area of protected habitat for plover chicks should extend from the ocean-side low water line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side intertidal habitat exists.</p> <p>A pedestrian free area should extend 300 meters on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting 600 meter-wide area of protected habitat for plover chicks should extend from the ocean-side low water line to the bayside low water line or to the farthest extent of dune habitat if no bay-side intertidal habitat exists.</p> <p>A monitoring program should be implemented to gather basic data on location, population size, foraging areas, and success of breeding piping plovers and other imperiled species. However, this type of monitoring program is not a sufficient replacement for the implementation of Adaptive Management.</p> <p>A potentially significant difference between the above and SM1/SM2 is the uncertainty of the buffer zone to protect piping plover chicks. In SM1 a 1000 meter buffer is established “based on observation of bird behavior and</p>	<p>Alts B, C, D, E, F require a 1000m buffer, which is essentially a de-facto closure of beach sections. No alternative calls out specific habitat areas to be closed.</p> <p>Alts B, C, D, E, and F require this.</p> <p>Alts B, C, D, E, and F require this.</p> <p>Alternatives C, D, E, and F have this monitoring program</p>	

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<p>terrain conditions” at each site. Exactly how do these conditions (bird behavior or terrain conditions) determine whether a 1000 meter buffer is needed and what is the alternative? Similarly, under SM2 the buffer is reduced (to 500 meter for ORVs, and 200 meters for pedestrians) two weeks after hatching, and once again observed behavior of the brood determines whether a reduced buffer can be employed. We do not understand the reasoning for reducing established buffers with minimal observations (e.g., once daily for SM1) or after a set period of time (e.g., two weeks after hatching for SM2) when such criteria offer little information on the effects of the management action. We recommend a 1000 meter buffer be established in all situations. We also recommend that Adaptive Management be used to determine when and under what conditions an alternative buffer might be warranted.</p>	<p>Alts B, C, D, E, and F require a 1000m buffer for SM1 and SM2.</p>	
<p><i>Vehicle restrictions in chick habitat:</i> Restrictions on the use of vehicles in areas where unfledged plover chicks are present should begin on or before the date that hatching begins and continue until chicks have fledged. For purposes of vehicle management, plover chicks are considered fledged at 35 days of age or when observed in sustained flight for at least 15 meters, whichever occurs first.</p> <p>When piping plover nests are found before the last egg is laid, restrictions on vehicles should begin on the 26th day after the last egg is laid. This assumes an average incubation period of 27 days, and provides a 1 day margin of error.</p> <p>When plover nests are found after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles should begin on 15 May (the earliest probable hatch date). If the nest is discovered after 15 May, then restrictions should start immediately. If hatching occurs earlier than expected, or chicks are discovered from an unreported nest, restrictions on vehicles should begin immediately.</p> <p>If the nest is monitored at least twice per day, at dawn and dusk by a qualified biologist, vehicle use may</p>	<p>Alts B, C, D, E, and F have vehicle restrictions using these criteria.</p> <p>No alternative contains this language, but all alternatives restrict vehicles around nests until 2 weeks after nest is lost or chicks are fledged. However, the restrictions would only require 75m nest buffers until eggs hatch.</p> <p>Same as above.</p>	

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<p>continue until hatching begins, subject to the protection buffers discussed above and the nighttime restrictions below. Nests should be monitored at dawn and dusk to minimize the time that hatching may go undetected if it occurs after dark.</p> <p>Whenever possible, nests should be monitored from a distance with spotting scope or binoculars to minimize disturbance to incubating plovers.</p> <p>If ruts are present that are deep enough to restrict movements of plover chicks, then restrictions on vehicles should begin at least 5 days prior to the anticipated hatching date of plover nests. If a plover nest is found with a complete clutch, precluding estimation of hatching date, and deep ruts have been created that could reasonably be expected to impede chick movements, then restrictions on vehicles should begin immediately.</p> <p>Regarding the language that states: "Points and spits would only be accessible from 7 a.m. - 7 p.m. 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." We recommend that the phrase "Points and spits" be replaced with "Areas with unfledged chicks", and that the 7 am to 7 pm timeframe be adjusted to be consistent with the Sea Turtle protection measures in the effected area, using whichever is the more restrictive.</p>	<p>No alternative contains language for twice a day monitoring of nests.</p> <p>No details on monitoring methods are provided in alternatives. How much detail should the alts show?</p> <p>The current range of alternatives does not include measures that deal with vehicle ruts and plover movement.</p> <p>The range of alts includes night closures, but none specific to the points and spits.</p>	
<p><i>PIPL Non-Breeding areas:</i>            Suitable interior habitats should be closed to pedestrians and vehicles year-round with a 100 meter buffer to vehicle and pedestrian use to protect essential resting and foraging habitats. Access to the Point or spits would be maintained. These areas in conjunction with the nearby islands would provide valuable high beach roosting habitat as well as sound side intertidal, mudflat, and ephemeral moist sand foraging habitat.</p> <p>Recommend that efforts be made to provide disturbance-free ocean intertidal habitat in the vicinity of the Point and the spits. This could be in the form of high beach ORV corridors and/or inter-dunal roads that route vehicles</p>	<p>All alternatives close all suitable interior habitat to ORV use and pets year round, but no alternative mentions restrictions to pedestrians or a 100m buffer around these areas.</p>	

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<p>around select areas of ocean inter-tidal habitat. I do not believe we know enough at this time to determine objectively how much of this habitat type is needed to sustain non-breeding birds or where specifically the preferred ocean intertidal foraging habitat is located (other than to say it is in the general vicinity of the Point (specifically South Beach) and the spits). As such, I would recommend that every effort be made to provide this habitat, and I would also agree that there is insufficient evidence to support complete closure of any area to ORV access for the purpose of providing undisturbed ocean intertidal foraging habitat at this time.</p> <p>A monitoring program should be implemented on the 5th, 15th, and 25th of each month to gather basic data on location, population size, and habitat use by non-breeding plovers as well as other important shorebirds. The non-breeding plover season extends from 1 July to 31 May. However, this type of monitoring program is not a sufficient replacement for the implementation of Adaptive Management.</p> <p>A potentially significant difference between the above and SM1/SM2 is the difference between available ocean intertidal habitats. Another potential difference between the above and SM1/SM2 is the monitoring of non-breeding piping plovers. We understand the difficulties of identifying and distinguishing migrating piping plovers from nesting piping plovers during the spring and fall. However, the proposed monitoring may miss two to three months of the migration period, and thus important information on the use of CAHA by migrating piping plovers. We recommend that surveys for non-breeding piping plovers begin on 1 July according to the schedule describe above and continue through 31 May, noting that numbers during the “shoulder” months may include breeding birds. Furthermore, we recommend that all piping plover habitats be monitored rather than just “pre-established locations” to truly understand the use of CAHA by non-breeding piping plovers.</p>	<p>Alternative D closes all points and spits to ORV use year round.</p> <p>All action alternatives utilize the SECN non-breeding monitoring program.</p>	
<p>Pets should be prohibited within all natural resource closures and should not be permitted within 100 m of any resource closure between 1 April and 15 November</p>	<p>All alternatives prohibit pets in resource areas but <b>no alternative provides a 100m pet buffer on the resource area.</b></p>	

Element	Addressed in Alternatives to Date	If Yes, where?
Kite flying should be prohibited within 200 meters of all piping plover nesting or territorial adult or unfledged juvenile piping plovers between 1 April and 31 August.	Alternative B prohibits kite flying within the 1000m unfledged chick buffer, but <b>no alternative restricts kite flying within 200m of nesting or territorial behavior.</b> However, all action alternatives prohibit kite flying within or above resource closures (per Compendium)	
Fireworks should be prohibited on beaches where piping plovers nest from 1 April until all chicks are fledged.	Per Superintendent's compendium, fireworks are prohibited at CAHA.	
For other beach nesting birds, it would be reasonable to designate routes through these areas so long as it is clearly understood that these routes are subject to closure.	Assuming this is referring to CWB and other non-threatened species, all alternatives have designated routes subject to closures.	
A monitoring program also should be implemented to gather basic data on nesting locations, population size, nesting success, and hatching success of sea turtles.	All action alternatives include a monitoring program.	
<i>Sea turtles:</i> Surveys should begin monitoring for nesting sea turtles beginning 1 May and continue through 31 August (or two weeks after the last sea turtle nesting activity is found, whichever is later). All sea turtle nests should be located each morning, assessed according to NCWRC guidelines (2006), and immediately posted with symbolic fencing. The sea turtle closure should be a minimum of 10 meters by 10 meters around the nest.	All action alternatives include daily surveys from May 1 through September 15 (or two weeks after last nest or crawl found) and 10m by 10m closures.	
<p>Sea turtles: At day 50 of the incubation cycle, the closure should be expanded to encompass the area 20 meters duneward of the nest site down to the tide line. The width of the closures (running parallel to the shoreline) also should be expanded to 25 meters each side of the nest.</p> <p>The nest sites should be monitored daily for hatching activity after day 50 of the incubation cycle.</p> <p>Silt fencing should be installed at day 50 of the incubation cycle if any sources of light pollution from villages or other structures have the potential to disorient hatchlings. The fencing should be placed in a "U" shape behind the nest and extend oceanward to the high tide line. Vehicle ruts that have the potential to impede hatchlings emerging from nests and attempting to reach the ocean must be removed.</p>	<p>Action alternatives require 15m landward expansion and down to the tide line, <b>but no alternative requires 20m landward expansion.</b></p> <p><b>All action alternatives require a minimum 25m wide expanded closure.</b></p> <p><b>All action alternatives: Daily monitoring is desired, but restricted to availability of volunteers and staff.</b></p> <p>All action alternatives require filter fence and beach raking.</p>	
Lanterns or auxiliary lights and fixed lights of any kind burning for more than 5 minutes should be prohibited on	All action alternatives contain this	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>beaches from 1 May through 15 November.</p> <p>Campfires should be prohibited from 1 May through 15 November.</p>	<p>All alternatives prohibit beach fires year round between 12AM and 6AM. Alternative F prohibits beach fires everywhere but in front of villages and Ocracoke Day use Area from May 1 to November 15.</p> <p><b>No alternative completely bans beach fires.</b></p>	
<p>Night driving: Goals for recovery same as NCWRC</p>	<p>See NCWRC comment on same issue.</p>	
<p>Night driving: Performance objectives same as NCWRC</p>	<p>See NCWRC comment on same issue.</p>	
<p>Night driving: Year 1 (est. implementation 2011) –</p> <ul style="list-style-type: none"> <li>• Night driving from Nov. 16th through April 30th, subject to other provisions.</li> <li>• Restricted night driving from May 1st through Nov. 15th between ½ hour after sunset until all beaches have been cleared by NPS personnel (or authorized personnel), subject to the following conditions: <ul style="list-style-type: none"> <li>o Night driving permitted only on designated ORV routes and areas, subject to other restrictions, and only to the following areas – Bodie Island spit; one location at Ramp 23, 30, or 38 (i.e., approximately one mile around ramp open); and, Hatteras Inlet spit.</li> <li>o NPS enforcement officer and technician on location and available to provide enforcement, education, and conduct basic monitoring and documentation of biological information, including violations.</li> <li>o Permits are required with associated education about turtles, lighting rules, and reporting (turtle activity or violations) guidelines.</li> <li>o Headlights only on during transit and not shining into bird nesting areas. Other light restrictions as previously identified (i.e., no campfires, lanterns, etc.).</li> <li>o This is not a suitable replacement for Adaptive Management</li> </ul> </li> </ul>	<p>Alts B, C, D, E, and F allow night driving Nov 16 – April 30<sup>th</sup> and restricted May 1-Nov 15.</p> <p><b>No alternative restricts night driving beginning at ½ hour after sunset.</b> Alt F prohibits night driving May 1 – Nov 15 from 1 hour after sunset until all beaches have been cleared in the morning.</p> <p>No alternative specifies specific ramps for nighttime ORV access.</p> <p>Alt-B permit has educational requirement, including restrictions on headlights. Details of night driving permits not available for other alternatives. <b>(Note: Discuss with park, alt B nightdriving permit details are not in the matrix, but in effect through the permit system. Do these details need to make their way into the matrix for B and other action alts.)</b></p>	
<p>Year 3 (provided the above metrics are met); same as Year 1 with the following changes –</p> <ul style="list-style-type: none"> <li>• Night driving from Sept. 1st through April 30th, subject to other provisions.</li> <li>• Restricted night driving from May 1st through Aug. 31st between ½ hour after sunset until all beaches have been</li> </ul>	<p><b>No alternative provides night driving starting September 1.</b> Alternatives B, C, D, E, and F allow night driving November 16 through April 30<sup>th</sup>.</p>	



Element	Addressed in Alternatives to Date	If Yes, where?
cleared by NPS personnel (or authorized personnel), per the above conditions.	Alternatives B, E, and F have restricted night driving from September 16 – November 15, although the closure times vary. <b>No alternative restricts night driving beginning at ½ hour after sunset.</b> Alt F prohibits night driving May 1 – Nov 15 from 1 hour after sunset until all beaches have been cleared in the morning.	
Year 5 (provided the above metrics are met); same as Year 3 with the following changes – <ul style="list-style-type: none"> <li>• Restricted night driving from May 1st through Aug. 31st between ½ hour after sunset until 1 hour after sunrise (or earlier if beaches are cleared by NPS personnel or authorized personnel), subject to the following condition. <ul style="list-style-type: none"> <li>o Night driving permitted only on designated ORV routes and areas, subject to other restrictions, and only to the following areas – Bodie Island spit; one location at Ramp 23, 30, or 38; east beach of Cape Point; Hatteras Inlet spit; and, spit at south end of Ocracoke Island).</li> </ul> </li> </ul>	Same as above	
Year 10 (provided the above metrics are met); same as Year 5 with the following changes – <ul style="list-style-type: none"> <li>• Night driving from first Friday before Labor Day through Memorial Day, subject to other provisions.</li> <li>• Restricted night driving from the first Tuesday after Memorial Day through the last Thursday before Labor Day between ½ hour after sunset until 1 hour after sunrise (or earlier if beaches are cleared by NPS personnel or authorized personnel).</li> </ul>	Same as above	
we recommend that the following be evaluated to determine if such measures are appropriate or achievable and to ensure success in implementing the successive stages of the strategy: <ul style="list-style-type: none"> <li>• Conduct assessment to determine whether population goal and population growth are appropriate.</li> <li>• Conduct assessment to determine whether hatching success and hatchling survival performance measures are appropriate.</li> <li>• Conduct assessment to determine baseline lighting conditions (number of lights visible from the beach) throughout Dare County by 2010. The recent “Night Skies” data may be used as part of baseline.</li> <li>• Implement a monitoring protocol or periodic evaluation to determine rates of disorientation/misorientation of</li> </ul>		These measures are addressed under Adaptive Management Initiatives and Research for all action alternatives.

Element	Addressed in Alternatives to Date	If Yes, where?
<p>adult and hatchling sea turtles and track changes in these rates through time and in response to changes in management practices.</p> <ul style="list-style-type: none"> <li>• Implement a monitoring protocol or periodic evaluation to determine rates of take to sea turtles and their nests and track changes in these rates through time and in response to changes in management practices.</li> <li>• Conduct an assessment of habitat conditions focusing on beaches with a history of high rates of nest failure with the intent of identifying and implementing habitat improvement projects.</li> </ul>		
<p><b>SBA:</b> Potential suitable seabeach amaranth habitat in the vicinity of the inlet spits and Cape Point should be identified by a qualified biologist and delineated with symbolic fencing consisting of wooden posts and string on or before 1 June. We recognize that these areas may be encapsulated within shorebird nesting areas and may not warrant additional symbolic fencing. However, protections for seabeach amaranth plants should not be removed before the plant has senesced (typically 1 December).</p> <p>A potentially significant difference between the above and SM1/SM2 is the protection of potential suitable seabeach amaranth habitat in the vicinity of the Point and spits and outside of existing resource closures. We recommend that “potential habitat” in these areas be protected, especially if they lay outside of other resource closures. We also recommend that seabeach amaranth areas within other resource closures be protected using symbolic fencing following cessation of nesting activity or otherwise any opening of the “other” natural resource closure.</p>	<p>Provided in all action alternatives</p>	
<p><b>United Four Wheel Drive Association</b></p>		
<p>Provide additional ramps to allow access beyond necessary protection closures to avoid areas becoming “effectively” closed because there is no ingress or egress to a land locked area. (pg 4)</p>	<p>Alternative C provides an extended interdunal road and new ramp 47. Alternative D provides an extended interdunal road and new ramps 47 and 48.</p>	
<p>Night driving between 10 pm and 6 am May 27 to Aug 28 is suitable for CAHA (pg 14)</p>	<p>Alternative A provides night driving year round.</p>	
<p>Visitors accessing the Seashore by ORV must drive only on areas and routes designated open for ORVs and must comply with posted restrictions. ORV routes/areas will be</p>	<p>Common to all alternatives</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
a designated area seaward from the toe of the dune or vegetation line to the water line. ORV access will be prohibited in all areas of the seashore not designated open as an ORV area or route. Routes and areas designated open, as well as those designated closed to ORV is presented in Exhibit C.		
Flushing of incubating AMOY should not be dispositive in determining whether pass-through corridor widths should be adjusted.	All action alternatives give the NPS to use discretion to adjust corridor widths based on bird behavior and human disturbance.	
Vegetation control measures should be implemented at Cape Point and be strongly considered for Bodie Island.	Alteration of habitat through vegetation management has been considered but dismissed.	
Extraordinary protection measures consisting of large segments or a sizable percentage of protection area within Cape Hatteras National Seashore are unwarranted for non-breeding migratory shorebirds, particularly where protection measures are greater than those measures afforded to species which have been vetted through the listing process under the Endangered Species Act. For example, large segments of ORV and/or pedestrian free beaches during migration season are unwarranted for Red Knots at Cape Hatteras. Red Knots are not a listed species under the Endangered Species Act nor is the species listed in North Carolina as protected species. The numbers of Red Knots that utilize Cape Hatteras is very few, accounting for less than 3% of the population.	Under all alternatives, no wintering closures (non-breeding closures) are enacted for birds beyond piping plover. Other closures in the winter are based on areas for pedestrian use, not birds.	
Carrying capacity decisions should not be made in the absence of peer reviewed studies or visitor use capacity planning. If carrying capacity is implemented as a visitor control measure in the future it should be done only after the determination of desired conditions, selection of indicators and standards that reflect the desired conditions, and monitoring of the indicators and standards.	Not in range of alts. Carrying capacity based on physical space requirements, not peer reviewed studies.	
Part of the decision-making matrix on carrying capacity must consider the specific park legislation where at Cape Hatteras there is a legislative guarantee to ocean access, including ORV access.	All alternatives provide ORV access to the oceanfront. (Note: enabling legislation does not guarantee vehicular access to the ocean)	
A speed limit of 15 mph is implemented uniformly within the Recreational Area, except where otherwise posted. A uniform speed limit facilitates consistency and driver compliance.	Alternatives C, D, E, and F provide a uniform 15 mph speed limit.	
<b>From Exhibit B...</b>		
Visitors accessing the Seashore by ORV must use only	Common to all alternatives	

Element	Addressed in Alternatives to Date	If Yes, where?
designated beach access ramps and soundside access roads to enter designated ORV routes. ORV access is provided via Oceanside ramps and access points (18 minimum) located off NC-12.		
Seashore staff maintains ramps and signage.	Common to all alternatives	
<p>Soundside access: Existing soundside ramps would remain open. Signage/posts would be installed at the primitive parking areas and boat launch areas to prevent damage to vegetation and other soundside resources.</p> <p>Add 1 soundside ORV access on Bodie Island.</p> <p>Plus all ramps would be constructed/maintained with a clay &amp; shell surface. All ramps would be maintained at 2 lanes wide for the safety of visitors.</p>	<p>This language contained in alternative C</p> <p>Alternative E adds a new vehicular soundside access point</p> <p>Alternatives C, D, E, and F contain this language.</p>	
<p>Interdunal roads</p> <p>If any road is a one lane interdunal road it must have passing turnouts.</p>	Alternatives C, E, and F provide pull-outs and/or widening of interdunal roads	
<p>Interdunal roads: Bodie Island Ranger District</p> <p>To be determined with design/access of new ramp 2 &amp; 3. (replacing current ramps 2 &amp; 4)</p>	<p>Range of alts move ramp 2 and creates ramps 3 (all action alts)</p> <p><b>No interdunal roads suggested under any alt for Bodie Island.</b></p>	
<p>Interdunal Roads Hatteras Island Ranger District</p> <p>Cape Point between Ramp 44 to Ramp 45</p> <p>_ Extend interdunal road west of Ramp 45 to Ramp 49.</p> <p>Establish new Ramps at Drain Road, 46, 47, and 48 off of interdunal road.</p> <p>Maintain Pole Road, crossover roads on either side of Isabell washover, Bone Rd. &amp; Spur Rd. to allow for safe 2 way passage.</p>	<p>Alternatives D and E contain this language</p> <p>Alternative C, E, and F provide for widening and pullouts for safe passage on all interdunal roads.</p>	
<p>Interdunal Roads Ocracoke Island Ranger District</p> <p>All current soundside access routes to be kept open with maintenance to allow safe access for ORV &amp; PED</p> <p>Reopen soundside access @ So boundary of Village.</p> <p>Reopen soundside access from ramp 72 south of spur</p>	<p>Alternatives A, B, C, D, and F keep all soundside access open.</p> <p><b>No alternatives expand soundside access north of ramp 72, only south.</b></p>	

Element	Addressed in Alternatives to Date	If Yes, where?
around SW end of dune in non-breeding season.	Alternative F provides a new soundside access point south of ramp 72.	
<p>Hours of allowable ORV operation: August 26 - May 26: Designated ORV routes &amp; areas open to ORV use 24 hours a day.</p> <p>May 27- August 25: All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore &amp; dunes) closed to non-essential ORV use from 10:00 pm until 6:00 am.</p>	<p><b>No alternative uses these specific dates</b>, but alternative A provides ORV access for 24 hours a day, 365 days a year. All action alternatives provide 24 hour a day access from November 16 – April 30.</p> <p><b>No alternative uses these specific dates</b>, but alternatives B and E prohibit night driving from September 16-November 15 from 10:00 pm to 6:00 am. Alternative C prohibits night driving from May 1 – November 15.</p>	
Administrative ORV Closures No administrative closures would be established.	None of the action alternatives establish administrative closures.	
Ramp Characteristics "High-use" ramps, including but not limited to Ramps 2/4, 23, 34, 38, 44, 49, 55, 59, 70, 72, add, toilet facilities, predator proof dumpsters and fish cleaning stations	All action alternatives involve the installation of toilets and trash receptacles at "high use" locations.	Fish cleaning stations are outside the scope of this plan. <b>[Park to verify – included in early versions of the matrix, but not most recent ones.]</b>
Standard regulatory signs and information boards at all ramps	All action alternatives contain this language	
Designated air down area with hardened surface (e.g., shell/clay base)	All action alternatives contain this language	
Gates at all ramps and access points	All action alternatives contain this language	
Wintering Closures Based on an annual wintering habitat assessment conducted after the breeding season, wintering areas are established while allowing an access corridor (pedestrian and pedestrian/ORV) as identified in the Use Areas Table. At the spits and Cape Point access will be maintained via ocean shoreline and interdunal roads.	All action alternatives contain this language	
Permits required for ORV use on beaches and ramps of Cape Hatteras National Seashore Recreational Area. No limit on number of permits.	Alternatives C, D, and F require ORV permits and do not limit the number of permits issued	
Permit Distribution Available in-person at various locations and on-line	Alternatives B, C, D, E, and F contain this language	
Permit Issuance Requirements ORV owners must read the rules and regulations governing ORV use at the seashore. The owner would sign for their permit in acknowledgment that they understood the rule and that	Alternatives D, E, and F contain this requirement	

Element	Addressed in Alternatives to Date	If Yes, where?
all drivers will abide by the rules and regulations governing ORV use at the seashore, including beach driving safety and resource closure requirements.		
Permit types * Special Use Permit. Daily, weekly, or annual. * Special free "nighttime ORV access" permit required for specified locations. See EXHIBIT E. Special Use Permit must be obtained prior to receiving "nighttime beach access" permit. Nighttime Beach Access only required from May 27 through August 25. * Special free "Self-contained Vehicle" permit. See EXHIBIT I. * Commercial Fishing Permit	<p>No alternative offers a daily permit option</p> <p>Alternative B offers a free night driving permit, although the dates are May 1 through November 16.</p> <p>Alternative E offers a SCV permit, although there would be a cost associated with it.</p> <p>Commercial Fishing Permits are issued by the state of North Carolina and are not addressed in this EIS.</p>	
Permit fees \$7/day/vehicle; \$20/week/vehicle; or \$30/year/vehicle	ORV permit fee would be based on cost recovery as described in NPS Director's Order and Reference Manual # 53. Permit fees have not yet been determined. Specific fees not in the range of alternatives.	
Permit affixed to vehicle in a manner approved by NPS.	All action alternatives require this	
A permit may be revoked after conviction for violation of applicable park regulations or terms and conditions of the permit, for period of time commensurate with the violation(s).	All action alternatives contain this language	
Beach Parking is allowed in any configuration so long as parked vehicles do not interfere with the clear and safe passage of a single lane of traffic.	Alternatives A, B, C, E, and F contain this language	
Temporary Emergency Beach Closures The NPS retains the authority to implement a temporary emergency beach closure is any of the following conditions are observed: * ORV traffic backing up on the beach access ramps, either on-or off-beach bound, which threatens to impede traffic flow for a significant length of time * ORV traffic on beach is parked in such a way that 2-way traffic is impeded for a significant length of time * Multiple incidents of disorderly behavior are witnesses by NPS and conflicts cannot otherwise be mitigated.	Alternatives B, E, and F contain this language.	
Seasonal Element related to Carrying Capacity Applicable only May 15 to September 15	No alternative applies a seasonal aspect to carrying capacity	
Periodic Review of Carrying Capacity Visitation, crowding,	Alternatives C, E, and F require a periodic review of	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>and safety monitored periodically to determine if implementation of carrying capacity is warranted.</p> <p>Once implemented, carrying capacity limits would be reviewed every 2 years. Review to include NPS and the appointed FACA committee at least every 2 years and more often if requested.</p>	<p>carrying capacity</p>	<p>Alternatives do not currently specify the schedule or individuals involved in periodic review</p>
<p>Areas of Implementation Would apply to all areas of the seashore.</p> <p>Carrying capacity requirement only implemented if carrying capacity plan is finalized and increased visitation results in crowding threshold being met.</p>	<p>Alternative C requires carrying capacity to be applied to all areas of the seashore.</p>	<p>There is no carry capacity "plan" contained in the alternatives at this time, other than periodic review expressed in alternatives C, E, and F. Alternatives C, E, and F establish carrying capacity thresholds based on linear feet of beach front and physical space requirements.</p>
<p>Parking Areas for Non-ORV Access Any new parking areas to be located near Non-ORV Areas and located away from eroding areas or potential inlet areas. New parking areas will implement environmentally appropriate design standards to minimize stormwater runoff. New or expanded parking areas for oceanside locations are identified in ORV Routes and Areas Table.</p>	<p>Common to all action alternatives</p>	
<p>Non-ORV Parking Area Characteristics * Each site would have a boardwalk or other appropriate pedestrian route for crossing the dune.</p> <p>* Parking areas with 25 or more parking spaces would have waste receptacles and toilet facilities.</p> <p>* Access provided for mobility impaired at select locations.</p>	<p>Alternatives do not provide details on boardwalks and dune crossing.</p>	<p>All action alternatives provide waste receptacles and toilet facilities at all "high use "areas, although it is not based on the number of parking spaces.</p> <p>Mobility-impaired is provided in all alternatives, although all action alternatives call for retrofitting existing boardwalks to add more accessibility.</p>
<p>Alternative transportation is not provided at the seashore.</p>	<p>Alternatives A, B, and D do not provide for alternative transportation.</p>	
<p>Pets are to be regulated by 36 CFR §2.13 See also special considerations for pets at EXHIBIT H, Resource Protection Table.</p>	<p>Pets are regulated by 36 CFR §2.15 (2.13 regulates beach fires) in all alternatives.</p>	
<p>Dog walking or "doggie park" areas should be established to provide alternatives for pet owners to minimize pet/resource conflicts.</p>	<p>Providing dog park areas is not within the scope of this plan. All alternatives provide oceanfront areas where pets are permitted. The concept of an off-leash is included in considered but dismissed.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>Beach fires are allowed per 36 CFR §2.13 and prohibited 12:00 midnight to 6:00am.</p> <p>No fires are allowed within 100 meters of a known turtle nest.</p>	<p>Alternatives B and D contain this language</p>	
<p>Camping*, as defined in 36 CFR 1.4 is prohibited on seashore beaches per Superintendent's Compendium §2.10(a).</p> <p>A new order will be issued to allow for Self-Contained Vehicles according to EXHIBIT I, Off-Road Vehicle Requirements and Characteristics.</p> <p>* 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 or a motor vehicle, motor home, or trailer, or mooring of a vessel for the apparent purpose of overnight occupancy. (36 CFR §1.4).</p>	<p>This language contained in alternatives A, B, C, D, and F.</p> <p>Alternative E provides SCV camping</p> <p>Per CFR: In all alternatives</p>	
<p>Boat Access Launch sites, as designated under 36 CFR § 3.8(a)(2), are identified in the Superintendent's Compendium. Launching or recovery of vessels is prohibited within resources closures.</p>	<p>Per CFR. Common to all alternatives</p>	
<p>Commercial Fishing Vehicles Authorized by permit, plus may be authorized by special use permit to access non-ORV areas and night driving restricted areas if there is no resource conflict.</p>	<p>All alternatives require a special use permit for commercial fishing and require authorization to enter non-ORV areas.</p>	
<p>Discontinue use of carsonite stakes as they increase sea turtle false crawls.</p>	<p><b>The alternatives currently do not contain details regarding the materials used for posting signage.</b></p>	
<p>An advisory committee shall be established to review the ORV Management plan annually or more often if requested by the superintendent. The committee shall consist of a reasonable cross sectional representation of the visitors to Cape Hatteras National Seashore Recreational Area.</p>	<p>All action alternatives contain a provision for a periodic review, <b>although the review would take place every five years. At present, the alternatives do not specify what individuals would be involved in the review of the ORV management plan.</b></p>	
<p>**need to compare access map, Exhibit C to alts access maps***</p>	<p>For all UFWDA routes and areas, there is an alternative that reflects the segment being treated the same way – see exhibit F explanation below.</p>	
<p><b>Night driving</b></p>		
<p>In general, night driving would be prohibited during the dates of May 27 and August 25;</p> <p>In general, night driving would be prohibited during the</p>	<p>Addressed in earlier UFWDA comment above.</p>	



Element	Addressed in Alternatives to Date	If Yes, where?
times of 10:00 p.m. to 6:00 a.m.		
<p>Night driving on specific designated routes to spits and points that are not otherwise closed due to bird breeding activity would occur with nighttime restrictions from May 27 to August 25, with sufficient NPS monitoring. Specifically, in four areas of the Park (Bodie Island Spit, Cape Point, Hatteras Spit and South Point Ocracoke), provided those areas are not otherwise closed due to bird breeding activity, limited access for appropriate nighttime access and appropriate recreational activity, with significant restrictions, would be permitted from May 27 to August 25.</p> <p>At the designated location(s), drivers would have to park and stay parked at night, with lighting restrictions. Fishing or other appropriate recreation (i.e., stargazing) would occur though vehicles must remain parked until the area reopens to ORV access at 6:00 a.m.</p>	<p>Addressed in earlier UFWDA comment above.</p> <p>Alternative E provides “park and stay” options.</p>	
Night driving on all routes and areas would occur without nighttime restrictions from August 26 until May 26.	Addressed in earlier UFWDA comment above.	
<b>Sea turtle monitoring</b>		
Daily sea turtle patrols will begin on May 1. Patrol will continue until September 15, or two weeks after the last sea turtle nest or crawl is found, whichever is later.	Common to all action alternatives	
Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches before onset of heavy public ORV use. Morning surveys must begin on the beach no later than twilight. 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 occur in areas of high visitation.	Common to all action alternatives	
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 excavations indicate that any nests remaining are not viable.	Common to all action alternatives	
At approximately 50-55 days into incubation, NPS will expand closures around a nest to the surf line, establish the filter fencing, and monitor the nest daily for signs of hatchling emergence.	Common to all action alternatives	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>Using personnel with local turtle experience survey the ocean beaches each identify problems of poor nesting sites and appropriate relocation areas.</p>	<p>Common to all action alternatives</p>	
<p>In general, NPS will follow the guidance found in the NCWRC Handbook for Sea Turtle Volunteers until such time as NPS develops site-specific guidelines for the unit and can transition to solely implementing such NPS guidelines.</p>	<p>The current alternatives do not mention a transition to NPS guidelines for sea turtles.</p>	
<p>May 27 – August 25: The general park wide approach to sea turtle management during these dates includes the following:</p> <ul style="list-style-type: none"> <li>o All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) will be closed to non-essential ORV use from 10:00 p.m. until 6:00 a.m.. Pedestrian use of beaches from 10:00 p.m. until 6:00 a.m. is allowed. All users, whether arriving via foot or via ORV, must comply with turtle etiquette regarding use of lights, prohibition of campfires, approach of turtles or nests, etc. as outlined below.</li> <li>o Areas of beach shall be cleared by turtle patrol prior to allowing ORV morning access. NPS shall provide sufficient personnel to meet the 6:00 a.m. standard. The turtle patrols will place as a first priority patrolling those areas that are currently open to ORV access, and as necessary, further prioritize those open areas within the spits and points.</li> <li>o Early morning monitoring will be done in the most effective and efficient fashion possible. This may include an initial sweep for marking of new nests and false crawls followed by a second sweep for detailed fencing, more permanent protections, etc.; beginning patrols at first twilight on the beach; and so forth.</li> <li>o Signaling of some kind should be established at ORV access ramps to indicate if the beach is closed. This may be signage, traffic-light lights, or so forth.</li> <li>o The Park shall seek, in partnership with the NCWC, Dare County, and a volunteers program to provide for at least 8 separate turtle patrols per day during the turtle-nesting</li> </ul>	<p>Alternatives B and E close this habitat to vehicles from 10:00pm to 6:00am, although the dates are May 1 – November 15.</p> <p>Alternative F includes turtle patrol checking the beach in the morning, but does not mention “clearing” the beach or require that it be done by 6:00am.</p> <p>The alternatives currently don’t provide this level of detail about how monitoring is conducted.</p> <p>It is assumed that this is included in some form under any alternative that closes the beach at night, as this closure would be signed in some way.</p> <p>All action alternatives mention the establishment of a cadre of volunteers to assist with nest monitoring, but</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>season.</p> <ul style="list-style-type: none"> <li>o The Park shall provide for sufficient and necessary enforcement to ensure the beach is cleared at night by 10:00 p.m., and that any violators are found and receive appropriate penalties.</li> <li>o Nest closures and buffers are described in the Resource Protection Table.</li> </ul>	<p>there are currently no details on how many patrols will be used.</p> <p><i>LE is still TBD on matrix</i></p>	
<p>August 26 – Date of Last Hatching: Designated ORV routes and areas are open to ORV use 24 hours a day subject to other natural resource closures. NPS will conduct night nest monitoring/watch during expected hatching to ensure the safety of hatchlings in any areas open to ORV use with turtle nests present. The NPS will work to establish a nest watch program with volunteers under appropriate supervision.</p> <ul style="list-style-type: none"> <li>o The Park will install filter fencing for managing light and will provide for an appropriate buffer around turtle nests to ensure hatchlings may make their way to the sea. Filter fencing should be no further from the nest than 5 meters to ensure light from distances further away from the nests is filtered.</li> <li>o Resources Management staff will examine all sea turtle 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, or later if eggs are still viable. Any live hatchlings found during excavations will be released at dusk or after dark on the same day as excavation.</li> </ul>	<p>Alternative A allows night driving during turtle nesting season. Alternatives B, E, and F allow limited night driving from September 16 through November 15. All action alternatives involve nest monitoring for hatchlings with the cooperation of volunteers.</p> <p>All action alternatives require the installation of filter fencing, but no specific distance from the nest is mentioned.</p> <p>All action alternatives contain this language</p>	
<p>Date of Last Hatching – May 26: Designated ORV routes and areas are open to ORV use 24 hours a day subject to other natural resource closures.</p>	<p>Alternative A allows night driving year round. Alternatives B, E, and F allow limited night driving starting September 16, and open the beaches to 24 hour ORV use from November 16 through April 30.</p>	
<p>General Requirements for Nighttime ORV Access of Bodie Island, Cape Point, Hatteras Inlet, and South Point Ocracoke - May 27 to August 25: Bodie Island Spit, Cape Point, Hatteras Inlet and South Point Ocracoke, if not</p>	<p>Addressed previously</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>otherwise closed due to bird breeding activity, are open to nighttime ORV access. The following additional restrictions apply within said ORV routes/areas.</p> <ul style="list-style-type: none"> <li>o All ORVs must obtain an ORV Special Use Permit, See EXHIBIT B for details. All ORVs must also obtain a Special Use Permit for Nighttime ORV Access.</li> <li>o Nighttime ORV Access Permits will be accompanied by education about sea turtles, their protection, the rules of nighttime access, and a phone number to report any violations or specific turtle behavior (nesting, false crawls, etc.).</li> <li>o In areas open to nighttime ORV access, campfires, use of vehicle headlights (other than as below), auxiliary lights, vehicle battery powered spotlights, or lanterns that cast light in a 360 degree direction are prohibited, except as needed in a true emergency situation. Intermittent use of lighting (5 minutes or less) is limited to handheld flashlights, headlamps or other battery powered lighting devices that cast a one-directional beam of light.</li> <li>o Headlights may only be used when in transit and will be turned off when the vehicle is parked.</li> <li>o Drivers and pedestrian should not approach turtles or turtle nests and should not aim any lights including flash photography toward adult sea turtles or hatchlings.</li> <li>o NPS will conduct night monitoring of the specific ORV routes and areas open to nighttime ORV access, with at least one monitor per ranger district, to identify, record, and monitor nesting females and record false crawls.</li> <li>o Incentives should be established for beach users to report any turtle activity.</li> <li>o Limitation on numbers of vehicles for areas open to</li> </ul>	<p>All action alternatives require an ORV permit and alternatives B, E, and F require a permit for night driving.</p> <p>Alternative B would require an educational component to the night driving permit.</p> <p>All action alternatives contain these light restrictions. Alternatives A, B, C, D, and E prohibit beach fires in all areas of the Seashore from 12:00am to 6:00am.</p> <p>Alternatives do not currently contain this language, but the night driving permit in alternative B recommends only using vehicle headlights when necessary.</p> <p>The night driving permit in alternative B contains this language.</p> <p>In their current state, the alternatives do not contain specific language regarding the amount of nighttime monitoring that will occur.</p> <p>All action alternatives involve developing educational materials to inform visitors about their impact on the success or sea turtle nests.</p> <p>Alternative E establishes vehicle limits for “park and</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>nighttime ORV access.</p>	<p>stay” areas. Alternatives C, D, E, and F limit the amount of vehicles in particular areas through parking restrictions or carrying capacity limits.</p>	
<p>Number of Vehicles per Nighttime ORV Access Area: The number of vehicles allowed in Nighttime ORV Access areas will be limited and such limitations will be established in the Superintendent’s Compendium under the authority of 36 CFR § 1.5, subject to periodic review by NPS, and adjusted as appropriate (could be increased if no negative impacts to resources are determined or decreased if needed to protect park resources). The limitation on number of vehicles will be as follows:</p> <ul style="list-style-type: none"> <li>o Bodie Island Spit limit – 25 vehicles</li> <li>o Cape Point: Vehicle limit – 50 vehicles</li> <li>o Hatteras Inlet Vehicle limit – 25 vehicles</li> <li>o Ocracoke South Point limit – 25 vehicles</li> </ul>	<p>Alternative E establishes vehicle limits for “park and stay” areas as follows: Inlet spits (15), Cape Point (25), and South Point (25). Alternatives C, D, E, and F limit the amount of vehicles in particular areas through parking restrictions or carrying capacity limits.</p>	
<ul style="list-style-type: none"> <li>• Special Use Permit for Nighttime ORV Access. The above areas will be accessible by ORV only before 10:00 p.m., subject to resource closures for bird breeding activity or turtle nests, and subject to terms and conditions of a special use permit, which include the following: <ul style="list-style-type: none"> <li>o Such vehicles must have a special use permit for “Nighttime ORV Access” which will be in addition to any standard beach access permit.</li> <li>o Appropriate recreation would include fishing, stargazing, or other passive activities.</li> <li>o Permitted vehicles must arrive at the site no later than 10:00 p.m. and remain parked within the designated area with headlights off until the beach is cleared by turtle patrol, which shall be by 6:00 a.m. Under rare circumstances, should a Nighttime ORV Access permittee need to leave the beach during the night due to a serious emergency, they must make a call to Dare County central dispatch (473-3444) or 911. Dispatch information will be listed on the nightly permit. Parking areas at the respective nighttime ORV access areas will be designated by NPS law enforcement staff and marked with signage (e.g., posts or barricades) that will be maintained by the LE staff. Permittees must park their vehicles only in the</li> </ul> </li> </ul>	<p>Addressed previously</p> <p>All alternatives all fishing, stargazing, or other passive activities 24 hours a day outside of all resource closures.</p> <p>Details of the “park and stay” program under alternative E have not yet been developed.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>designated area. Such areas will be contained and shall prevent vehicles from being spread up or down large sections of beach.</p> <ul style="list-style-type: none"> <li>o Pets are prohibited</li> <li>o Campfires, use of vehicle headlights, vehicle battery powered spotlights, or lanterns that cast light in a 360 degree direction are prohibited, except as needed in a true emergency situation. Intermittent use of lighting is limited to handheld flashlights, headlamps or other battery powered lighting devices that cast a one-directional beam of light.</li> <li>o Drivers and pedestrians should not approach turtles or turtle nests and should not aim any lights, including flash photography, toward adult sea turtles, hatchlings, or into a nest enclosure.</li> <li>o Special use permits will be issued one night at a time and must be obtained in person at a designated NPS permit issuing station (locations TBD). If NPS issuing stations are scheduled to be closed due to day of the week or known holiday, NPS must make permit available the business day immediate occurring before the day the permit issuing station is closed.</li> <li>o Each vehicle must have a functional portable toilet.</li> </ul> <p>If it appears that there is routinely more demand for permits than the vehicle limits allow NPS may impose a limit on the number of nights in a row an individual may obtain a nighttime ORV access permit. If a permit is</p>	<p>Alternative D prohibits pets at all points and spits year round and alternatives C and E prohibit pets in these areas from March 15 through October 15. Alternative F prohibits pets in these areas from March 15 through July 15.</p> <p>Alternatives A, B, C, D, and E prohibit beach fires from 12:00am until 6:00am. The provisions contained in the night driving permit under alternative B recommend using headlights only when necessary. All action alternatives prohibit the use of certain lights for more than 5 minutes at a time from May 1 through November 15.</p> <p>This language is in the night driving permit text in alternative B.</p> <p>Currently, the alternatives do not contain provisions for daily/nightly ORV night driving permits and do not provide details on NPS permitting issuing stations.</p> <p>Alternative E requires that all SCVs have a functional portable toilet (<b>Note: details of the “park and stay” permits are not available but could we assume that a personal portable toilet would be required</b>)</p> <p><b>Details of the “park and stay” program and permit are not available.</b> However, carrying capacity thresholds in alternatives C, D, E, and F are subject to periodic review and adjustment.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>obtained but permittee will not utilize permit for that day the permit must be returned to the permit issuing station prior to the time the permit station closes.</p> <p>NPS retains the right to refuse issuance of nighttime ORV access permits when adverse weather conditions are forecasted that pose dangerous conditions that will, or are likely to, lead to safety measures that would require evacuation from the beach between the hours of 10:00 p.m. and 6:00 a.m.</p> <ul style="list-style-type: none"> <li>o NPS may utilize volunteer hosts at nighttime ORV access areas as a management tool to monitor compliance with the permit requirements.</li> <li>o If a permittee, or individual accompanying a permittee, violates the terms and conditions of the permit, including any natural resource protection rules or any of the above provisions, the violator is subject to a citation and the person’s privilege to obtain a night-access permit will be revoked for the remainder of the season.</li> </ul>	<p>Under all alternatives, the NPS is authorized to implement temporary beach closures (36 CFR §1.5), <b>but the alternatives in their current state do not restrict the number of night driving permits that the NPS can issue</b>, except under the “park and stay” program.</p> <p>As currently written, none of the alternatives consider using volunteers in a law enforcement role (<b>Park: should this be considered but dismissed for safety/liability reasons?</b>)</p> <p>Alternatives B, C, D, E, and F contain provisions for revoking ORV and night driving permits for violations.</p>	
<p><b>Education and Outreach</b> The NPS will develop an appropriate, robust, and effective turtle education and outreach program to help inform all beach users, regardless of the means they use to access the beach, regarding turtle species, their behavior, and all appropriate human behavior to ensure the success of nesting and hatching of turtles on CAHA</p>	<p>All alternatives contain measures to educate the public on sensitive species and all action alternatives involve developing new turtle-based educational materials and turtle-friendly lighting controls.</p>	
<p><b>Research and Knowledge Base</b> The NPS will commit sufficient resources to the monitoring, science, and adaptive management approach to build a detailed, thorough knowledge of turtle management on CAHA to be used for future management of sea turtles at Cape Hatteras and to share that knowledge with others within the state, other Parks, and up and down the Atlantic Seashore.</p>	<p>These elements are contained in all action alternatives under the “Research” section of the Species Management tables.</p>	
<p><b>Volunteer Program</b> The NPS will develop an appropriate and effective volunteer program to increase its access to resources, to inform and educate interested members of the public, and to help advance the recovery of turtle species. To the greatest extent possible, the NPS will also partner with</p>	<p>Included as part of all action alternates on the Species Management Table.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
Dare County and such state agencies as the North Carolina Wildlife Resources Commission (NCWRC) to maximize resources and abilities to achieve the goals noted above. Volunteers may assist with turtle patrols and may also serve as nest watchers during hatching.		
Stationary Lighting within the Control of the NPS The NPS will work with USFWS, the NCWRC, and appropriate others to develop turtle-friendly lighting at all NPS facilities that might affect lighting on or near the beach, as well as require all concessionaires with potential impact to utilize the same lighting through their special use permits.	Included as part of all action alternates on the Species Management Table.	
Predator Control Under a separate process, NPS will develop and implement a predator control plan for predators of turtles, particularly hatchlings, in order to reduce harm and death to hatchlings.	As stated, this is being handled under a separate planning process.	
Commercial Fishing Commercial fishing permittees regulated pursuant to 36 CFR 7.58(b)(2) are not subject to the provisions of this ORV regulation during times or periods when beach use occurs while engaged in commercial fishing from seashore beaches. Appropriate requirements for protection of turtles will be managed separately through the commercial fishing special use permit.	Under all alternatives, commercial fishermen are allowed to enter beach closures that are not resource-based. Under alternatives C, D, E, and F, commercial fishermen would not be required to obtain an ORV permit and could be granted access to beaches at night, outside of resource closures.	
<b><i>Adaptive Management for Sea Turtles</i></b>		
Proposal: Identify the “management category” of each ocean beach segment as one of the following: 1. ORV areas (ORV/pedestrian segments, open to ORV use during daylight hours) 2. Non-ORV areas (pedestrian only segments) 3. Resource Areas that are closed from (date) to (date) to all ORV and pedestrian use (control segments) 4. Village	All action alternatives designate ORV use areas, non-ORV areas, species management areas (closures), and village areas that are management differently.	
Monitor and Document the following information: 1. Turtle species 2. Nest vs. false crawl 3. Document nests lost to storms, overwash, predators, etc. 4. Dates and times of activities (nest, false crawls, hatching) 5. Location (physical description and GPS location) 6. Management category (ORV, Non-ORV, Resource Area,	All action alternatives require these data collection measures, with the exception of 6 and 11	



Element	Addressed in Alternatives to Date	If Yes, where?
<p>other Resource Closures, or Experimental, Villages) of the nest site at the time it was laid</p> <p>7. 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</p> <p>8. Necessary protective measures for nest and hatchlings</p> <p>9. Information regarding any resource closure violations, predation, hatchling misorientation, trapping by obstacles, or possible “take” incidents</p> <p>10. Information regarding any post hatching nest excavation and analysis</p> <p>11. Visitor use in terms of number of visitors using the beach from May 1 to October 31, kinds of use, night use, kinds of night activities, and other appropriate socio-economic data.</p> <p>12. 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, or later if the eggs are still viable (i.e., late season nests). Any live hatchlings found during excavations will be released after dark on the same day as excavation.</p>		
<p>Evaluate:</p> <ol style="list-style-type: none"> <li>1. Compare the number and proportion of nests, false crawls, hatchling misorientation/disorientation incidents, predation incidents, lost nests, and hatchling emergence rate that occur in the respective management categories. Document in annual sea turtle report.</li> <li>2. Evaluate data over multiple years to help determine management actions chosen in terms of dates, times, and restrictions, to the extent possible, against such criteria as nests, false crawls, and others noted above, generally related to risk management, overall impact, etc.</li> <li>3. Conduct periodic review and evaluate trends every 5 years and include a summary of that analysis in the annual sea turtle report for the respective year. Review results with USFWS.</li> </ol>		<p>All action alternatives indicate that the NPS may authorize additional scientific research on turtles at CAHA. <b>Current range of alternatives does not include this level of detail for data collection.</b></p>

Element	Addressed in Alternatives to Date	If Yes, where?
<p>(Note: Loggerhead and green turtles typically nest every 2-3 years, so this would allow for a minimum of two nesting cycles to be considered.)</p> <p>Adapt:</p> <p>If no significant effect of recreation at a particular site is found, recreational restrictions can be varied systematically to distinguish the effects of type and level of activity. This might include changing dates, times, and locations. On the other hand, if no effect is detected, then the next round of experiments could entail allowing similar night access to other selected sites. Any change in management would require consultation with USFWS and NCWRC, prior to implementation.</p> <p>Design a systematic research study to monitor and determine the effects, if any, of night access on sea turtle nesting at Cape Hatteras.</p>		<p>All action alternatives contain an adaptive management initiative to evaluate the level of human disturbance that might be caused by altering ORV access at night. All action alternatives also include a periodic review to determine if management changes are required based on these adaptive management initiatives or other research.</p>
<p>****See Exhibit F, routes and areas table and compare to alts****</p> <p><b><i>*note: not sufficient detail concerning the purple areas, as they refer to a point/spit plan that governs recreational use in these areas. Purple areas are not included in NPS maps (in NPS maps just open year round and all year round is subject to resource closures)</i></b></p>		<p>Current range includes all of the recommendations on exhibits C and F, with the following exceptions:</p> <ul style="list-style-type: none"> <li>• Proposed interdunal road from ramp 4 to bait pond</li> <li>• New ramp 28</li> <li>• Possible new ramp 40</li> <li>• New ramp 45</li> <li>• New ramp 46</li> <li>• New ramp 48</li> <li>• New ramp 51</li> <li>• Provides access around points and spits to and along sound-side.</li> </ul>
<p>Exhibit G – Criteria for Safety Closures Established. See this document, and note if it is included in any of the alts.</p>		<p>Alternative F establishes a similar set of criteria for safety closures. <b>The only difference is that a stakeholder advisory committee is not discussed in the NPS range of alternatives.</b></p>
<p>See exhibit H below – note in first column if these species measures are covered in an alternative</p>		
<p>STAKEHOLDER INPUT: The Park shall establish and</p>		<p>In their current form, the alternatives do not involve</p>

Element	Addressed in Alternatives to Date	If Yes, where?
<p>maintain a standing stakeholder advisory [FACA] committee with representatives from various sections/geographies of the Park representing diverse and balanced interests to provide input to the Park on, among other things, ORV-related issues via a standing ORV subcommittee.</p>	<p>the formation of a standing stakeholder advisory committee.</p>	
<p>ESSENTIAL VEHICLES: Essential vehicles are allowed in non-ORV areas, and within resource closures subject to guidelines in Essential Vehicles section of Appendix G of the U.S. Fish and Wildlife Service Piping Plover (<i>Charadrius melodus</i>), Atlantic Coast Population, Revised Recovery Plan (USFWS 1996a, as cited in the strategy/EA). 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.</p> <p>In the event of an emergency, the protection of human life takes precedence over all other management activities.</p> <p>Essential vehicles will avoid driving within turtle nest closures.</p>	<p>Common to all alternatives</p> <p>Alternative A (FONSI) contains this language.</p> <p>Alternative A (FONSI) contains this language.</p>	
<p>COMMERCIAL FISHING: ORV operations by commercial fishermen will be addressed in the Commercial Fishing CFR (CFR 7.58) and any associated permits.</p>	<p>Alternative A contains this language which is incorporated and augmented in the remaining alternatives.</p>	
<p>All vehicles must exhibit the following characteristics to drive on the Park's beaches. Drivers are responsible for ensuring their vehicles meet these characteristics.</p> <ol style="list-style-type: none"> <li>1. 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>2. Four-wheel drive vehicles are allowed.</li> <li>3. Motorcycles are allowed.</li> <li>4. Two wheel drive vehicles are allowed after the operator obtains a special use permit.</li> <li>5. All-Terrain Vehicles (ATVs) are prohibited. ATVs are defined as a type of off-highway vehicle that travels on three or more low-pressure tires; has handle-bar steering; is less than or equal to 50 inches in width; and has a seat</li> </ol>	<p>All action alternatives contain language similar to items 1, 2, 5, and 7-10.</p> <p>Alternatives A and B permit motorcycle driving at the Seashore and alternative E allows motorcycles only at the soundside access points.</p> <p>All alternatives allow two-wheel drive vehicles, but there is no requirement for a special use permit in the current range of alternatives. However, all vehicles would need an ORV permit under alternatives C, D, E, and F.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>designed to be straddled by the Operator.</p> <p>6. The Park Superintendent will determine the acceptability of new or state of the art vehicles (those that are not listed in items 2-5) for driving on CAHA as needed, with input from the standing advisory group and/or state law.</p> <p>7. There is a three axle maximum for vehicles (this is the axle maximum for the powered vehicle only and does not include the additional number of axles on towed trailers).</p> <p>8. Any trailers are limited to no more than two axles.</p> <p>9. The maximum vehicle length is thirty (30') feet (this is the maximum length for the powered vehicle and does not include the additional length of a towed trailer).</p> <p>10. Tires must be U.S. Department of Transportation listed and/or approved tires only.</p>	<p>At this time, the alternatives do not use the term "state of the art" vehicles, although all alternatives require that all vehicles at the Seashore be "street legal".</p>	
<p>REQUIRED EQUIPMENT: All vehicles operated on the beach shall contain the following required equipment.</p> <ol style="list-style-type: none"> <li>1. A low-pressure tire gauge <b>effective down to 5 psi.</b></li> <li>2. A shovel</li> <li>3. A jack</li> <li>4. A jack support</li> <li>5. <b>Trash bag or container</b></li> <li>6. <b>A flashlight</b></li> <li>7. <b>Copy of the current NPS ORV regulations and map.</b></li> </ol>	<p>All action alternatives require a low pressure tire gauge, shovel, jack and jack stand.</p> <p>However, the action alternatives only recommend a trash bag and flashlight.</p> <p>Alternative B requires that night drivers carry a copy of their permit (containing the regulations) while driving.</p>	
<p>HIGHLY RECOMMENDED EQUIPMENT: The following equipment is recommended but not required.</p> <ol style="list-style-type: none"> <li>1. A full size spare tire</li> <li>2. First aid kit</li> <li>3. Fire extinguisher</li> <li>4. 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> </ol>	<p>Alternatives C, D, E and F contain this language.</p>	
<p>DRIVER'S LICENSE: All drivers must carry a valid driver's license.</p>	<p>Common to all alternatives. Contained in Superintendent's Compendium</p>	
<p>SPEED LIMITS: The speed limit on CAHA beaches is 15 mph year-round, unless otherwise posted.</p>	<p>Alternatives C, D, E and F contain this language.</p>	
<p>TIRE PRESSURE: When driving on designated routes, tire pressure must be lowered sufficiently to maintain adequate traction within the posted speed limit. Twenty (20) psi is 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</p>	<p>Alternatives C, D, E and F contain this language.</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
<p>possible.</p> <p>RIGHT OF WAY: Right of way shall be as follows:</p> <ol style="list-style-type: none"> <li>1. A vehicle exiting the beach via a Ramp or Interdunal Road has the right of way until reaching state-regulated roads.</li> <li>2. When traveling parallel to the ocean or sound, the vehicle with the water to its right side has the right of way.</li> <li>3. Vehicles must yield to pedestrians at all times, including on beaches and ramps.</li> </ol>		<p>Superintendent’s compendium states that the vehicle right-of-way is not defined by Seashore, and the standard driving rules must be followed. On ramps, the vehicle exiting the Seashore has the right-of-way.</p>
<p>SELF-CONTAINED VEHICLE CAMPING: Self contained vehicle camping is allowed in CAHA and will be managed under a special use permit system. The special use permit will be an addition to any other broad beach access permit or pass system required.</p> <p>The special use permit will include a fee whose price will be determined under NPS rules, regulations, and policies regarding a value of service determination.</p> <p>Self-contained vehicle camping is limited to designated areas in the beach environment only. At all designated times there will be at least one designated area on each of the three islands (Bodie, Hatteras &amp; Ocracoke) contained within CAHA. These areas include Oregon Inlet Campground, Cape Point Campground, and Ocracoke Campground.</p> <p>For the purpose of this CAHA-specific regulation, a self-contained vehicle camper is defined as follows:</p> <ul style="list-style-type: none"> <li>• Self-contained vehicle campers must meet the ORV characteristics and requirements.</li> <li>• Self-contained vehicles must be 4WD only. 2WD campers are prohibited.</li> <li>• Self-contained vehicles are limited to a maximum length of thirty feet (30’) including front racks and rear decks.</li> <li>• Self-contained vehicles must have a self-contained water or chemical toilet and a separate permanently installed holding tank for both black and grey water, each with a minimum capacity of 3 days waste.</li> <li>• Tents and camping trailers are prohibited. There will be no limit to the total number of available self-contained vehicle permits.</li> </ul> <p>The number of self-contained vehicle campers allowed to camp in CAHA at any one time will be limited by the space</p>		<p>Alternative E permits SCV camping. However, at this time there are not enough details to compare with the proposed alternative element.</p>

Element	Addressed in Alternatives to Date	If Yes, where?
<p>available in the designated self-contained vehicle camping areas. The camping space limits are as follows:</p> <ul style="list-style-type: none"> <li>• Oregon Inlet Campground: not more than 100 spaces</li> <li>• Cape Point Campground: not more than 100 spaces</li> <li>• Ocracoke Campground: not more than 50 spaces</li> </ul> <p>Other than the parking space for self-contained vehicles, the NPS will provide no additional services other than garbage and septage dumping services. The experience is intended to be a primitive, beach camping experience within appropriate self-contained vehicles. When possible, the only access to the camping will be via a four-wheel drive only path or road (i.e., access to Cape Point Campground only via the interdunal road). Self-contained camping will be allowed from November 1 until March 31.</p> <p>Self-contained camping permits will be offered either weekly or annually.</p> <p>There will be a self-contained camping limit of no more than seven consecutive days/six nights) in any one visit. There will be a self-contained camping limit of no more than one visit per month.</p> <p>All self-contained beach camping spaces are available on a first-come, first-served basis.</p> <p>All self-contained vehicles arriving for an overnight stay must check in/register via a system to be determined before entering the self-contained camping area. An overnight authorization must be displayed at all times the vehicle is in the designated self-contained camping area. Self-contained vehicles MUST exit the self-contained camping area after no longer than 72 consecutive hours in order to empty holding tanks and gray water at an established septage dumping facility. Any permittee who violates the terms and conditions of the self-contained vehicle (SCV) permit is subject to being cited for the violation, will have his/her SCV permit revoked, and may be denied from obtaining any ORV related permit at CAHA for a period of at least one year. Generally, the NPS will work to discourage illegal camping on any and all NPS properties via signage, education, information, and/or</p>		

Element	Addressed in Alternatives to Date	If Yes, where?
<p>other appropriate and effective means</p> <p>OTHER RELEVANT REGULATIONS: Other pertinent and relevant federal or state regulations include:</p> <ul style="list-style-type: none"> <li>• Camping is only allowed at designated areas. (36 CFR 2.10)</li> <li>• Obstructing traffic on park roads is prohibited. (36 CFR 4.13)</li> <li>• Driving under the influence of alcohol or drugs is prohibited. (36 CFR 4.23)</li> <li>• All drivers and passengers are required to wear seatbelts. (36 CFR 4.15)</li> <li>• A valid state driver's license is required for all operators of motor vehicles on park roads. (36 CFR 4.2)</li> <li>• Operating a motor vehicle without due care or at a speed greater than which is reasonable and prudent considering wildlife, traffic, weather, road and light conditions and road character is prohibited. (36 CFR 4.22)</li> <li>• Operators of motor vehicles involved in accidents resulting in property damage, personal injury, or death shall immediately report the accident to park rangers. (36 CFR 4.4)</li> <li>• The operators of authorized emergency vehicles, when responding to an emergency or when pursuing or apprehending an actual or suspected violator of the law may disregard traffic control divides, exceed the speed limit, and obstruct traffic. (36 CFR 4.3)</li> </ul>	<p>Common to all alternatives</p>	
<p><b>Audubon, Defenders of Wildlife, Southern Environmental Law Center, and NRDC and Wilderness Society</b></p>		
<p>Alternatives that are consistent with the USGS protocols for all shorebirds</p>	<p>All action alternatives provide species buffers that are at least as protective as protocols.</p>	
<p>Permits: ORV Special Use permit required - Education required - fees should be reasonable and set for cost recovery to include resource management costs necessitated by ORV use.</p>	<p>All action alternatives require an ORV permit with an educational requirement</p>	
<p>Prohibit Motorcycles, ATV, and UTV</p>	<p>Alternatives A, B, C, D, and F prohibit all of these vehicles at the Seashore</p>	

Element	Addressed in Alternatives to Date	If Yes, where?
Adopt vehicle operations and characteristics as approved by full committee on December(?) 2008	<p>All action alternatives contain language similar to the approved items with the following exceptions:</p> <p>All alternatives allow two-wheel drive vehicles, <b>but there is no requirement for a special use permit in the current range of alternatives.</b> However, all vehicles would need an ORV permit under alternatives C, D, E, and F.</p> <p>At this time, the alternatives do not use the term “state of the art” vehicles, although all alternatives require that all vehicles at the Seashore be “street legal”.</p> <p>All action alternatives <b>recommend</b> that ORV users carry a trash bag or container, flashlight, and a copy of the current NPS ORV regulations and map <b>instead of making it a requirement.</b></p> <p><b>The range of alternatives does not state that the vehicle with the water to its right side has the right of way.</b></p>	
Frisco and Hatteras Village Closed year-round	<p>All action alternatives require a low pressure tire gauge, shovel, jack and jack stand.</p> <p>However, the action alternatives only recommend a trash bag and flashlight.</p> <p>Alternative B requires that night drivers carry a copy of their permit (containing the regulations) while driving.</p>	
North (east facing) villages open to vehicles seasonally	Alternatives C, D, E and F contain this language.	
Recommend increase in operations funding for CAHA	All action alternative will increased funding.	
<b>Routes</b>		
<i>Bodie Island</i>		
S. Nags Head to approximately 0.75 mi south of ramp 2 closed to vehicles (pedestrian area)	Alternatives D and F	
Approximately 0.75mi south of ramp 2 to ramp 4 designated as ORV route.	All action alternatives	
Ramp 4 to inlet, inlet facing beach, soundside, and all soundside wet sand/mud flats and all interior areas	Alternative D	



Element	Addressed in Alternatives to Date	If Yes, where?
closed to vehicles (resource area)		
<i>Hatteras Island</i>		
Southern boundary of Salvo Village to 2.0mi south of Ramp 23 designated as an ORV route	Alternatives E and F	
2.0 mi south of Ramp 23 to 1.0 mi north of ramp 34 closed to vehicles (resource area)	Ramp 23 to Ramp 27 is open to ORV use under all alternatives. Ramp 27 to ramp 30 is closed to ORVs under alternatives D, E, and F. Ramp 30 to Ramp 32.5 is open to ORV use year round under all alternatives.	
1.0mi north of Ramp 34 to Avon Village designated as ORV route.	Alternatives C, D, and F designate this area as a seasonal ORV route	
1.0 mi centered on the haulover between Avon and Buxton closed to vehicles (pedestrian area)	Alternative D closes two mile stretch to vehicles in this area	
Beach between Avon and Buxton, except for 1.0mi centered on the haulover as described in "d" designated as ORV route.	All alternatives provide a 1.7 mile ORV use area here	
Restore historic pedestrian only area restored from south groin at Buxton to ramp 43 closed to vehicles (pedestrian area)	Alternative D	
Ramp 43 to Ramp 45 designated as ORV route. Route extends only within 50m of mean high water.	Alternatives E and F	
Ramp 45 to 0.5 mi east of Ramp 49 closed to vehicles (resource area); no upper beach route; interdunal road from ramp 45 to ramp 49 is acceptable	Alternative D closes Ramp 45 to Ramp 47 to ORV use. All alternatives allow ORV use from Ramp 47 to Ramp 49.	
Ramp 49 to Ramp 55 closed to vehicles.	All alternatives establish an ORV use area from Ramp 49 to east Frisco boundary. However, alternative D prohibits ORV use from east Frisco boundary to ramp 55.	
Ramp 55 to 0.5mi west of ramp 55 designated as ORV route.	All alternatives	
0.5 mi west of Ramp 55 to Hatteras Inlet, inlet facing beach, and soundside 0.5mi east toward Hatteras Village closed to vehicles (resource area); Pole Road and soundside access roads are acceptable.	All alternatives designate the area from ramp 55 to .2 miles SW of Bone Road as an ORV use area. However, alternatives D and F prohibit vehicular use from .2 miles SW of Bone Road to the spit.	
<i>Ocracoke Island:</i>		
Ramp 62 to Hatteras Inlet, inlet facing beach, all soundside wet sand/mud flats and all interior areas closed to vehicles (resource area).	Alternative F closes *new* Ramp 62 to inlet to vehicles, with the exception of a .5-mile area from .25 NE of Ramp 59 to .25 SW of Ramp 59, which would be open to ORV year round.	
Ramp 62 to ramp 64 designated as ORV route.	All alternatives	
Ramp 64 to ramp 67 closed to vehicles (resource area).	All action alternatives prohibit ORV use from *new* Ramp 64 to .75 miles NE of Ramp 67. However, the	

Element	Addressed in Alternatives to Date	If Yes, where?
	.75-mile stretch to Ramp 67 would be open to ORV year round under all alternatives.	
Ramp 67 west 0.5mi designated as ORV route	Common to all alternatives	
Eastern edge of Ocracoke Campground to 0.5 mi east of ramp 70 closed to vehicles from 15 March to 1 December (resource area).	Alternative D	
Ramp 70 to 0.25mi west of ramp 72 designated as ORV route.	All alternatives	
0.25 mi west of ramp 72 to 1.25mi west of ramp 72 closed to vehicles with bypass route 10m in width, 75m from mean high water, pass through only, open seasonally from 1 September to 15 March (resource area).	Alternative D closed to ORV from .5 miles west of Ramp 72. Alternative F provides a seasonal pass-through on the upper beach.	
Mid-point of Ocracoke Inlet beach to soundside and north toward Ocracoke Village for 1.0mi, including all interior areas closed to vehicles (resource area).  Designated ORV route from 1.25mi west of ramp 72 to mid-point of Ocracoke Inlet beach extends only within 50 of mean high water.	<i>Discuss with park, not sure what area is being referred to.</i>	
****See next section for species protection table****		
<b>Waters Sports Industry Association</b>		
No comments on the alternatives provided.		

UFWDA EXHIBIT H* highlight = not in current SM tables for A, B, or Action Alts			
Survey Time and Frequency	PIPL	AMOY	CWB
<p><b>Was this alternative considered? If so where?</b></p> <p>All Species</p>	<p>Species Management 1 (SM1): Will use larger, longer lasting buffers with less monitoring to alleviate the need for constant monitoring and frequent fencing changes. Will be used at locations which would likely be closed anyway if SM2 buffers were used. Estimated staffing requirements TBD by NPS.</p> <p>Species Management 2 (SM2): Will use smaller buffers and require more frequent monitoring and fencing changes. Will be used at selected inlets, Cape Point and West to Ramp 47, and, at the discretion of NPS, at other locations in which more labor intensive management would provide access. Estimated staffing requirements TBD by NPS.</p> <p>Pass-through Corridors: At a limited number of locations (TBD), a smaller buffer may be used as part of a <b>controlled study</b> with adequate monitoring to determine if a smaller buffer for an ORV pass-through corridor is adequate to prevent disturbance.</p>	<p>By March 1, all potential habitats will have been evaluated. PIPL prenesting closures will be recommended based upon that habitat evaluation. Those closures will be installed by March 15.</p> <p>March 15 – July 15: survey recent breeding areas (<b>last three years</b>) three times per week (or every other day). Survey potential new and or former habitat two times per week. Survey for Wilson’s plover during piping plover surveys.</p>	<p>April 1 – July 15 survey recent breeding areas (last three years) two times per week.</p> <p><b>Turtle patrol will take over monitoring after July 15th.</b></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 overwashed or predated, the buffer expansion shall be removed to the established pre-nesting</p>
Pre-nesting surveys	<p>By March 1, all potential habitats will have been evaluated. PIPL prenesting closures will be recommended based upon that habitat evaluation. Those closures will be installed by March 15.</p> <p>March 15 – July 15: survey recent breeding areas (<b>last three years</b>) three times per week (or every other day). Survey potential new and or former habitat two times per week. Survey for Wilson’s plover during piping plover surveys.</p>	<p>March 15 – July 15 survey recent breeding areas (<b>last three years</b>) two times per week.</p> <p><b>Turtle patrol will take over monitoring after July 15th.</b> If an AMOY nests in a prenesting 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 overwashed or predated, the buffer expansion shall be removed to the established pre-nesting</p>	<p>April 1 – July 15 survey recent breeding areas (last three years) two times per week.</p> <p><b>Turtle patrol will take over monitoring after July 15th.</b></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 overwashed or predated, the buffer expansion shall be removed to the</p>

	<p>The PIPL pre-nesting areas will be surveyed 3 times per week if piping plovers are present in the area. <b>To mitigate disturbance to nesting birds, surveys may need to be curtailed.</b> Pre-nesting buffers will not be modified in cases where the beach erodes into the buffered habitat.</p>	closure.	established prenesting closure.
Pre-nesting buffers	<p>SM1: Resource closures will not allow ORV or pedestrian access.                  SM2: Areas designated as SM2 may have a designated ORV and/or pedestrian access corridor. In areas open to ORV use, delineate the ORV corridor with posts placed up to <b>100 feet</b> above the high tide line, or as designated in a site specific plan (e.g., Bodie Island Spit, Cape Point, and South Point). During the breeding season, pets are prohibited in passthrough corridors or at the points and spits.</p> <p>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 <b>June 15th</b> or when area has been abandoned for a 2-week period, which ever comes later.</p>	<p>SM1: Prenesting closures will be installed by March 15 in areas that <b>had nest(s) in the past 3 years</b>, if habitat is still suitable. Closures will be removed if no breeding activity is seen in the area by July 15, or 2 weeks after the site is abandoned by AMOY, whichever comes later.  <b>SM2: Pre-nesting closures will not be established prior to the bird's arrival.</b></p>	<p><b>SM1 &amp; SM2: Prenesting 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.</b></p>
Courtship/mating surveys	<p>PIPL, AMOY, or CWB are <b>observed exhibiting territorial or courtship behavior in suitable habitat during two separate observations in recent breeding habitat</b>, observe 3 times per week. <b>If scrapes are observed in the absence of courtship behavior, survey three times per week. Survey potential new habitat 2 times per week.</b></p>		
Courtship/mating buffers	<p>If courtship or copulation is observed outside of existing pre-nesting closures, establish or expand buffer to ensure <b>50 m</b> buffer for the observed birds. Buffer will</p>	<p>SM1: Pre-nesting closures will have already been established for the majority of returning birds.  <b>Pre-nesting closures will be</b></p>	<p>SM1: If scraping is observed outside of existing closures, a 200 meter buffer will be established around the scrape locations.</p>

	<p>be increased if flushing occurs due to human disturbance.</p> <p>Designate an ORV or pedestrian access corridor as identified. In the case of ORV pass-through corridor, pets restricted to vehicle while vehicle is in corridor. In the case of pedestrian use of corridor, <b>pets must be on leash no longer than necessary to keep pet within 1 foot of keeper.</b></p>	<p>evaluated to determine the adequacy of their placement. For observed activity outside of prenesting closures by pairs with known nesting history, buffers will be established when one observation or scraping or territorial has been documented or if a scrape is being maintained. For birds with unknown nesting history, such buffers will be established when three such observations occur. Based on bird behavior and suitable habitat, a 200 meter buffer will be established around the bird activity.</p> <p>SM2: For observed breeding activity outside of pre-nesting closures by pairs of known nesting history, closure will be installed when one observation of scraping or territorial behavior have been documented or if a scrape is being maintained. For observed breeding activity outside of pre-nesting closure by pairs of unknown nesting history, closure will be installed when three separate observations of scraping or territorial behavior have been documented or if a scrape is being maintained.</p>	<p>Closure establishment will be based on the locations of scrapes and not locations for copulation or "fish flashing". Consider using SM2 buffer and survey frequency at sites in which the smaller buffer would still allow access.</p> <p>SM2: If scraping is observed outside a resource closures, a buffer will be established around the scrape location.</p> <p>Buffer will be 100 meters for least terns and 200 meters if the colony contains common terns, gull-billed terns or black skimmers For an ORV pass-through, buffer will be 50-75 meters for LETE and 75 meters if other CWB are present.</p> <p>If, in the judgment of NPS Resources Management staff, a colony has abandoned a territory and established a new territory at another location, the buffer may be removed at the abandoned territory.</p> <p>Designate an ORV or pedestrian access corridor as identified. In the case of ORV pass-through corridor, pets restricted to vehicle while vehicle is in corridor. In the case of pedestrian use of</p>
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<p>Nesting Surveys:</p>	<p>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.</p>	<p>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. Designate an ORV or pedestrian access corridor as identified. In the case of ORV pass-through corridor, pets restricted to vehicle while vehicle is in corridor. In the case of pedestrian use of corridor, pets must be on leash no longer than that necessary to keep pet within 1 foot of keeper.</p>	<p>corridor, pets must be on leash no longer than that necessary to keep pet within 1 foot of keeper.</p>
		<p>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). 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.</p>	<p>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. SM1: Observe colonies at least three times per week from a distance. For incubating birds that cannot be observed from a distance, check colonies on a weekly basis. 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 three days</p>

<p>Nesting Buffers:</p>	<p>All Species: The park retains the discretion to expand buffers under SM1 and SM2 depending on staffing and bird behavior. In unprotected areas, a closure will be established immediately when a nest with egg(s) is found. When nesting occurs in the immediate vicinity of paved roads, parking lots, campgrounds, building and other facilities, NPS retains the discretion to provide resource protection to the maximum extent possible while still allowing those sites to remain operational. 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. After August 1, closures will be removed if all nesting is complete.</p>	<p>SM1 &amp; SM2: Establish 50 m buffer/closure around piping plover nests occurring outside existing closures. If flushing off nest occurs due to human disturbance, buffer will be increased using flexible increments dependent on observed bird behavior. If the buffer falls within the intertidal zone a full-beach closure will result. Designate an ORV or pedestrian access corridor as identified. Pets restricted.</p>	<p>Establish buffer/closure based on adult's reaction to human disturbance.                  SM1: Buffer will be the same as four courtship and mating – 200 meters.                  SM2: Buffer around nests will be a minimum of 150 m for pedestrians/ORVs; or 75 m for an ORV pass-through. If flushing off nests occurs due to pedestrian disturbance, passthrough will be limited only to ORV. If flushing off nests occurs due to ORV activity, buffer will not be increased.</p>	<p>SM1: Use buffer of 200 m. Consider using SM2 buffer and survey frequency at sites in which the smaller buffer would still allow access.                  SM2: Use buffer of 100 m for least terns and 200 m if the colony contains common terns, gull-billed terns or black skimmers; or for an ORV pass-through, a minimum of 50-75 meters for LETE and 75 meters if other CWB present. If flushing off nest(s) occurs due to pedestrian disturbance, pass-through will be limited only to ORV.                  All: Establish buffer immediately when a nest is located. Increase buffer in flexible increments if necessary to prevent human disturbance. If the buffer falls within the intertidal zone a full-beach closure will result. Closures will be removed when areas have been abandoned for a two week period.</p>
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<p>Adult Foraging Surveys and Buffer</p>	<p>For breeding adults (with an associated scrape or nest territory) foraging outside of a closure on two consecutive surveys, establish or expand the buffer using flexible increments based on observed bird behavior to include foraging site if the foraging area is associated with a pre-nesting closure. These closures are intended to provide foraging opportunities close to breeding sites. Remove closure if no foraging observed for a 2-week period during the breeding season, or when associated breeding activity has concluded.</p>	<p>No additional buffers/closures.</p>	<p>After July 15 the 2-week removal period will no longer be required for closure removal. No additional buffers/closures.</p>
<p>Unfledged Chicks Surveys</p>	<p>SM1: Observe brood once daily. SM2: Observe brood am and pm daily. Have monitor(s) present during periods of ORV or pedestrian access. Observations end once chicks have fledged. Chicks are considered fledged at 35 days or are observed in sustained flight of &gt;15 m.</p>	<p>SM1: Observe brood at a minimum every other day. SM2: Observe brood once daily. Observations end once the chicks have fledged. Chicks are considered fledged if they have been observed to be proficient in flying or observed in sustained flight of &gt;30 m.</p>	<p>Colonies will be surveyed by foot during the "peak" hatching period which should fall 21 days after initial nest counts. A follow-up survey by foot should be conducted during the "peak" fledge which should fall 20 days after hatch counts. SM1: Observe colony weekly. SM2: Observe colony at two-three day intervals; or daily if shoreline is open to ORV use. Observations end after no unfledged chicks have been observed on two consecutive</p>



<p>Unfledged Chick buffers</p>	<p>SM1: Establish a minimum 1000 meter buffer on either side of brood based on observation of bird behavior and terrain conditions at site. No ORV or pedestrian access until all chicks have fledged.                  SM2: For the first 2 weeks after hatching, establish a 1000 m buffer for ORVs and pedestrians on either side of the brood.                  Based on observed behavior (i.e., mobility of the brood) at the discretion of park management, the buffer can be reduced after the first two weeks to 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</p>	<p>SM1: Establish a 300 meter buffer when unfledged chicks are present. Closure would be removed 2 weeks after fledging. Consider using SM2 buffer and survey frequency at sites in which the smaller buffer would still allow access.                  SM2: Establish a 200 meter buffer around the unfledged chick(s) location.                  Adjust/increase buffer as needed when chicks are mobile. ORV access would not be allowed until 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. 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.</p>	<p>occasions. Closure can be removed after all chicks have fledged.                  SM1: Use 200 m buffer. If chicks move outside of the buffer, it will be adjusted to include an additional 100 meters from the chick(s) location outside of the closure.                  Consider using SM2 buffer and survey frequency at sites in which the smaller buffer would still allow access.                  SM2: Establish a 200 meter buffer around the chick(s) location.                  Adjust buffer as needed when chicks are mobile. Monitor daily if shoreline in front of colony open to ORV use.</p>
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	maintained. The 7 a.m. opening maybe delayed until the chicks have been located.		
	Reopen access corridor outside of pre-nesting area after chicks fledge (except for AMOYs where the area will remain closed to ORVs for an additional 2 weeks). During breeding season, pets are prohibited in pass-through corridors or at the points and spits. Remove pre-nesting closure 2 weeks after all chicks in the area have fledged.		
Non-breeding/Wintering Buffers	NPS will monitor presence, abundance and behavior of migrating and wintering PIPL, AMOY, WIPL, and REKN at the points and spits July 1 through May 31 following the existing NPS winter monitoring protocol. In addition, the International Shorebird Survey (ISS) protocol will be used to document other migrating/wintering species.		
Non-breeding/wintering buffers	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 the suitable habitat types based on the results of the annual survey. All winter closures will be installed no later than September 15th. Actual locations of suitable foraging and resting habitat may change periodically due to natural processes. Access will be maintained to inlet shoreline via the ocean shoreline. (Exact terminus and configuration of access corridor TBD by NPS resource management staff based on an annual habitat assessment).	No closures.	No closures.
Data Collected	GPS will be used to document nest locations. Record locations where territorial/courtship behavior occurs, including scrape locations. Estimate where adult	GPS will be used to document nest locations. Record presence and abundance of birds. Assess productivity and	GPS will be used to document nest locations. Record presence and abundance of birds.

	and chick foraging occurs. Chicks should never be disturbed to obtain this information. Record presence and abundance of birds. Assess productivity and known reasons for nest failure.	known reasons for nest failure.	
<b>SEA TURTLES</b>			
Survey Time and Frequency	<p>Sea turtle patrol will begin on May 1. 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 before onset of heavy 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. Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.</p>		
Data Collected	<p>Follow the North Carolina Wildlife Resources Commission Handbook and record:</p> <ul style="list-style-type: none"> <li>-Turtle species</li> <li>-Nest vs. false crawl</li> <li>-nests lost to storms, overwash, predators, etc.</li> <li>-Location (physical description and GPS location)</li> <li>-management category (ORV, Non-ORV, Resource Area, other Resource Closures, Villages)</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> </ul> <p>Necessary protective measures for nest and hatchlings</p> <ul style="list-style-type: none"> <li>-Information regarding any post hatchling 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 after 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>		
Nest Closures/Buffers	<p>Establish a buffer approximately 10 meters square with symbolic fencing and signage around nest. Closure size may</p>		

	<p>be modified due to environmental conditions at the nest site. 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> <ul style="list-style-type: none"> <li>a. Vehicle-free areas with little or no pedestrian traffic – 25 meters wide (total width);</li> <li>b. Villages or other areas with high levels of day use –50 meters wide (total width);</li> <li>c. Areas with ORV traffic –105 meters wide (total width).</li> </ul> <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 landward 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 no more than 5 meters 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>
Nest Relocation	<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, staff assesses 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>
Light Management	<p>Establish turtle friendly lighting standards and/or reduce light for all Seashore (NPS) structures.</p> <p>Encourage concessioners to install turtle friendly lighting.</p> <p>Develop educational material to inform visitors about their impact on the success of sea turtle nests.</p>
Research	<p>Support research efforts looking at the sex ratios of sea turtles.</p> <p>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.</p>
SBA	
Survey Time and Frequency	<p>August</p> <p>An annual survey of potential habitat will be conducted. 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</p>

	<p>traffic.</p> <p>July– September</p> <p>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>
Data Collected	<p>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.</p>
Buffers	<p>April 15 – November 30</p> <p>If a plant/seedling is found outside of an existing closure, the Seashore will erect symbolic fencing with signage creating a 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 died.</p>

Shorebird / Waterbird Buffer Summary

Species	Breeding Behavior/ Nest Buffer	ORV Pass-through	Unfledged Chicks
	SM1 / SM2	SM2 only	SM1 / SM2
Piping Plover	50 m / 50 m	50 m	1000 m / 200-1000 m
American Oystercatcher	200 m / 150 m	7.5 m	300 m / 200 m
Least Terns	200 m / 100 m	50-57 m	300 m / 200 m
Other Species CWB	200 m / 200 m	7.5 m	300 m / 200 m

<b>Audubon, etc Species Management Table</b>			
Survey Time and Frequency	PIPL	AMOY	CWB
<b>Was this alternative considered? If so where?</b>			
All Species	<p>Zone of ocean backshore at least 10m wide and running the length of the Seashore is closed to ORV use. This zone should be adjacent to the toe of the primary dune wherever a primary dune exists.</p>		
All Bird Species	<p>Species Management 1 (SM1): Will use larger, longer lasting buffers with less monitoring to alleviate the need for constant monitoring and frequent fencing changes. Will be applied at all resource areas other than Cape Point and S. Ocracoke. Estimated staffing requirements TBD by NPS.</p> <p>Species Management 2 (SM2): Will use smaller buffers and require more frequent monitoring and fencing changes. Will be applied at Cape Point and S. Ocracoke only at the discretion of NPS. Estimated staffing requirements TBD by NPS. This method is less predictable for Seashore visitors, relies on variable closure and opening dates depending on presence of birds, requires additional skilled staff, and requires additional resources.</p> <p>If NPS is unable to survey, monitor, or protect areas as described, unable to implement SM1 as described, or determines that SM1 or SM2 are inadequate to protect natural resources, then NPS will implement USGS Protocol Option A or B for breeding species.</p> <p>NPS is committed to implementing science-based resource protection and management practices. NPS also recognizes that new or additional data, and scientific studies, may indicate that species management and protection actions should be altered to adequately protect natural resources.</p> <p>Disturbance is defined as follows: "Human disturbance is any activity that changes the contemporaneous behavior or physiology of one or more individuals within a breeding colony of waterbirds" (Nisbet 2000). This definition shall be applied to nesting Colonial Waterbirds, Piping Plover, Wilson's Plover, American Oystercatcher, and non-breeding shorebirds.</p>		

	<p>Dogs are prohibited within 100 meters of all natural resource closures, including all natural resource areas for migrating and wintering shorebirds. Pet restrictions and leash regulations will be strictly enforced.</p>		
<p>Pre-nesting surveys</p>	<p>SM1, SM 2: By March 1, all potential habitats will have been evaluated. PIPL prenesting closures will be recommended based upon that habitat evaluation. Those closures will be installed by March 15.</p> <p>March 15 – July 15: Survey prenesting areas at least 3 times per week. Outside of prenesting areas and existing closures, survey suitable habitat 3 times per week; more often if breeding PIPL are observed in the area. If prenest closures allow pedestrian and/or ORV access corridors, survey daily.</p> <p>Survey for Wilson’s plover during piping plover surveys.</p> <p>Prenesting buffers will not be modified in cases where the beach erodes into the buffered habitat. Bodie Island, Cape Point &amp; South Beach, Hatteras Inlet, N &amp; S Ocracoke Island, and historic nesting areas active in the past 10 years:</p>	<p>SM1: March 15 – July 15 survey historic breeding areas (last ten years) at least 3 times per week.</p> <p>SM2: March 15 – July 15 survey historic breeding areas (last ten years) at least 3 times per week.</p> <p>If/when AMOY pairs are observed in an area, survey site daily.</p> <p>As of May 1 turtle staff will observe for AMOYs during daily patrols. Turtle patrol will take over monitoring after July 15th. If pre-nesting closures allow pedestrian and/or ORV access corridors, survey daily.</p> <p>Bodie Island, Cape Point &amp; South Beach, Hatteras Inlet, N &amp; S Ocracoke Island, and historic nesting areas active in the past 10 years:</p>	<p>SM1: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week.</p> <p>April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week.</p> <p>SM2: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week. If/when CWB are observed in an area, observe daily.</p> <p>As of May 1 turtle staff will observe for CWBs during daily patrols (i.e., survey for CWB while observing for AMOY.) Turtle patrol will take over monitoring after July 15th. If pre-nesting closures allow pedestrian and/or ORV access corridors, survey daily.</p> <p>Bodie Island, Cape Point &amp; South</p>

<p>Pre-nesting buffers</p>	<p>SM1: Areas designated as SM1 Resource Areas will not allow ORV or pedestrian access during the pre-nesting period.</p> <p>SM2: Areas designated as SM2 may have a narrow ORV (where permitted) and/or pedestrian access corridor until nesting activity (including but not limited to territorial behavior, courtship, mating, scraping, confirmed scrapes, and other breeding or nest building activities) is observed. Standard buffer distances in Table 1 will apply immediately upon observation of nesting activity and will not be reduced to allow an ORV or pedestrian corridor. Pre-nesting closures will be established at all nesting sites active in the previous 10 years.</p> <p>Bodie Island: Due to location of waterbird colonies and shorebird nesting sites, and the location of nesting habitats for these species, the closure of the pedestrian corridor will begin at the northernmost boundary of the pre-nesting closures as delineated in Alt E. Cape Point: North side corridor to be not more than 50m wide; Hatteras Inlet: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years; S. Ocracoke: established as described above (page 13, revised map 2/13/09); N. Ocracoke: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years. Deliberate attempts to harass or disturb birds, or vandalize fencing, will result in immediate closure of the corridor.</p>	<p>SM1/SM2: Pre-nesting closures will be installed by March 15 in areas that had nest(s) in the past 10 years, if habitat is still suitable. Closures will be removed if no breeding activity is seen in the area by July 15, or 2 weeks after the site is abandoned by AMOY or Wilson's Plover, whichever comes later.</p>	<p>SM1/SM2: Pre-nesting closures will be established for CWB by April 1 in areas that had a colony (or colonies) in the past 10 years, if habitat is still suitable. Closures will be removed if no breeding activity is seen in the area by July 31, or two weeks after the site has been abandoned by CWB, whichever comes later. NPS natural resource staff will conduct an annual assessment of colonial waterbird breeding habitat to plan pre-nesting</p>	<p>Beach, Hatteras Inlet, N &amp; S Ocracoke Island, and historic nesting areas active in the past 10 years</p>
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			closures that are adapted to current habitat and physiographic conditions.
Courtship and Mating Surveys	<p>All areas with pre-nesting closures and pedestrian and/or ORV corridors will be surveyed daily from establishment to removal of the pre-nesting closure.</p> <p>SM1: If PIPL, AMOY, WIPL, or CWB are observed exhibiting territorial or courtship behavior in suitable habitat, or if scrapes are observed in the absence of courtship behavior, observe 3 times per week. Survey potential new habitat 2 times per week; increase to 3 times week once birds are observed in the area.</p> <p>SM2: PIPL monitored as described for SM1. If AMOY or CWB are observed exhibiting territorial or courtship behavior in suitable habitat, or if scrapes are observed in the absence of courtship behavior, observe daily. Survey potential new habitat 2 times per week; increase to 3 times per week once birds are observed in the area.</p>		
Courtship and Mating Buffers	<p>SM1, SM2: If courtship or copulation is observed outside of existing prenesting closure, or inside the closure but within 50 m of the closure boundary, establish or expand buffer to ensure 50 m buffer for the observed birds. Buffer will be increased in 50 m increments if disturbance occurs.</p> <p>If nest buffer is less than 75 m observe nesting activity daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is observed. Observations; observations will continue until 50</p>	<p>SM1: Outside of existing prenesting closure, or inside the closure but within 300 m of the closure boundary, if one observation of scraping or territorial behavior has been documented or if a scrape is being maintained, a 300 meter buffer will be established around the bird activity.</p> <p>SM2: Outside of existing prenesting closure, or inside the closure but within 150 m of the closure boundary, if one observation of scraping or territorial behavior has been documented or if a scrape is being maintained, a 150 meter pedestrian/ORV buffer will be</p>	<p>SM1: Outside of existing pre-nesting closure, or inside the closure but within 300 m of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, a 300 meter buffer will be established around the scrape locations.</p> <p>SM2: Outside of existing pre-nesting closure, or inside the closure but within the buffer distance prescribed below of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, establish a</p>

	<p>additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.</p>	<p>established around the bird activity Courtship site will be monitored daily and the buffer will be adjusted as needed. Buffer will be increased in 50 m increments if disturbance occurs. If, in the judgment of NPS Resources Management staff, a pair has abandoned a territory and established a new territory at another location, the buffer may be removed at the abandoned territory after two weeks with no activity</p>	<p>buffer around the scrape location. Buffer will be 100 meters for least terns and 200 meters if the colony contains common terns, gull-billed terns or black skimmers. Colony will be monitored daily as new nest sites are being established and buffers will be adjusted as needed. Buffer will be increased in 50 m increments if disturbance occurs.</p>
<p>Nesting Surveys</p>	<p>Nesting survey (walk-through to look for nests) conducted every 3 days.</p>	<p>Nesting survey (walk-through to look for nests) conducted when observations suggest a nest is present.</p>	<p>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.</p>
<p>Nest Observation</p>	<p>SM1, SM2: 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. If nest buffer is less than 75 m observe nest daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is</p>	<p>SM1: Observe nests at least 3 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).  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 3 days.</p>	<p>SM1: Observe colonies at least three times per week from a distance. For incubating birds that cannot be observed from a distance, check colonies on a weekly basis.  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 three days.</p>

	<p>observed. Observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.</p>		
<p>Nesting Buffers</p>	<p>All species: The park retains the discretion to expand buffers under SM1 and SM2 depending on staffing and bird behavior. In unprotected areas, a closure will be established immediately when a nest with egg(s) is found. When nesting occurs 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 sites to remain operational. 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.</p> <p>SM1, SM2: NPS shall not reduce buffers to accommodate ramp access. After July 31, closures will be removed outside of prenesting closures two weeks after all nesting is complete or all chicks in area have fledged, whichever is later.</p> <p>Deliberate attempts to harass or disturb birds, or vandalize fencing, shall result in immediate expansion of the buffer by 50m for the first act, an additional 100m for the second act, and 500m for the third act.</p>		
	<p>SM1, SM2.: Establish 50 m buffer around piping plover nests occurring outside existing closures. If bird leaves nest due to human disturbance, buffer will be increased in 50 m increments until disturbance is abated. If the nest buffer falls within the intertidal zone a full-beach closure will result.</p> <p>If buffer is adequate to prevent human disturbance, a designated ORV or pedestrian access corridor can be maintained during incubation. During breeding season, pets are prohibited in pass-through corridors</p>	<p>SM1: Use buffer of 300 m.</p> <p>SM2: Use buffer of 150 m around nests occurring outside of existing closures.</p> <p>All: Establish buffer immediately when nest is located. Increase buffer in 50 meter increments if necessary to prevent human disturbance. If the buffer falls within the intertidal zone a full-beach closure will result. For AMOY nests that occur inside a pre-nesting closure at one of the</p>	<p>SM1: Use buffer of 300 m for all species.</p> <p>SM2: Use buffer of 100 m for least terns and 200 m if the colony contains common terns, gull-billed terns or black skimmers.</p> <p>All: Establish buffer immediately when nest/colony is located. Increase buffer in 50 meter increments if necessary to prevent human disturbance. If the buffer falls within the intertidal</p>

	<p>or at the points and spits. If nest buffer is less than 75 m observe nest daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m for the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is observed. Observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.</p>	<p>points or spits and requires a buffer expansion of the pre-nesting area, if the nest is lost due to overwash or predation, the buffer expansion shall be removed to the original pre-nesting closure after two weeks with no activity.</p>	<p>zone a full-beach closure will result. Colony will be monitored daily for presence of new nesting activity and buffers will be adjusted as needed.  For a colony that occurs inside a prenesting closure at one of the points or spits and requires buffer expansion of the prenesting area, if the colony is over-washed or predated, the buffer expansion shall be removed to the original pre-nesting closure after two weeks with no activity.</p>
<p>Pass-through corridors during courtship/mating and incubation</p>	<p>n/a</p>	<p>n/a</p>	<p>n/a</p>
<p>Adult Foraging Surveys and Buffer</p>	<p>Survey suitable piping plover 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 of existing closure, survey site daily. If observe foraging outside of buffer on two consecutive surveys, establish or expand the buffer using flexible increments based on observed bird behavior to include foraging site if the foraging area is associated with a prenesting closure. These closures</p>	<p>No additional buffers/closures.</p>	<p>No additional buffers/closures.</p>

	<p>are intended to provide foraging opportunities close to breeding sites. Remove closure if no foraging observed for a 2-week period during the breeding season, or when associated breeding activity has concluded.</p>		
Unfledged Chicks Surveys	<p>SM1.: Observe brood once daily.</p> <p>SM2.: Observe brood at least 1 hour each in am and pm daily. Have monitor(s) present during periods of ORV or pedestrian access.</p> <p>Observations end once chicks have fledged. Chicks are considered fledged at 35 days or are observed in sustained flight of &gt;15 m.</p>	<p>SM1.: Observe brood at a minimum every other day.</p> <p>SM2.: Observe brood once daily.</p> <p>Observations end once the chicks have fledged. Chicks are considered fledged if they have been observed to be proficient in flying or observed in sustained flight of &gt;30 m.</p>	<p>Colonies will be surveyed by foot during the “peak” hatching period which should fall 21 days after initial nest counts.</p> <p>A follow-up survey by foot should be conducted during the “peak” fledge which should fall 20 days after hatch counts.</p> <p>SM1: Observe colony every other day. Tern and skimmer chicks will often move 100m or more from their colony site, often toward the nearest shoreline.</p> <p>SM2: Observe colony daily. Observations end after no unfledged chicks have been observed on 3 consecutive survey days. Closure can be removed after August 31 or two weeks after all chicks have fledged, whichever is later.</p>
Unfledged Chick Buffers	SM1: Establish a minimum 1000 meter buffer on either side of brood based on observation of bird behavior and terrain	SM1: Establish a 300 meter buffer when unfledged chicks are present. Include foraging and	SM1: Use 300 m buffer. If chicks move outside of the buffer, it will be adjusted to include an

	<p>conditions at site. No ORV or pedestrian access until all chicks have fledged.</p> <p>SM1: For the first 2 weeks after hatching, establish a 1000 m buffer for ORVs. Based on mobility of the brood, at the discretion of park management, the buffer can be reduced after the first two weeks to 500 m for ORVs and 200 m for pedestrians (at Cape Point and South Point). Points and spits would only be accessible from 7 a.m. to 7 p.m. as long as unfledged PIPL chicks are in the area and only if prescribed buffers can be maintained. The 7 a.m. opening (shall) be delayed until the chicks have been located. If chicks are highly mobile, the 1000 m buffer may need to be maintained. Buffer moves with chicks. Vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to PIPL chicks because of steep topography, dense vegetation, or other naturally occurring obstacles.</p> <p>SM1/SM2: The closure will extend for 1000m on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure will extend from the ocean side low water line to the bayshore low water line or to the dune line if no</p>	<p>roosting habitat from the ocean (low water line) to the dune (or sound shoreline, if applicable), if accessible. Closure would be removed 2 weeks after fledging (observed flight of 30 meters); The closure will extend for 300m on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure will extend from the ocean side low water line to the bayshore low water line or to the dune line if no bayshore habitat exists.</p> <p>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 chicks. The closure will extend for 200m on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure will extend from the ocean side low water line to the bayshore low water line or to the dune</p>	<p>additional 200 meters from the chick(s) location outside of the closure.</p> <p>SM2: Establish a 200 meter buffer around the chick(s) location. Adjust buffer as needed when chicks are mobile. Monitor daily if shoreline in front of colony open to ORV use.</p>
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	<p>bayshore habitat exists.</p>	<p>line if no bayshore habitat exists.                  All: ORV access would not be allowed until 2 weeks after AMOY chicks have fledged (observed flight of 30 meters);</p>	
	<p>SM1/SM2: Reopen access corridor outside of pre-nesting area after chicks fledge (except for AMOYs where the area will remain closed to ORVs for an additional 2 weeks). Dogs are prohibited within 100m of all natural resource closures established for breeding birds and chicks. Closure can be removed after July 31 or two weeks after all chicks have fledged, whichever is later, except for site with Black Skimmers. At sites with Black Skimmers, closure can be removed after August 31 or two weeks after all chicks have fledged, which ever is later.</p>		
<p>Non-breeding Wintering Survey</p>	<p>NPS will monitor presence, abundance and behavior of migrating and wintering PIP, AMOY, WIPL, and REKN 3 times per month at the points and spits July 1 through May 31 following the existing NPS winter monitoring protocol. In addition, the International Shorebird Survey (ISS) protocol will be used to document other migrating/wintering species. NPS will document the distribution and abundance of migrating and wintering shorebirds within the Seashore, following the International Shorebird Survey (ISS) protocols.                  Non-breeding shorebird surveys will begin on July 1 and continue until May 31.                  Survey sites TBD, but should include Cape Point, South Beach, all inlet spits (ocean and soundside habitats), and selected ocean facing beaches between Buxton and Salvo, Hatteras Village to Hatteras Inlet, and Ocracoke.</p>		
<p>Non-breeding Wintering Area</p>	<p>Non-breeding and wintering areas will be considered natural resource protection areas.                  Cape Point and Inlets: An annual migrating/wintering habitat assessment will be conducted at the points and spits by NPS. Migrating/wintering resource closures will be established and will be based on foraging, resting, and roosting habitats used by migrating and wintering Piping Plovers, Red Knots, and other shorebirds in the past 10 years, and suitable habitat types based on the results of the annual surveys. ORV use will not be permitted within 75m of mean high water at terminus of Pole Road, Hatteras Inlet. S. Ocracoke: Corridor passing non-breeding/wintering ocean beach closure will be pass-through only.                  Other Areas: To benefit Red Knots, Willets, Sanderlings, Black-bellied Plovers, Piping Plovers, and all other species of migrating and wintering shorebirds, NPS will establish resource protection areas for migrating and wintering shorebirds (open to pedestrians, unless closed for breeding birds or other reasons) that will provide relatively less disturbed foraging, resting, and roosting areas for migrating and wintering birds.                  Migrating/wintering resource closures will be maintained year round. Dogs will be prohibited within 100m of all migrating/wintering resource closures. The following activities are compatible with the non-breeding/wintering shorebird resource protection areas: fishing, beach walking, birding, kayaking, kite boarding, paddle boarding, photography, picnicking, sailing, shelling, stargazing, sunbathing, surfing, swimming, wildlife viewing and wind</p>		

	<p>surfing.</p> <p>The activities listed above singly or collectively could result in disturbance that is incompatible with protection of habitat for migrating and wintering shorebirds. Human disturbance in these areas will have to be monitored and should any single activity or collective activities become excessive (definition TBD), NPS will implement seasonal or additional restrictions on compatible uses.</p> <p>Within 12 months of the implementation of ORV regulations, NPS will initiate a study of migrating/wintering resource areas in cooperation with USGS or major university. Should this study or future research indicate additional restrictions are needed, NPS will implement such restrictions.</p>	
<p>Data Collect</p>	<p>Collect data as recommended by USGS (Cohen 2005) and use GPS to document nest locations.</p> <p>Record locations where territorial/courtship behavior occurs, including scrape locations.</p> <p>Estimate where adult and chick foraging occurs. Chicks should never be disturbed to obtain this information.</p>	<p>Collect data as recommended by USGS (Meyers 2005) and use GPS to document nest locations.</p> <p>Collect data as recommended by USGS (Erwin 2005) and use GPS to document colony locations.</p>
<p>Future Research</p> <p>Goals, Objectives, and Desired Conditions</p>	<p>Species Management protocols as outlined in this table will not prevent qualified biologists or ornithologists associated with a major university from conducting scientific research that will add to the existing knowledge of species or improve resource protection within the Seashore.</p> <p>NPS will develop goals, objectives, and desired conditions of all species of breeding birds within the Seashore, taking into consideration the best available scientific data regarding habitat conditions, historical distribution and abundance of breeding populations, carrying capacity of breeding species, fledging success, and productivity. NPS will work to achieve these goals, which may require additional resource protection measures at some or all locations. NPS will develop these goals in cooperation with USFWS, USGS, and NCWRC.</p>	
<p><b>Sea Turtles</b></p>		
<p>Survey Time and Frequency</p>	<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</p>	



	<p>turtle nest or crawl is found, whichever is later. Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches before 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. 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. Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.</p>
<p>Data Collected</p>	<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 hatchling 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 after 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>
<p>Nest Closures/buffers</p>	<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> <ol style="list-style-type: none"> <li>a. Vehicle-free areas with little or no pedestrian traffic – 25 meters wide (total width);</li> <li>b. Villages or other areas with high levels of day use –50 meters wide (total width);</li> <li>c. Areas with ORV traffic –105 meters wide (total width).</li> </ol> <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 landward from the nest. Pedestrian 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>Night driving restrictions will begin May 1st and continue until November 15th.</p> <p>Beach routes will be closed to ORV use from 30 minutes after sunset and will remain closed until nest search by sea turtle patrol has been completed and nests are marked with symbolic fencing. NPS will attempt to open each section of beach as soon as possible each morning.</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, staff assesses 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>
Night Driving Restrictions	
Nest Relocation	<p>Establish turtle friendly lighting standards and/or reduce light for all Seashore (NPS) structures.</p> <p>Encourage concessioners to install turtle friendly lighting.</p> <p>Develop educational material to inform visitors about their impact on the success of sea turtle nests.</p> <p>Support research efforts looking at the sex ratios of sea turtles.</p> <p>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.</p>
Light Management	
Research	
<b>SBA</b>	
Survey Time and Frequency	<p>August</p> <p>An annual survey of potential habitat will be conducted. 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</p> <p>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>
Data Collected	Record location of all individual plants or plant clusters using a GPS and note if the plant is located in an area open

<p>Buffers</p>	<p>or closed to recreational use.                  April 15 – November 30                  If a plant/seedling is found outside of an existing closure, the Seashore will 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.                  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.                  Areas reopened if no plants are present by September 1. Where plants occur, the closed areas will be reopened after the plants have died.</p>
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Summary

	SM1 / SM2	SM1 / SM2
Piping Plover	50 m / 50 m	1000 m / 200-1000 m
American Oystercatcher	300 m / 150 m	300 m / 200 m
Least Terns	300 m / 100 m	300 m / 200 m
Other Species CWB	300 m / 200 m	300 m / 200 m

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edited 4/10/09 MM

**National Park Service**

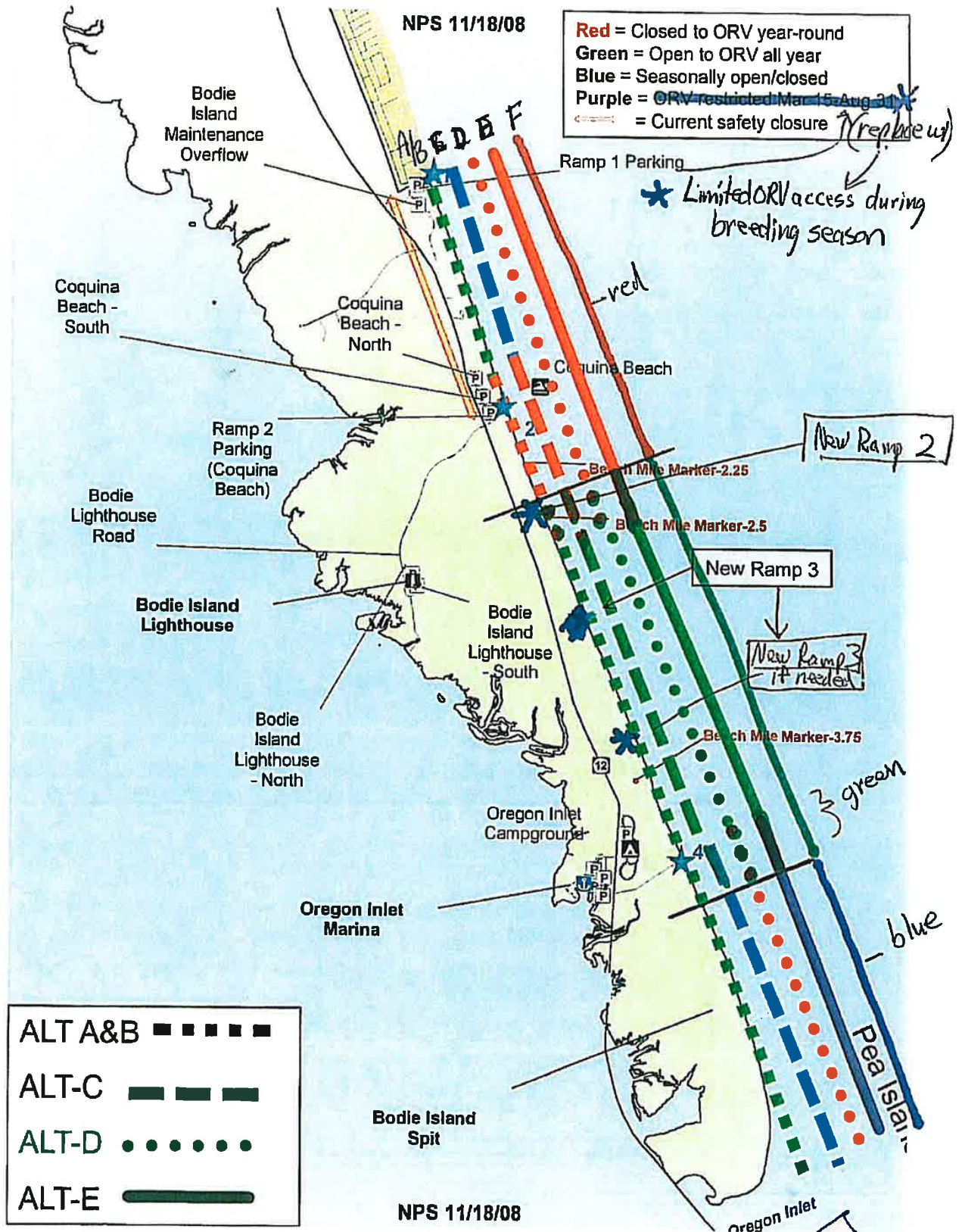
## Cape Hatteras National Seashore ORV Management Alternatives Maps

**11/18/08**

**NPS is not seeking or considering public comment on these materials at this time. NPS is sharing this information with the negotiated rulemaking advisory committee now solely for members' use in negotiating a consensus alternative for recommendation to the NPS. NPS highly values public input in the planning process and will actively seek public comment on the draft environmental impact statement (DEIS), which will include these alternatives and an analysis of their impacts. NPS plans to have the DEIS ready for public review in the early fall of 2009.**




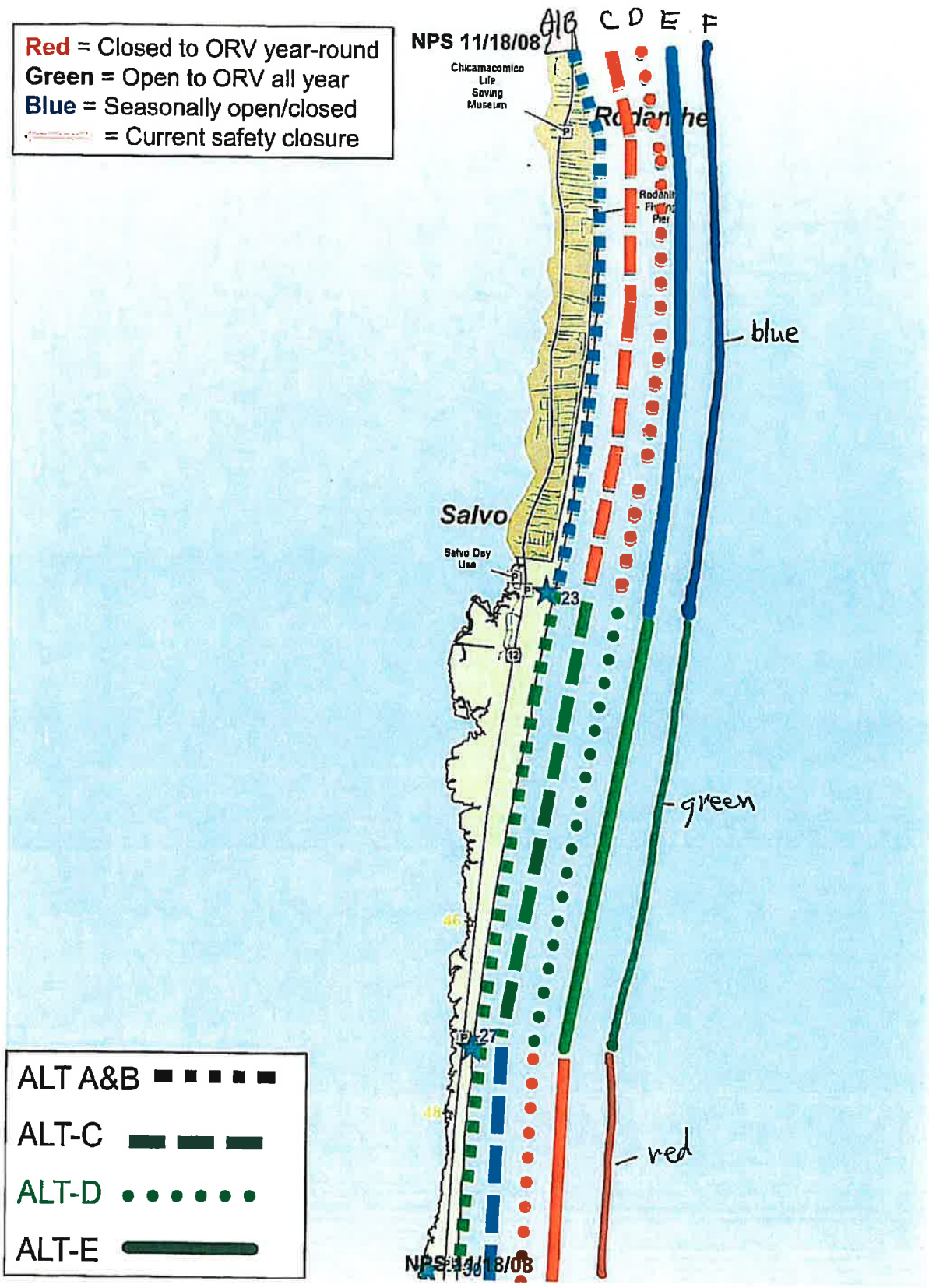
0023539



0023541



**Red** = Closed to ORV year-round  
**Green** = Open to ORV all year  
**Blue** = Seasonally open/closed  
 = Current safety closure

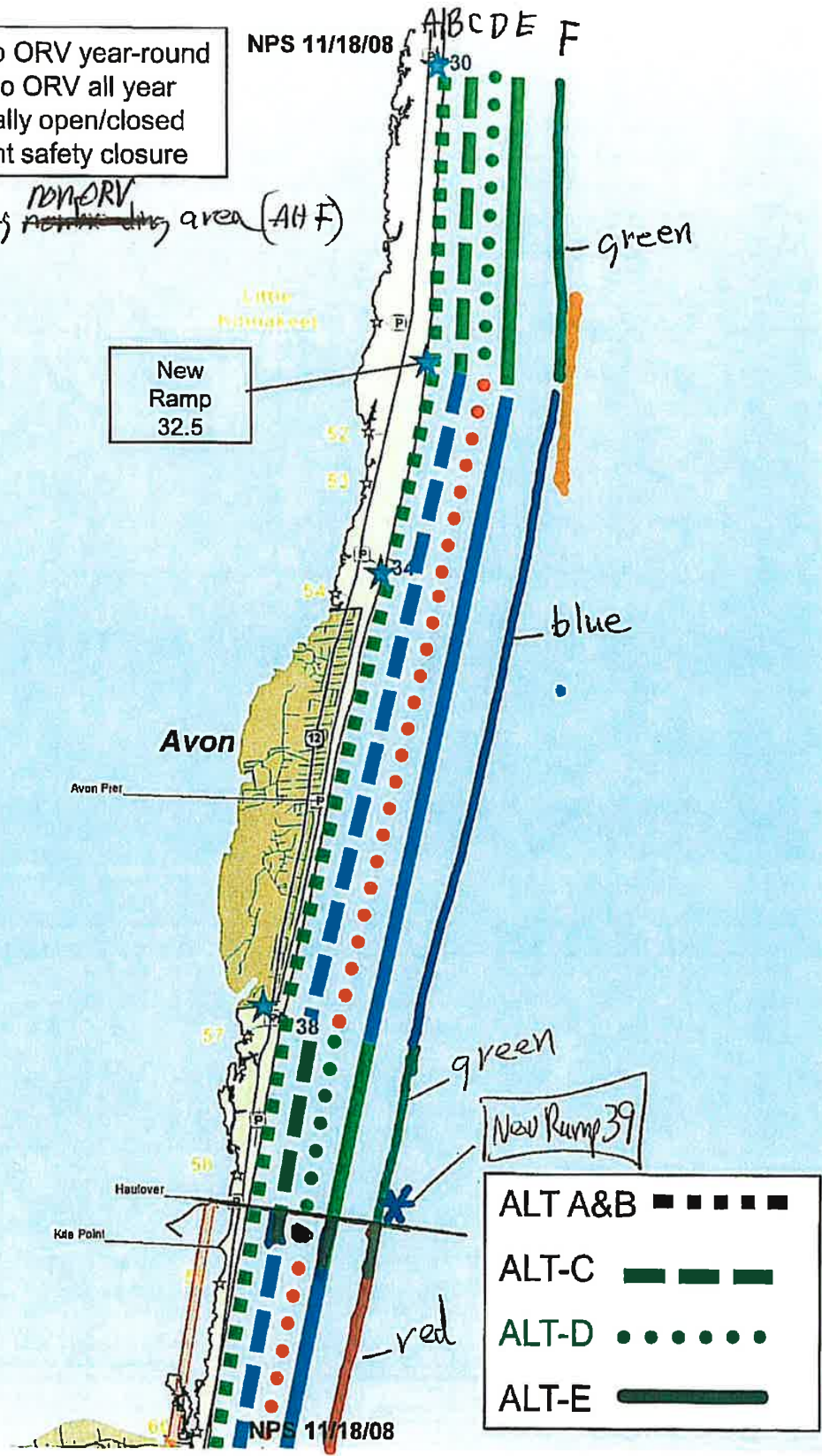


ALT A&B   
ALT-C   
ALT-D   
ALT-E 

0023543

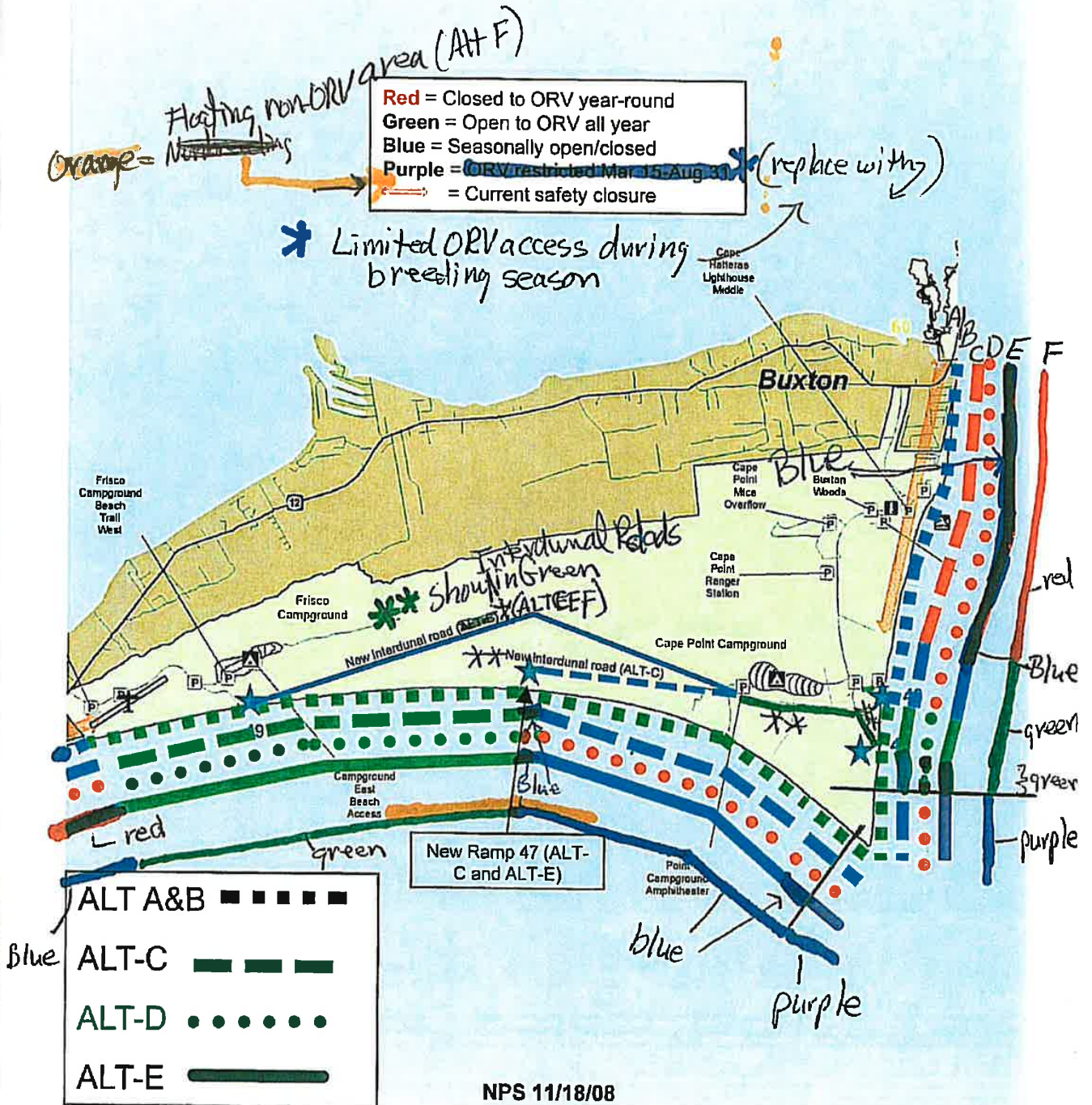
**Red** = Closed to ORV year-round  
**Green** = Open to ORV all year  
**Blue** = Seasonally open/closed  
= Current safety closure

*Orange* = Floating ~~nearby~~ area (A/H F)



0023545

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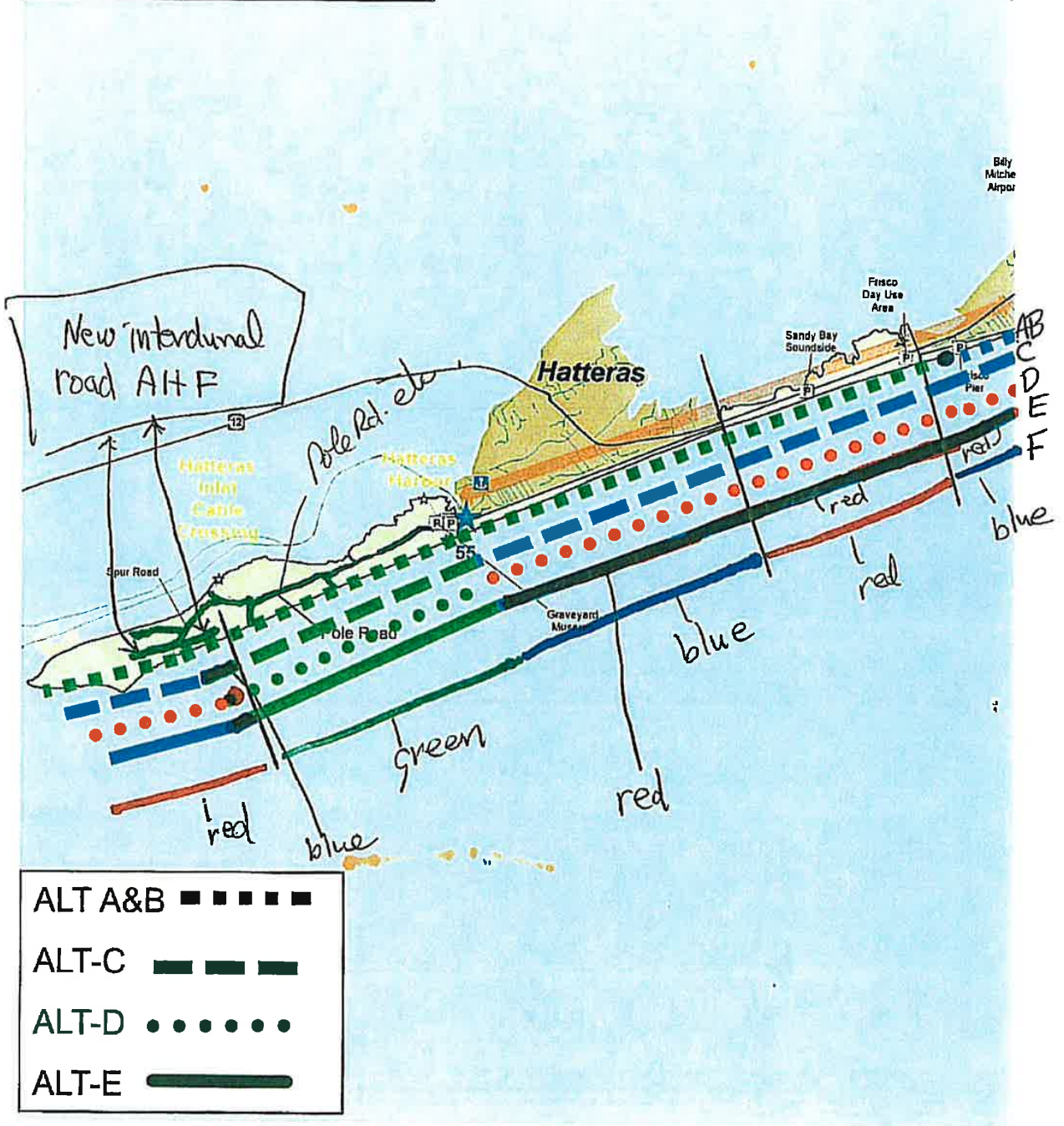


NPS 11/18/08

0023547

NPS 11/18/08

**Red** = Closed to ORV year-round  
**Green** = Open to ORV all year  
**Blue** = Seasonally open/closed  
← = Current safety closure




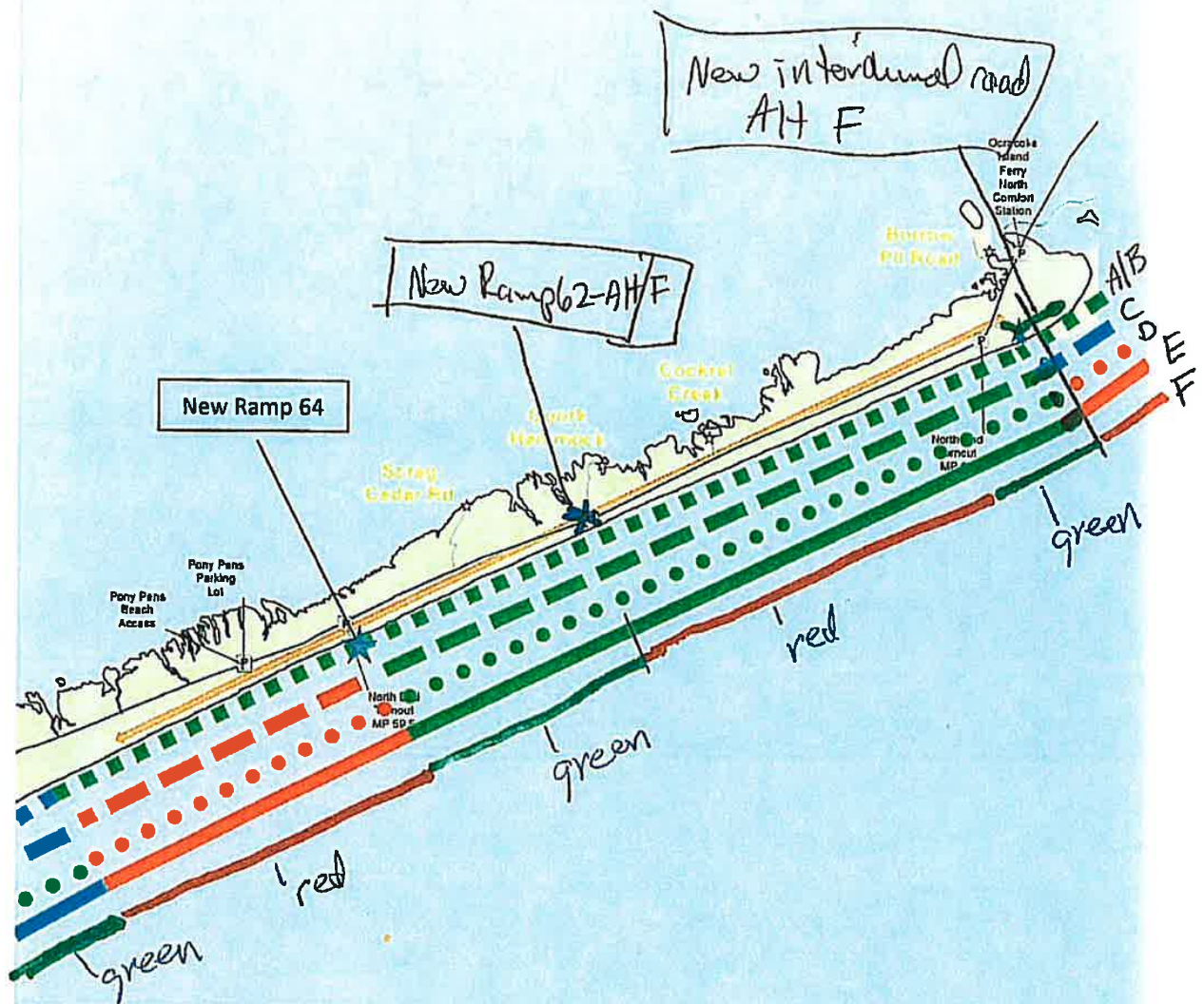
NPS 11/18/08

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**Red** = Closed to ORV year-round  
**Green** = Open to ORV all year  
**Blue** = Seasonally open/closed  
 = Current safety closure



ALT A&B	■ ■ ■ ■ ■
ALT-C	■ ■ ■ ■ ■
ALT-D	● ● ● ● ●
ALT-E	—————

NPS 11/18/08

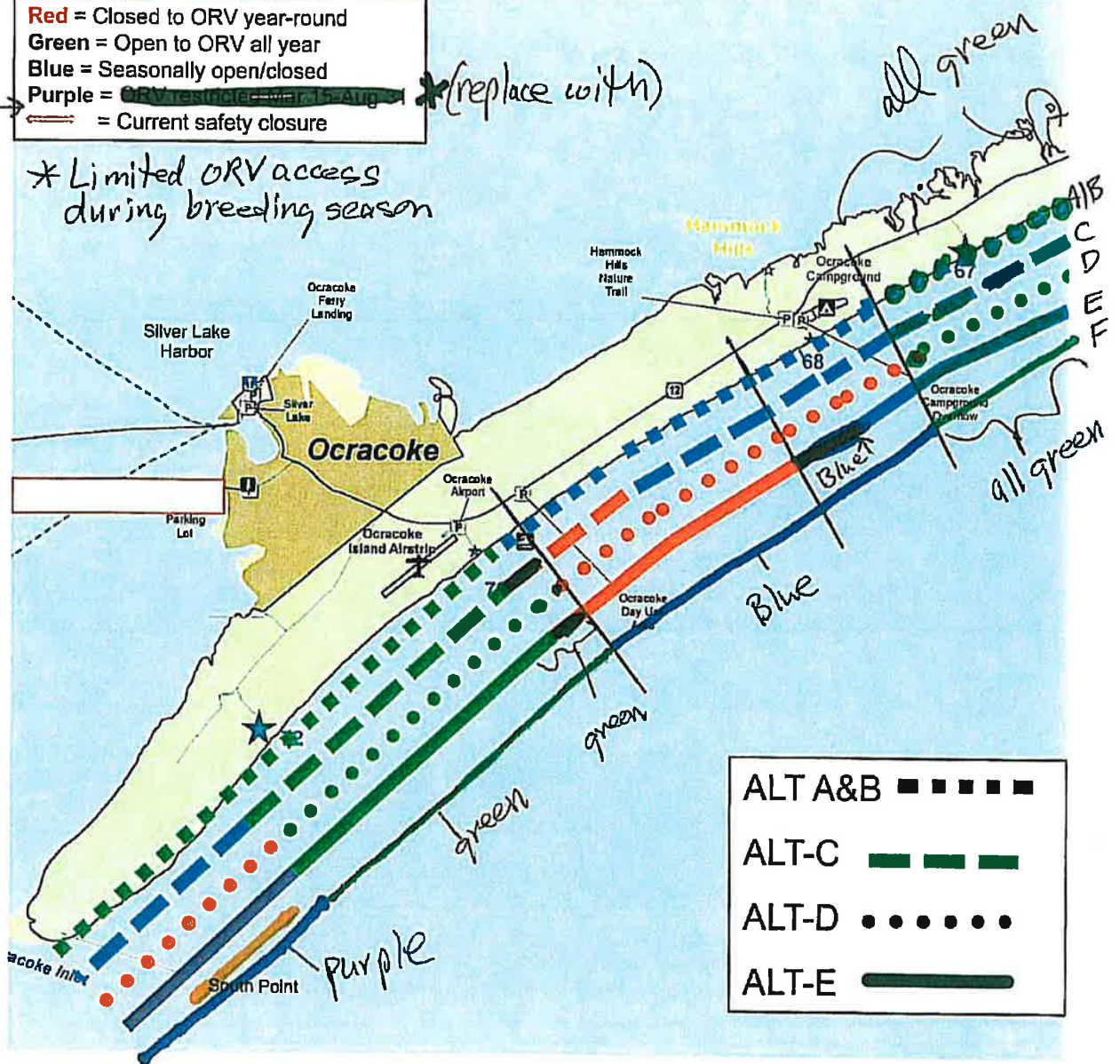
0023551

NPS 11/18/08

Orange = Floating non-ORV area (A11F)

- Red = Closed to ORV year-round
- Green = Open to ORV all year
- Blue = Seasonally open/closed
- Purple = ~~ORV restricted area~~ \* (replace with)
- = Current safety closure

\* Limited ORV access during breeding season







NPS 11/18/08

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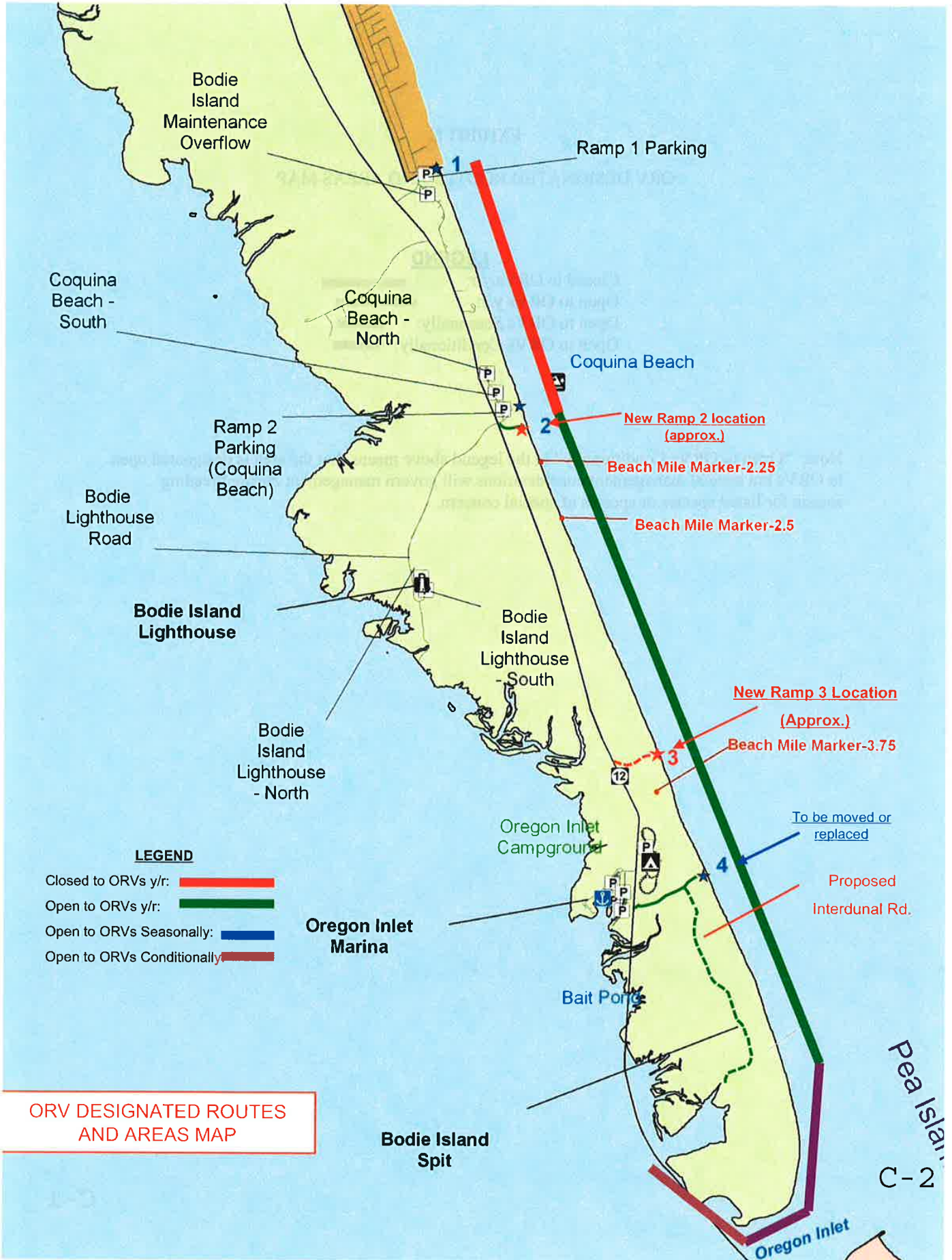
EXHIBIT C

ORV DESIGNATED ROUTES AND AREAS MAP

**LEGEND**

- Closed to ORVs y/r: 
- Open to ORVs y/r: 
- Open to ORVs Seasonally: 
- Open to ORVs Conditionally: 

Note: "Open to ORVs Conditionally" in the legend above means that the area is designated open to ORVs but special management considerations will govern management during breeding season for listed species or species of special concern.

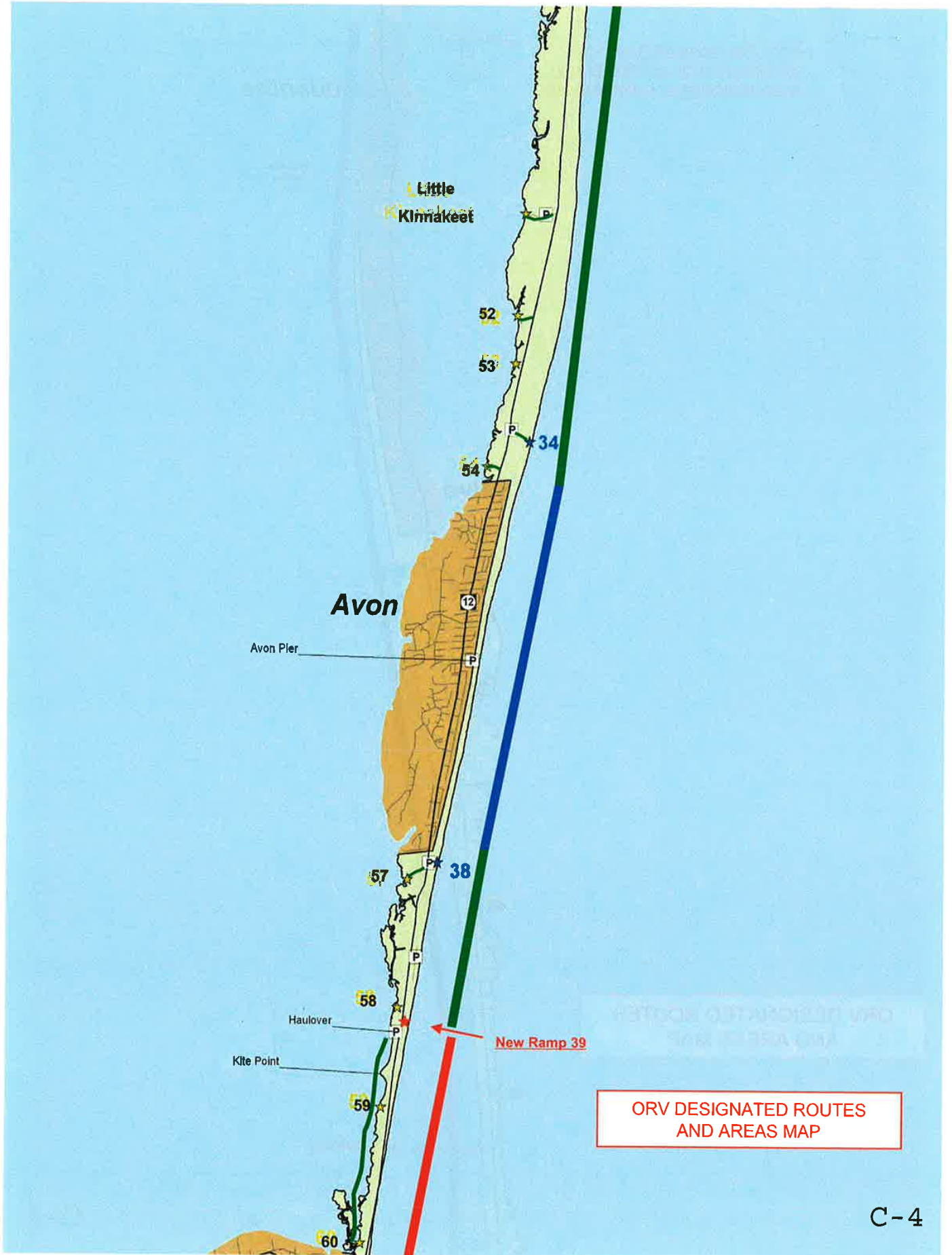


**Note: Pea Island NWR shall be considered as an addition to any area designated as pedestrian-only.**



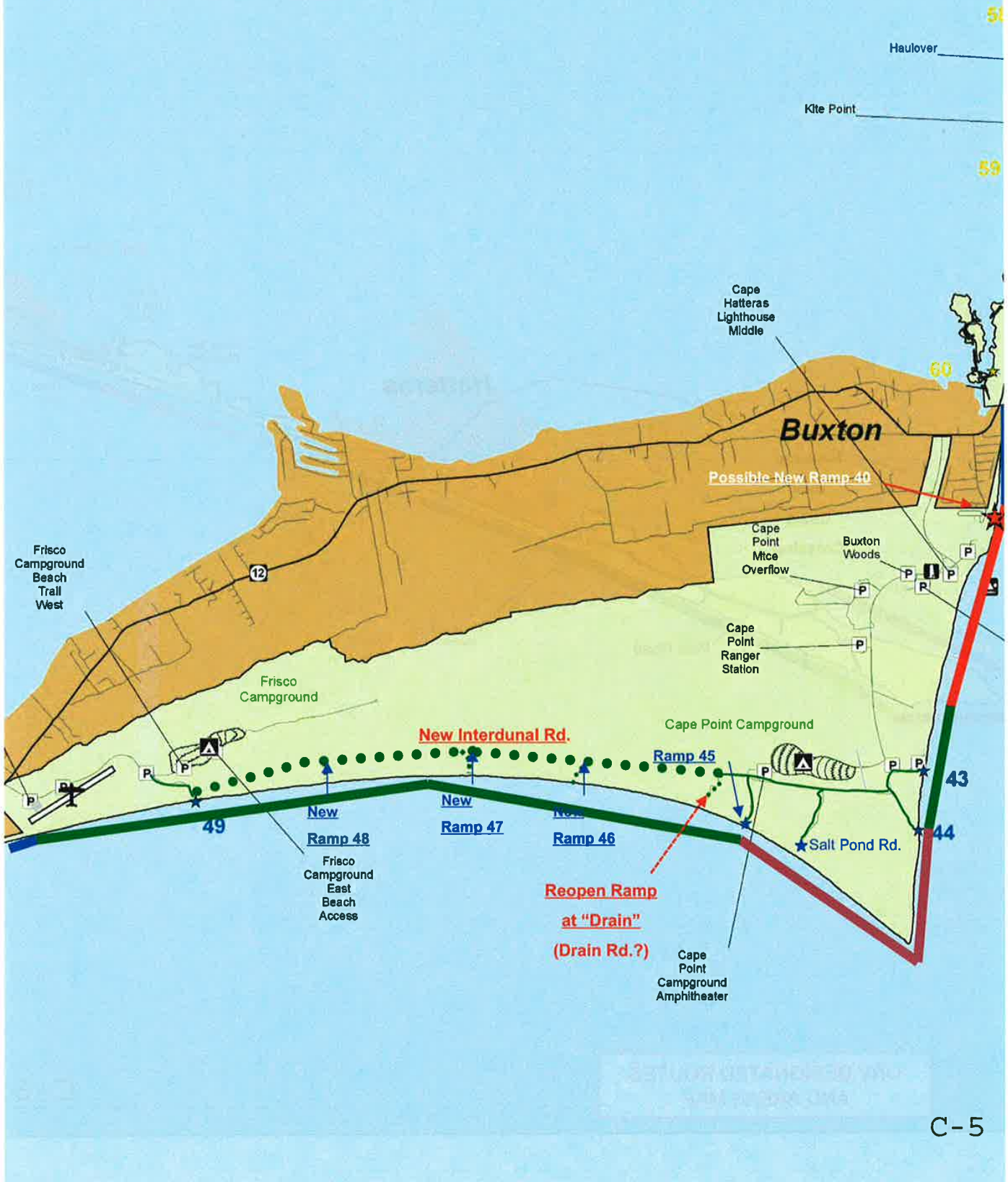
**ORV DESIGNATED ROUTES AND AREAS MAP**

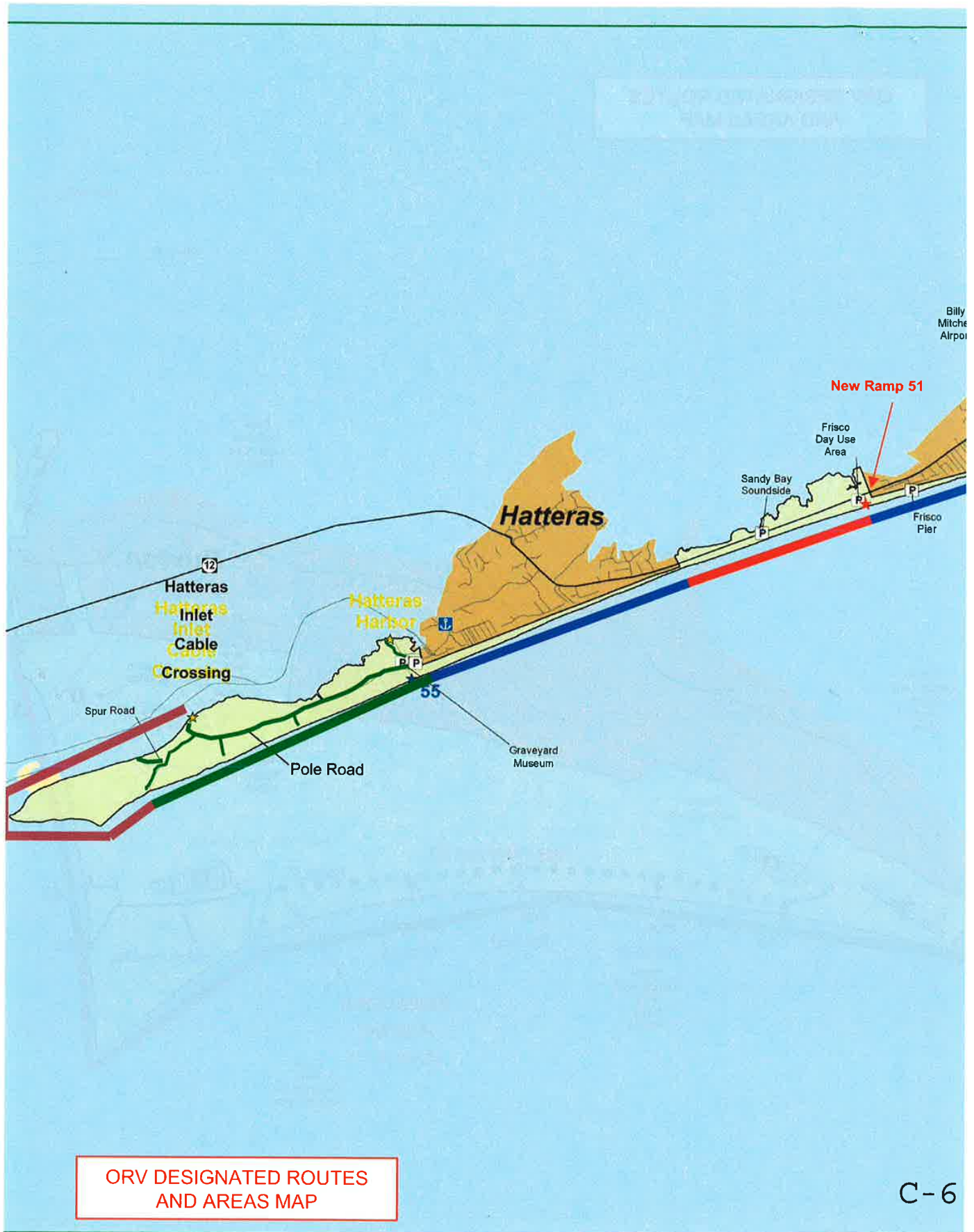
FOR INFORMATION ONLY  
NOT TO BE USED FOR  
OFFICIAL PURPOSES

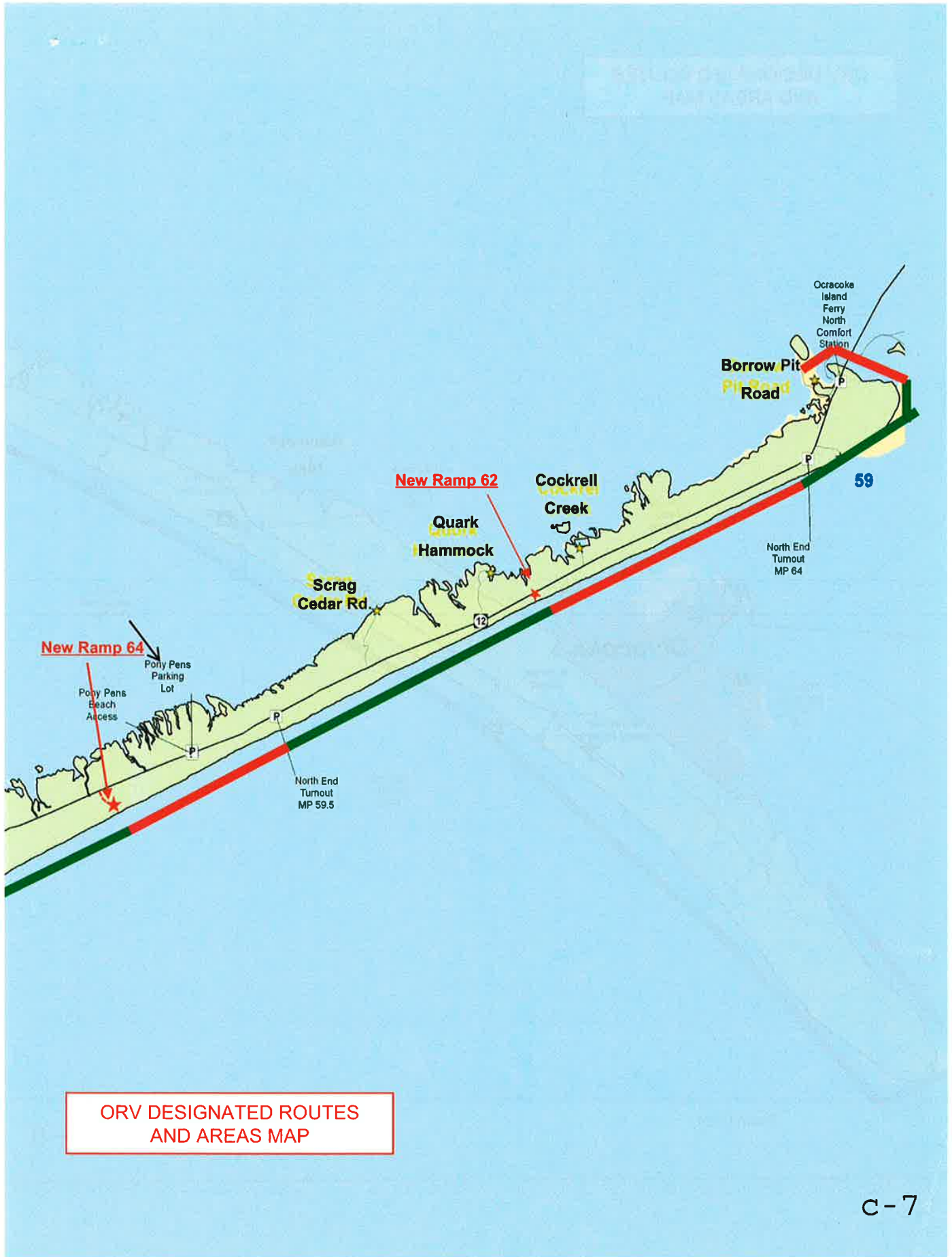




ORV DESIGNATED ROUTES AND AREAS MAP







ORV DESIGNATED ROUTES AND AREAS MAP

ORV DESIGNATED ROUTES  
AND AREAS MAP

