

0077540

From: [Britta Muiznieks](#)
To: [Mike Murray](#)
Cc: [Thayer Broili](#)
Subject: Re: Fw: RegNeg proposal to review-correction
Date: 03/02/2009 09:31 AM
Attachments: [CAHA Species Mgmt Matrix Proposal #2.02.20.09-BDM.doc](#)

I would wait. I plan on including this in our AMOY report that I am working on as time permits. I could send Doug Wetmore and Sandy the files that Shiloh sent me if you think it is necessary. Shiloh did have GIS data for 1999 so we now do have 10 years of AMOY data.


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▼ [Mike Murray/CAHA/NPS](#)

Mike Murray/CAHA/NPS

03/02/2009 08:41 AM

To: Britta Muiznieks/CAHA/NPS@NPS
cc: Darrell Echols/CAHA/NPS@NPS, Doug McGee/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS
Subject: Re: Fw: RegNeg proposal to review-correction 

The ball is in our court now in terms of planning, so don't need to share the information with the Committee at this point. IF you believe this is the most accurate information we have, I'll forward it to Sandy Hamilton to use in the DEIS.

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▼ [Britta Muiznieks/CAHA/NPS](#)

Britta Muiznieks/CAHA/NPS

03/02/2009 08:27 AM

To: Mike Murray/CAHA/NPS@NPS
cc: Darrell Echols/CAHA/NPS@NPS, Doug McGee/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS
Subject: Fw: RegNeg proposal to review-correction

Mike-

In case you plan on using the AMOY table I previously provided in the near future, I have made some corrections to it utilizing data that Shiloh provided me. Shiloh forwarded me his 1999-2007 files and they are very different from what we have in the attribute tables in GIS which is what I usually consider our most accurate information. There are a lot of blanks or "?" in the GIS attribute tables which need to be corrected in GIS as Abra's time permits. Following is an updated table to the one I provided in the previous email.

0077541

| Location | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-----------------|-----------|------|------|-------|------|------|------|------|------|------|------|
| Green Island | # prs | | | | | 3 | 2 | 2 | 2 | 2 | 2 |
| | # nests | | | | | 3 | 3 | 3 | 2 | 2 | 4 |
| | # fledged | | | | | 0 | 2 | 0 | 2 | 2 | 2 |
| Bodie Island | # prs | 2 | 2 | 2 | 2 | 5 | 3 | 2 | 2 | 2 | 3 |
| | # nests | 3 | 3 | 3 | 5 | 5 | 7 | 3 | 2 | 2 | 5 |
| | # fledged | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Bodie-Hatteras | # prs | 5 | 4 | 3 | 3 | 6 | 4 | 4 | 3 | 5 | 4 |
| | # nests | 6 | 4 | 3 | 3 | 6 | 4 | 5 | 5 | 9 | 6 |
| | # fledged | 0 | 0 | 2 | 0 | 3 | 6 | 2 | 2 | 3 | 4 |
| Hatteras Island | # prs | 19 | 20 | 21 | 14 | 10 | 11 | 13 | 11 | 10 | 11 |
| | # nests | 25 | 25 | 25 | 22 | 17 | 14 | 21 | 14 | 12 | 14 |
| | # fledged | 3 | 2 | 4 | 4 | 3 | 3 | 9-11 | 3 | 6 | 7 |
| Ocracoke Island | # prs | 15 | 12 | 13 | 12 | 8 | 9 | 5 | 5 | 4 | 3 |
| | # nests | 17 | 17 | 15 | 18 | 12 | 11 | 10 | 8 | 10 | 3 |
| | # fledged | 2 | 7 | 14-17 | 3 | 1 | 8 | 1 | 2 | 1 | 2 |
| Total | # prs | 41 | 38 | 39 | 31 | 32 | 29 | 26 | 23 | 23 | 23 |
| | # nests | 51 | 49 | 46 | 48 | 43 | 39 | 42 | 31 | 35 | 32 |
| | # fledged | 5 | 9 | 21-24 | 9 | 7 | 19 | 9-11 | 9 | 12 | 17 |


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----- Forwarded by Britta Muiznieks/CAHA/NPS on 03/02/2009 07:58 AM -----

Britta Muiznieks/CAHA/NPS

02/25/2009 10:40 AM

To: Mike Murray/CAHA/NPS@NPS
cc: Darrell Echols/CAHA/NPS@NPS, Doug McGee/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS
Subject: Re: RegNeg proposal to review 

Mike-

I do find this document difficult to "live with" and it would be even more difficult to implement. When we prepared the original document, we tried to be realistic with our recommendations. This document has basically doubled the closure sizes and doubled the monitoring requirements. It is many times more restrictive than the consent decree that we are currently operating under. Under SM1 they want to maintain the current monitoring requirements and increase the buffer sizes. Some of the requests appear to be completely unrealistic (e.g. pre-nesting closures for all CWB colonies for the last 10 years). I do not think that we could count on revenue from ORV permits to fund the required monitoring since the majority of the beach will be closed from March through July. The definition they want to use for human disturbance is not implementable on the ground. I agree theory with the definition but would want them to explain how we would document changes in physiology for CWBs, PIPs, WIPLs, AMOYs, and non-breeding shorebirds. Is their intent for us to stop hiring monitors and start hiring researchers?

Another issue that I have with this document is that throughout the document they refer to human disturbance instead of ORV disturbance. Isn't this supposed to be an ORV Management Plan? Isn't disturbance caused by pedestrians beyond the scope of this document?

In another email you said that Walker and others have expressed concern that for some species the past three years represent the lowest nesting ever, so that our approach would be a minimalist approach. I have been taking a closer look at the AMOY data (it still needs some verification on the earlier years), but I would say that we are doing pretty good as far as productivity goes which should be our measure of success. The number of nesting pairs we have is more of a reflection of their overwintering survival than a reflection of park management. This past year we fledged 17 AMOY chicks, the second highest year on record. In 2001 22 chicks fledged, 15 of them from Ocracoke. After that banner year the most that have ever fledged off of Ocracoke is 4 chicks. The decline is probably due to a number of factors including changes in habitat and predators but I don't have a good explanation for the steep decline on Ocracoke after 2001. As I have said before, closing the beaches isn't going to automatically improve our nesting numbers.

| Location | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-----------------|------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Green Island | # prs | unk | unk | unk | 3 | 3 | 1 | 2 | 2 | 2 |
| | # nests | unk | unk | unk | 3 | 3 | 2 | 2 | 2 | 4 |
| | # fledged | unk | unk | unk | 0 | 2 | 1 | 2 | 2 | 2 |
| Bodie Island | # prs | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 2 | 3 |
| | # nests | 3 | 3 | 5 | 5 | 7 | 3 | 2 | 2 | 5 |
| | # fledged | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Bodie-Hatteras | # prs | 4 | 3 | 3 | 6 | 4 | 4 | 4 | 5 | 4 |
| | # nests | 5 | 3 | 3 | 6 | 4 | 5 | 5 | 9 | 6 |
| | # fledged | 0 | 2 | 0 | 3 | 0 | 2 | 2 | 3 | 4 |
| Hatteras Island | # prs | 19 | 21 | 14 | 10 | 11 | 13 | 11 | 10 | 11 |
| | # nests | 24 | 25 | 22 | 17 | 14 | 19 | 14 | 12 | 14 |
| | # fledged | 2 | 4 | 4 | 3 | 2 | 6 | 3 | 6 | 7 |
| Ocracoke Island | # prs | 12 | 13 | 12 | 8 | 8 | 5 | 5 | 4 | 3 |
| | # nests | 17 | 15 | 18 | 12 | 10 | 10 | 8 | 10 | 3 |
| | # fledged | 1* | 15 | 3 | 1 | 4 | 1 | 2 | 1 | 2 |
| Total | # prs | 37 | 39 | 31 | 31 | 30 | 25 | 24 | 23 | 23 |
| | # nests | 49 | 46 | 48 | 43 | 38 | 39 | 31 | 35 | 32 |
| | # fledged | (3?) | 22 | 9 | 7 | 8 | 10 | 9 | 12 | 17 |

*(DM says 7 fledged)

Our species diversity in the CWB colonies is declining but we have no good estimates of productivity for the colonies for comparison purposes.

I have made comments directly onto the attached document. Abra is in the process of uploading the maps containing the last 10 years of PIPL nests and the last 9 years of AMOY nests with 75 meter buffers. We do not have 10 years of GIS data for AMOYs. We only have general locations for CWB prior to 2007. It would take quite a bit of effort to figure out how to map these. The maps can be found on the shareall in the following folder:

I:\DIVISION FOLDER-RES MNGT\Maps for Superintendent\10 yr breeding history.

They should be printed on 11" X 17" paper.



CAHA Species Mgmt_Matrix_Proposal #2.02.20.09-BDM.doc

Call if you have any questions.

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▼ Mike Murray/CAHA/NPS

Mike Murray/CAHA/NPS

02/23/2009 09:31 AM

To: Britta Muiznieks/CAHA/NPS@NPS
cc: Doug McGee/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS, Darrell Echols/CAHA/NPS@NPS, Michelle Baker/CAHA/NPS@NPS
Subject: RegNeg proposal to review

Britta,

See attached revisions to the Resource Protection Measures Table that is proposed by the environmental groups and being considered as a recommendation by the Committee. Is there anything in there that we cannot live with? Please identify anything in it that you would change (and how you change it) and provide comments to me **by noon on Wednesday, Feb 25**. Don't really need comments about the problems/difficulties with it as written. Just want to know what you would change and why, since that is what I really need to know to negotiate changes in it. In other words, as an example, a comment that a certain measure would increase our workload and would be difficult to sustain (which may well be true about some of the proposed measures), does not help me unless you can propose an alternative approach that addresses the resource protection concern as well as addresses the workload concern.

I am expecting a joint proposal from FWS/WRC on night driving restrictions (dates, times, adaptive management, etc.) that both agencies can "heartily support." Will need your input on that as well and will forward it to you as soon as I

0077543

receive it.

Thanks,

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----- Forwarded by Mike Murray/CAHA/NPS on 02/23/2009 09:08 AM -----

"GOLDER, Walker"
<WGOLDER@audubon.org>

02/20/2009 07:37 PM

To "Mike_Murray@nps.gov" <Mike_Murray@nps.gov>, Pat Field
<pfield@cbuilding.org>, 'Robert Fisher' <rcf@fishercs.com>
cc Derb Carter <derbc@selcnc.org>, Destry Jarvis <destryjarvis@earthlink.net>,
Jim Lyons <chra07@yahoo.com>, 'Jason Rylander'
<JRYLANDER@defenders.org>, "MADDOCK, Sidney"
<smaddock@audubon.org>
Subject CAHA Species Management Table

Attached please find the revisions to the species management table that I spoke of during our meetings this week. Our proposal is contingent upon implementation of resource protection measures in this table.

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[attachment "CAHA Species Mgmt_Matrix_Proposal #2.02.20.09.doc" deleted by Britta Muiznieks/CAHA/NPS]

Natural Resource Protection Proposal #2

| Survey Time and Frequency | Piping Plover | American Oystercatcher and Wilson's Plover | Colonial Waterbirds |
|--------------------------------|---|--|---------------------|
| <p>All Bird Species</p> | <p><u>Species Management 1 (SM1)</u>: 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 inlets and Cape Point. Estimated staffing requirements TBD by NPS.</p> <p><u>Species Management 2 (SM2)</u>: Will use smaller buffers and require more frequent monitoring and fencing changes. Will be applied at inlets and Cape Point at the discretion of NPS. Estimated staffing requirements TBD by NPS.</p> <p>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 monitor 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 <u>Option A</u> or B.</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 <u>any activity</u> 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, <u>and non-breeding shorebirds.</u></p> <p>Dogs are prohibited within 100 yards of all natural resource closures, including natural resource areas for migrating and wintering shorebirds. Pet restrictions and leash regulations will be strictly enforced.</p> | | |

Comment [MSOffice1]: Is the Park really willing to consider Option A-no recreation on the seashore? Or even Option B? For PIPLs Option B states that we will close all potential PIPL nesting, roosting and foraging habitat to ORV traffic 24 h/day year round at all the spits and Cape Pt/South Beach. Who will determine where the closures would start and end?

Comment [MSOffice2]: This definition refers to much more than just the effects of ORVs. I didn't think that the ORV Management Plan was trying to address all disturbance at all locations throughout the park. It is not possible to detect changes in physiology with the type of observations that we conduct.

Comment [MSOffice3]: If non-breeding birds are included in disturbance, then we would have to shut the park down. Non-breeding birds use the entire park and would be subject to ORV disturbance.

Comment [MSOffice4]: I would say that a minimal level of disturbance should or could be acceptable. Flushing a bird off a nest would not be acceptable unless it was for data collection. A bird lifting it's head while incubating because someone is walking by in my opinion is negligible but by this strict definition would be considered disturbance.

Natural Resource Protection Proposal #2

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|-----------------------------------|---|---|---|
| <p>Pre-Nesting Surveys</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 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.</p> <p>Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years:</p> | <p>March 15 – July 15 survey historic breeding areas (last ten years) at least 3 times per week. If/when AMOY pairs are observed in an area, survey site daily. 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 & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years:</p> | <p>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 If/when CWB are observed in an area, survey site daily. 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 & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years:</p> |
| <p>Pre-Nesting Buffers</p> | <p><u>SM1</u>: Areas designated as SM1 Resource Areas will not allow ORV or pedestrian access during the pre-nesting period.</p> <p><u>SM2</u>: Areas designated as SM2 may have a narrow ORV (where permitted) 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. 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 ORV and pedestrian corridor will begin at the northernmost boundary of the pre-nesting closures as delineated in Alt E. Cape Point and South Beach: North side corridor to be not more than 50m, established as delineated in Alt E; 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: as delineated in Alt E; N. Ocracoke: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years.</p> | | |

Comment [MSOffice5]: We may not have specific data going back 10 years. Many of the reports cite general areas (ie small colonies near ramps 23 and 34).

Comment [MSOffice6]: This statement conflicts with what is stated below for AMOYs. This statement makes it sound like there will only be prenesting closures at the points and spits while below it states that there will be prenesting closure for all nests for the last 10 years. Which is it?

| | | | |
|---|--|--|---|
| | <p>Deliberate attempts to harass or disturb birds, or vandalize fencing, will result in immediate closure of the corridor.</p> | | |
| | <p>SM1/SM2: In February or March of each year, NPS natural resource staff will conduct an annual assessment of piping plover breeding habitat to plan pre-nesting closures in historic breeding areas that are adapted to current habitat and physiographic conditions. Historic 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 July 15, or 2 weeks after chicks in the area have fledged, whichever comes later.</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.</p> <p>NPS natural resource staff will conduct an annual assessment of colonial waterbird breeding habitat to plan pre-nesting closures that are adapted to current habitat and physiographic conditions.</p> |
| <p>Courtship/Mating Surveys:</p> | <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><u>SM1:</u> 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><u>SM2:</u> 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> | | |

Comment [MSOffice7]: They have basically eliminated the differences that we had for SM1 and SM2. Briefly looking at some maps I have with all AMOY nests, Ramp 4 to the south would be closed for the next 10 years from March 15-July 15th because of the pair we had last year nesting in the narrows. At Cape Point Ramp 44 would have to be closed because of a nest in the vicinity. At Hatteras Inlet the Spur Road would have to be closed because of birds that nested just east of the junction of the pole road and spur road. These are just a few examples of what this requirement would mean.

Comment [MSOffice8]: This is very different from what we had proposed! We had stated that pre-nesting closures will not be established for CWB because they do not return to the same location every year. This proposal would essentially shut down most of the ramps- Ramp 27, 34, and 45 come to mind immediately. Other ramps may remain open but very little beach would be left to drive on. There would be no access to Oregon Inlet after the "narrows". We do not have specific nest locations so I don't even know how we would go about establishing pre-nesting areas for CWB unless it would be duneline to shoreline in all the old nesting areas.

Comment [MSOffice9]: Who would determine when and where pedestrian and ORV corridors could be allowed? What criteria would be used?

Comment [MSOffice10]: How will we determine if a corridor is an option for CWB colonies?

Natural Resource Protection Proposal #2

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|---|---|---|--|
| <p>Courtship/Mating Buffers:</p> | <p><u>SM1, SM2:</u> 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. <u>At the first disturbance,</u> buffer will be expanded by 50 m if human disturbance is observed. Observations; 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><u>SM1:</u> 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 a scrape is being maintained, a 300 meter buffer will be established around the bird activity.</p> <p><u>SM2:</u> Outside of existing pre-nesting 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 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.</p> <p>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><u>SM1:</u> 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><u>SM2:</u> 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 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> |

Comment [MSOffice13]: This completely eliminates what we were trying to accomplish in our original proposal-larger buffers so that we would have to do less monitoring. This maintains a high level of monitoring (3X/week) and also has a larger buffer (300 m vs 150 m).

Comment [MSOffice11]: I think we should keep the disturbance monitoring to ORV and not include pedestrians.

Comment [MSOffice12]: So the first time someone honks a horn and flushes a bird foraging on the shoreline the corridor will be closed? According to the definition of disturbance that they want to use any activity that changes the behavior of one or more individuals is considered disturbance.

Natural Resource Protection Proposal #2

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|---------------------------------|--|---|---|
| <p>Nest Observation:</p> | <p><u>SM1, SM2:</u> 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>If nest buffer is less than 75 m observe nest daily to determine if <u>ORV</u> 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 that can be attributed to an ORV, buffer will be expanded by 50 m if human disturbance is observed. Observations observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human-ORV disturbance occurs again.</p> | <p><u>SM1:</u> 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).</p> <p><u>SM2:</u> 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><u>SM1:</u> 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.</p> <p><u>SM2:</u> 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><u>All species:</u> 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><u>SM1, SM2:</u> NPS shall not reduce buffers to accommodate ramp access. After <u>July 31</u>, 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><u>SM1, SM2:</u> 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</p> | <p><u>SM1:</u> Use buffer of 300 m.</p> <p><u>SM2:</u> Use buffer of 150 m around nests occurring outside of existing closures.</p> | <p><u>SM1:</u> Use buffer of 300 m for all species.</p> <p><u>SM2:</u> Use buffer of 100 m for least terns and 200 m if the colony contains common terns, gull-billed terns or black skimmers.</p> |

Comment [MSOffice14]: I recommend that a time limit be used instead of vehicle #'s (1 hour of observations) otherwise this may turn into dawn to dusk monitoring.

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Comment [MSOffice15]: If human disturbance is defined as written in the first page

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Comment [MSOffice16]: On page 3 it states that pre-nesting closures for PIPLs and AMOYs can be removed by July 15th.

Natural Resource Protection Proposal #2

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| | <p>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 or at the points and spits.</p> <p>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-ORV disturbance is observed. Observations; observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human-ORV disturbance occurs again.</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.</p> <p>For AMOY nests that occur inside a pre-nesting closure at one of the 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>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 zone a full-beach closure will result.</p> <p>Colony will be monitored daily for presence of new nesting activity and buffers will be adjusted as needed.</p> <p>For a colony that occurs inside a pre-nesting closure at one of the points or spits and requires buffer expansion of the pre-nesting 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 & 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</p> | <p>No additional buffers/closures.</p> | <p>No additional buffers/closures.</p> |

Comment [MSOffice19]: ORV?

Comment [MSOffice17]: ORV?

Comment [MSOffice18]: ORV?

Comment [MSOffice20]: Lower staffing levels and increased buffer were supposed to decrease monitoring requirements

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| | the foraging area is associated with a prenesting 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. | | |
| Unfledged Chicks Surveys: | <p><u>SM1</u>.: Observe brood once daily.</p> <p><u>SM2</u>.: 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 >15 m.</p> | <p><u>SM1</u>.: Observe brood at a minimum every other day.</p> <p><u>SM2</u>.: 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 >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><u>SM1</u>: Observe colony every other day.</p> <p>Tern and skimmer chicks will often move 100m or more from their colony site, often toward the nearest shoreline.</p> <p><u>SM2</u>: Observe colony daily.</p> <p>Observations end after no unfledged chicks have been observed on 3 consecutive survey days. Closure can be removed after July 31 or two weeks after all chicks have fledged, whichever is later.</p> |
| Unfledged Chick Buffers: | <p><u>SM1</u>: 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.</p> <p><u>SM1</u>: For the first 2 weeks after hatching, establish a 1000 m buffer for ORVs .</p> <p>Based on mobility of the brood, at the</p> | <p><u>SM1</u>: Establish a 300 meter buffer when unfledged chicks are present. Include foraging and 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);.</p> | <p><u>SM1</u>: Use 300 m buffer. If chicks move outside of the buffer, it will be adjusted to include an additional 200 meters from the chick(s) location outside of the closure.</p> <p><u>SM2</u>: 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> |

Natural Resource Protection Proposal #2

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| | <p>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 bayshore habitat exists.</p> | <p>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><u>SM2</u>: 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.</p> <p>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 line if no bayshore habitat exists.</p> <p>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</p> | | | |

Comment [MSOffice21]: This will be difficult to sign. We will have to have a separate line of signs saying no dogs beyond this point. LE had this same issue with kite flying over closures.

Natural Resource Protection Proposal #2

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| | fledged, which ever is later. | | |
| Non-breeding / Wintering Survey | <p>NPS will monitor presence, abundance and behavior of migrating and wintering PIPL, 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.</p> <p>NPS will document the distribution and abundance of migrating and wintering shorebirds within the Seashore, following the International Shorebird Survey (ISS) <u>Southeast Coast Network (SECN)</u> protocols.</p> <p>Non-breeding shorebird surveys will begin on July 1 and continue until May 31 <u>once the pre-nesting closure have been removed</u>.</p> <p>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> | | |
| Non-breeding / Wintering Areas | <p>Non-breeding and wintering areas will be considered natural resource protection areas.</p> <p>Points and Spits: An annual migrating/wintering habitat assessment will be conducted at the points and spits by NPS. Migrating/wintering <u>resource closures</u> 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. Access to inlet shoreline where permitted will be maintained via a corridor TBD by NPS Resources Management staff based on an annual habitat assessment.</p> <p><u>Other Areas:</u> 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.</p> <p><u>Migrating/wintering resource closures will be maintained year round. Dogs will be prohibited within 100m of all migrating/wintering resource closures.</u> 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 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. <u>Human-ORV</u> 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> | | |
| Data Collected | Collect data as recommended by USGS (<i>Cohen 2005</i>) and use GPS to document nest locations. Record locations where territorial/ | Collect data as recommended by USGS (<i>Meyers 2005</i>) and use GPS to document nest locations. Record presence and abundance | Collect data as recommended by USGS (<i>Erwin 2005</i>) and use GPS to document colony locations. Record presence and abundance of birds. |

Comment [MSOffice22]: We will be disturbing nesting birds if we utilize these dates. I suggest wintering surveys will be conducted when the pre-nesting closure has been removed (i.e. when the non-breeding closure has been installed).

Comment [MSOffice23]: I recommend using the SECN protocols which randomly sample the entire seashore.

Comment [MSOffice24]: This info is not available.

Comment [MSOffice25]: Willets, black-bellied plovers, and sanderling occur throughout the entire seashore. How will the location of these closures be determined?

Comment [MSOffice26]: Is it still true that the NPS has determined that Microsoft Access will be the official database management software?

Comment [MSOffice27]:

Natural Resource Protection Proposal #2

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| | <p>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>Record presence and abundance of birds. Assess productivity and reasons for nest failure.</p> | <p>of birds. Assess productivity and reasons for nest failure.</p> | |
| Future Research | <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> | | |
| Goals, Objectives, and Desired Conditions | <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>Sea Turtles (a minimum of 7 field personnel is required to meet the daily monitoring requirements on the Park's 67 miles of shoreline). NPS will follow monitoring recommendations in the Atlantic Loggerhead Recovery Plan.</p> | | | |
| Survey Time and Frequency | <p>Sea turtle patrol will begin on May 1, unless leatherback nests have been reported within the state, in which case CAHA will follow the direction of NCWRC. Patrol will continue until September 15, or two weeks after the last sea turtle nest or crawl is found, whichever is later.</p> <p>Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches 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.</p> <p>Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed washed ashore or following severe storm events. Nest observations stop when all nests have hatched or excavation indicates that the nest was not viable.</p> <p>Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.</p> | | |
| Data Collected | <p>Follow the North Carolina Wildlife Resources Commission Handbook and record:</p> <ul style="list-style-type: none"> -Turtle species -Nest vs. false crawl -Location (physical description and GPS location) -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 | | |

| | |
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| | <p>-Necessary protective measures for nest and hatchlings -Information regarding any post hatching nest excavation and analysis</p> <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 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> <ul style="list-style-type: none"> a. Vehicle-free areas with little or no pedestrian traffic – 25 meters wide (total width); b. Villages or other areas with high levels of day use –50 meters wide (total width); c. Areas with ORV traffic –105 meters wide (total width). <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> |
| Night Driving Restrictions | <p>Night driving restrictions will begin May 7th and continue until September 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> |
| 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> |

Proposal # 2: 02/20/09

Natural Resource Protection Proposal #2

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| | Encourage concessioners to install turtle friendly lighting. Develop educational material to inform visitors about their impact on the success of sea turtle nests. |
| Research | Support research efforts looking at the sex ratios of sea turtles. 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. |
| Seabeach Amaranth | |
| Survey Time and Frequency | August 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. July– September Before opening any species closure or identifying alternate ORV corridors, survey for seedlings/plants. End observations when all plants have died back. |
| 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 or closed to recreational use. |
| Buffers | 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. |

See Shorebird/Waterbird Buffer Summary on next page.

Table 1. Shorebird / Waterbird Buffer Summary for SELC Proposed Alternatives

| Species | Breeding Behavior/ Nest Buffer | Unfledged Chicks |
|------------------------|-----------------------------------|---------------------|
| | 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 |