From: Mike Murray
To: pfield@cbuilding.org; rcf@fishercs.com
Subject: draft message
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Importance: High
Attachments: NightTurtleProtection&Access2-6.doc

(Pat and Robert, At yesterday's meeting, there was a significant difference between what the environmental stakeholders and the ORV/access stakeholder wanted for night driving restrictions. As a means of resolving the differences on that issue, I proposed asking FWS and WRC to make a joint recommendation for night driving that both agencies could heartily support. See below for draft message that I would send Pete Benjamin and Dave Allen, with copy to Gordon Myers, asking for them to do this. Please offer any suggestions for improving the wording.)

Pete and Dave,

I appreciate your participation in the integration group discussion on Monday. After five days of negotiations, the group has a working proposal with a number of differences that still need to be resolved. One of the unresolved issues is night driving. There was a significant difference between what the environmental stakeholders propose (night driving prohibited May 1 - Nov 15, from 1 hour after sunset until beaches have been patrolled in the morning; park and stay allowed as previously described) and what the ORV/access stakeholders want (night driving prohibited from the Tuesday after Memorial weekend until the Friday before Labor Day weekend, from 1 hour after sunset until beaches have been patrolled in the morning, or preferably a fixed time; park and stay allowed as previously described).

As a means of resolving the differences on this issue, I proposed to the group that we ask FWS and WRC to make a joint recommendation for night driving that both agencies could heartily support. (This is what I will do anyway if the group or the Committee cannot agree, so I figure why not do it now and let the group consider accepting it?) There was interest in this approach. My thinking is that your proposal would likely be more flexible than the environmental proposal and more protective (and defensible) than the access proposal. My hope is that you could help identify a biologically defensible, adequately protective approach that could allow for some selective relaxation in the future if results warrant it (e.g., future changes might be a change in dates, or allowing select routes to inlets or Cape Point to have more flexibility the Spring and/or the fall than other locations).

Pete, people were particularly intrigued by your discussion of examples at Ft. Bragg and Camp Lejeune that allowed for eventual relaxation of restrictions as performance objectives were met. Is it possible to define something like that for night driving at CAHA? For example, if you believe that a night lighting ordinance would be beneficial, perhaps you could consider a phased relaxation of access restrictions once an ordinance goes into effect or when some nesting target is met.

Bottom line: If you are amenable, would you two (or your designated staff) please work together to develop a concise straightforward proposal for managing night driving that both of your agencies could heartily support. Ideally, it would be more concise and easier to understand and implement than the latest NR subcommittee proposal (which is attached as background information). You should consider all the previous discussion that went into that proposal, but I suspect it would be better to

start from scratch in writing a new recommendation rather than try to edit the existing document (it is too long and complicated). I don't think you need to provide a lengthy explanation or justification; just propose the concise measures than both of you can support. Hopefully, one page or less, if possible. You can assume that NPS monitoring and nest management would occur as described in the Resource Protection Tables, unless you specify something different or additional in your proposal. Please make one joint recommendation that may involve multiple elements. We do NOT need multiple options to choose from. This is your chance to recommend what you really think it should be to protect turtles and provide for a legally and biologically defensible plan. That is what I am asking for.

Thank you for your consideration of this request and for your ongoing assistance. It would be most helpful if you could provide a joint recommendation to the facilitators and me by Monday morning, as we have an integration group conference call Monday afternoon and will want to share the information before the call. Please feel free to call if you have any questions.

Thanks again for your efforts.

NightTurtleProtection&Access2-6.doc

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Adaptive Management Proposal for Night Access during Sea Turtle Nesting and Hatchling Season

Acknowledgement

Numerous factors may affect sea turtles, turtle behavior, and turtle habitat including natural factors (ocean water quality, water temperature, storm events, predators, etc.), general human activity on beaches, artificial lighting (stationary in particular), and ORVs. Though the scope and focus of this plan is ORV management, this is not to imply numerous other management actions are not necessary and important to maintain and improve turtle populations on CAHA.

General Goals of Night Driving, Seasonal Restrictions, and Turtle Management

- Protect the sea turtles and contribute to the recovery of the species. More specific goals include:
  - Reduce the potential for false crawls due to night activity on the beach;
  - Reduce the potential for female turtles not emerging onto the beach due to night activity on the beach;
  - Reduce the potential for hatchling disorientation, when attempting to return to the sea, due to night activity on the beach;
  - Reduce potential direct impact to hatchlings seeking to reach the ocean, especially those hatchlings emerging from undiscovered/unmarked nests.
  - Reduce potential direct impact to nesting femails.
- Protect the opportunity for access.

General Question

- What are the restrictions on pedestrians regarding beach access, use, behavior, etc., during turtle nesting season?

General Concepts

This overall plan includes desired conditions established by the NPS, a adapative management program, robust education, a permit system, a related but separate predator control plan, NPS facility lighting controls, and a related but separate effort to reduce and manage lights from villages adjacent to the Seashore. Specific measures are as follows.

- In general, night driving would be prohibited during the dates of (options listed below):
  - 22 May, until 14 September;
  - Friday before Memorial Day until the Tuesday after Labor Day;
  - May 1 to 14 September;
- In general, night driving would be prohibited during the times of (options listed below):

  - 1 hour after sunset until 30 minutes after sunrise, unless otherwise noted below.
- 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 X date to Y date, 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 parking and appropriate stationary recreational activity, with significant restrictions, would be permitted from during the summer (to be defined). 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 stationary until the area reopens to ORV access in the morning.
- From September (dates to be determined) until 14 November night driving on all routes and areas (not otherwise subject to resource closures) with low or no density of turtle nests would occur with nighttime restrictions with appropriate NPS monitoring. Geographic ORV access openings would be dictated by the location of turtle nests and at the discretion of the NPS.
- Night driving on all routes and areas would occur without any nighttime restrictions from November 15 until April 30.

Monitoring

- Daily sea turtle patrols will begin on May 1 or before, 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.
- 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.
- 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 indicates that any nests remaining are not viable.
- At approximately 50-55 days into incubation, NPS will expand the closure around a nest to the surf line, establish the filter fencing, and monitor the nest daily for signs of hatchling emergence.
- More intensive night monitoring focused on the appropriate turtle life stage (nesting or hatching) will occur from 1 May until XX May (nesting) and again from XX September until 15 November (hatching).
- Because night activities also have potential affects on nesting birds, monitors need to take notes on bird disturbances particularly during the 1 May --XX May period.

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Management

- In general, NPS will follow the guidance found in the NCWRC Handbook for Sea Turtle Volunteers. Specific buffers regarding nests are detailed in the separate Resource Protection Tables produced separately by the NPS.

- November 16 - April 30: Designated ORV routes and areas are open to ORV use 24 hours a day subject to other natural resource closures.

- May 1 – September 15: The general (parkwide) approach to sea turtle management during these dates includes the following:
    - All potential sea turtle nesting habitat (ocean intertidal zone, ocean backshore, and dunes) will be closed to non-essential ORV use from 1 hour after sunset until the beach is cleared by the turtle patrol, which shall be ½ hour after sunrise.
    - Areas of beach shall be cleared by turtle patrol prior to allowing ORV morning access. NPS shall provide sufficient personnel to meet the ½ hour after sunrise standard.
    - 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.
    - The turtle patrols will prioritize for first patrols those areas that are currently open to ORV access, and as necessary, further prioritize those open areas within the spits and points.
    - 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.
    - 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 season.
    - The Park shall provide for sufficient and necessary enforcement to ensure the beach is cleared at night by the night closure time, and that any violators are found and receive appropriate penalties.
    - Nest closures and buffers will be established as described in the CAHA ORV Resource Protection Tables, dated 11/15/08 (see page 9 of Table).
    - Pedestrian access to the ocean beaches after dark is allowed at any location(s) adjacent to the villages or established parking, subject to site specific resource closures as needed for bird breeding activity or sea turtle nests.

- Site Specific Management 1 May to XX May: Designated ORV routes and areas to Bodie Island Spit, Cape Point, Hatteras Inlet and South Point Ocracoke, if not otherwise closed due to bird breeding activity, are open to ORV use in the nighttime with the following additional restrictions within those ORV routes/areas:

- All ORVs must be permitted for driving.
- Permits will be accompanied by education about sea turtles, their protection, the rules of night driving, and a phone number to report any violations or specific turtle behavior (nesting, false crawls, etc.).
- In areas open to night driving, 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, from 1 hour after sunset until sunrise, whichever comes first. 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.
- Headlights may only be used when in transit and will be turned off when the vehicle is parked.
- Drivers and pedestrian should not approach turtles or turtle nests closer than 75 feet, and should not aim any lights including flash photography toward adult sea turtles or hatchlings.
- NPS will conduct night monitoring of the specific ORV routes and areas open to night driving, with at least one monitor per ranger district, to identify, record, and monitor nesting females and record false crawls.
- Incentives should be established for beach users to report any turtle activity.

- From XX May – XX September, Specific: Limited ORV Access for Appropriate Night Recreation during Turtle Nesting Season (i.e., park and stay). The following areas are designated as open to limited ORV access for appropriate and stationary night recreation from May XX to September XX, subject to site specific resource closures as needed for bird breeding activity or sea turtle nests; and subject to the terms and conditions of a permit (see next section) and to the overnight vehicle limit indicated in (parentheses):
  - Bodie Island Spit limit – 25 (if not otherwise closed)
  - Cape Point: Vehicle limit – 50 (Access via eastern corridor, if not otherwise closed.)
  - Hatteras Inlet Vehicle limit – 25 (Access via Spur Road, if not otherwise closed.)
  - Ocracoke South Point limit – 25 (Access via designated corridor, if not otherwise closed.)
- The above limits 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 above areas will be accessible by ORV only during daylight hours, 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:
  - Such vehicles must have a special use permit that is in addition to any standard beach access permit or pass.
  - Appropriate recreation would include fishing, stargazing, or other relatively stationary activities.

- Permitted vehicles must arrive at the site no later than one hour after sunset and remain parked within the designated area with headlights off until the beach is cleared by turtle patrol, which shall be ½ hour after sunrise.
- Under rare circumstances, should a "park and stay" 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 night access sites will be designated by NPS law enforcement staff and marked with signage (e.g., carsonite or barricades) that will be maintained by the LE staff. Permittees must park their vehicles only in the designated area. Such areas will be contained and shall prevent vehicles from being spread up or down large sections of beach.
- Pets are prohibited
- 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.
- Drivers and pedestrian should not approach turtles or turtle nests closer than 75 feet, and should not aim any lights including flash photography toward adult sea turtles or hatchlings.
- 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).
- Each vehicle must have a functional portable toilet.
- NPS may impose a limit on the number of nights in a row an individual may obtain a night fishing permit, if it appears that there is routinely more demand for permits than the vehicle limit allows.
- NPS retains the right to not issue night parking permits when weather forecasts dangerous conditions.
- NPS may utilize volunteer park-and-stay site hosts as a management tool to monitor compliance with the permit requirements.

- 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. If there are three (3) or more documented violations of these requirements at a particular site within a 30-day period, all night access to that site will be suspended for a 30 day period. If night access is suspended at a location due to repeated violations, NPS will evaluate apparent causes of non-compliance (is it training? signing? something else?) and take proactive steps to address manageable causes prior to reopening. If, in the judgment of NPS, causes of non-compliance cannot be effectively managed, NPS will not reopen an area to night access until all turtle nests in the area have hatched.

- *ADDITIONAL OPTION:* The NPS may provide an escort for a one-time leaving of the park and stay area each night in one or more of the four points and spits' designated areas at midnight. Such an escort would be a one- time action per night, would not involve escorting any vehicles on the beach after night as defined as one hour after sunset, and would follow appropriate procedures to minimize all light, speed, noise and other measures that might adversely influence turtle nesting behavior.

- September XX – November 14: Based on the location(s) of remaining unhatched sea turtle nests, NPS will designate routes/areas that are reopened to night driving (i.e., night driving will be reopened on routes/areas that do not have unhatched turtle nests). NPS will publish the list of routes/areas open to night driving in a regular and frequency beach access report and will update the list weekly until all turtle nests have hatched. The Park will ensure an appropriate width of 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, especially after Day 55 of incubation.
    - All ORVs must be permitted for night driving (either a special use permit or part of the overall general beach use permit/pass).
    - Permits will be accompanied by education about sea turtles, their protection, the rules of night driving, and a phone number to report any violations or specific turtle behavior (nesting, false crawls, etc.).
    - In areas open to night driving, 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, from 1 hour after sunset until sunrise. Intermittent use of lighting (less than 5 minutes) is limited to handheld flashlights, headlamps or other battery powered lighting devices that cast a one-directional beam of light.
    - Headlights may only be used when in transit and will be turned off when the vehicle is parked.
    - No flash or fixed light photography is allowed of turtles, nests, or hatchlings and any flash photography should be kept some distance (XX m?) from turtles, nests, or hatchlings.
    - Drivers and pedestrian should not approach turtles or turtle nests closer than 75 feet.
    - Flashlights, headlamps, and other low light sources may be used on an intermittent basis.
- As of September 16 if unhatched sea turtle nests remain that block night access to Bodie Island Spit, Cape Point, Hatteras Spit or South Point Ocracoke, NPS may continue to utilize the ORV limited night access special use permit for night procedures described above to allow night access to those locations until all such turtle nests have hatched (NEEDS MORE EXPLANATION).
- 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.
- 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. Provided no other unhatched nests remain in the area, areas will reopen to nighttime driving in accordance with what is published in the weekly beach access report.

- The Superintendent retains the authority under 36 CFR § 1.5 (a) to close all or a portion of a park area to all public use or to a specific use or activity, as needed to protect park resources.

Education and Outreach

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 Cape Hatteras National Seashore.

Research and Knowledge Base

The NPS will commit sufficient resources to the monitoring, science and adaptive management approach to build a detailed, thorough knowledge of turtle management on Cape Hatteras National Seashore and to share that knowledge with others within the state, other Parks, and up and down the Atlantic Seashore.

Volunteer Program

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 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 FWS, 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.

Village Lighting

The NPS, Dare County, Hyde County, and the North Carolina Wildlife Commission with technical assistance from the FWS, will work in good faith to develop a turtle friendly lighting program to reduce the amount of light from outdoor lights associated with residential and commercial structures. The program may include:

- Outreach and education such as homeowner education, homeowner stickers or emblems designating "turtle friendly household," reminder light switches, and other outreach efforts to ensure broad education and participation in lighting reduction efforts.
- A rebate program to provide incentives for the installation of turtle-friendly lighting, potentially funded, at least in part, by state and federal funds.
- A lighting ordinance to promote and encourage the installation of turtle-friendly lighting. The ordinance might include requirements for new construction, timelines for retrofits or renovations, grants, technical assistance, and other means to achieve the end goal.
- Review of any building or other codes that may require stronger or more substantial light on structures than is preferred for turtle resource protection.

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.

Commerical Fishing

Commerical 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.

Adaptive Management

***Caveat*: This section needs to be reviewed by someone with expertise in adaptive management methodology in order to confirm or improve the technical sufficiency of the following proposal. The information that is collected by the Resources Management staff is anecdotal in nature. It can reasonably be used to inform management decisions or to support the need for additional formal research studies. The anecdotal information alone should not be used as the sole basis for making significant changes in management practices. Any significant changes in management should include consultation with recognized experts in the field.**

Objective: To determine the effect of management on nesting rate, hatching success, sea-finding by hatchlings (prevalence of misorientation/disorientation and trapping by obstacles), and proportion of false crawls.

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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. Other resource closures (i.e., a category # 1 or # 2 segment that is closed during the season for resource protection and then it become a category # 3 segment at that time)

Monitor and Document the following information:

1. Turtle species
2. Nest vs. false crawl
3. Dates and times of activities (nest, false crawls, hatching)
4. Location (physical description and GPS location)
5. Management category (ORV, Non-ORV, Resource Area, other Resource Closures, or Experimental) of the nest site at the time it was laid
6. 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
7. Necessary protective measures for nest and hatchlings
8. Information regarding any resource closure violations, predation, hatchling misorientation, trapping by obstacles, or possible "take" incidents
9. Information regarding any post hatching nest excavation and analysis
10. Visitor use in terms of number of visitors using the beach from May 1 to November 15, kinds of use, night use, kinds of night activities, and other appropriate socio-economic data.
11. 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.

Evaluate:

1. Compare the number and proportion of nests, false crawls, hatchling misorientation/disorientation incidents, predation incidents, and hatchling emergence rate that occur in the respective management categories. Document in annual sea turtle report.
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.
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 and NCWRC. (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.)

Adapt:

1. If a 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.

Further Studies to Consider:

1. Design a systematic research study to monitor and determine the effects of night access on sea turtle nesting