From:	Britta Muiznieks
To:	Mike Murray
Cc:	Darrell Echols; Michelle Bogardus; Thayer Broili
Subject:	Pea Island Nest Relocation Procedures
Date:	06/08/2010 03:25 PM
Attachments:	PINWR Turtle Nest Relocation Procedures.doc 20100607 email Muiznieks to Godfrey-Pea Island Nest Relocation Procedures.pdf

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Mike-
Here is a copy of Pea Island's Sea Turtle Nest Relocation Procedures.

PINWR Turtle Nest Relocation Procedures.doc

We spoke with Matthew regarding Pea Island's Nest Relocation Procedures and he requested that I submit a request for comments to him in writing. Pea Island Staff had told him that they were following the NCWRC Handbook. However, they are not following the fundamental rule "management and protection should be undertaken in a manner that will minimize impacts on the natural order of reproduction". If we were to implement Pea Island's Relocation Procedures at the Seashore we would be relocating >95% of our nests. It is easy to come up with protocols for relocating all nests or no nests but it is harder to come up with a relocation protocol that would actually benefit the species. From one year to the next, dunes/swales will form in new locations and disappear in others. Nests laid early in the season may not be affected whereas nests laid later in the season in the same location may be affected by storms. Michelle is working on drafting the Park's current relocation guidelines which will be included in our DEIS comments. One of the first questions that needs to be asked when a nest is discovered is whether or not a nest will be destroyed if left in situ. I wish we had a crystal ball to help us predict what is going to happen at each nest site but unfortunately nest relocation is not an exact science. One thing that is for sure is that some nests that should have been relocated will not get relocated and others that are relocated could have been left in place depending on how conservative or pro-active the nest relocation program is. Matthew did emphasize that the goal should not always be to maximize the number of hatchlings reaching the water as this will have very little effect on the population in the future. One thing that has been speculated is that the number of males in this DPS of breeding age may become a limiting factor which is why we would not want to relocate the majority of our nests to the upper beaches where the nests would be less susceptible to overwash and warmer temperatures and therefore produce fewer males.

I'm attaching the email that I sent to Matthew. He knows that we are on a time crunch and will try to respond in a timely fashion.

20100607 email Muiznieks to Godfrey-Pea Island Nest Relocation Procedures.pdf

That's all I have for now. We'll try to address these issues/concerns in our comments as well.

Britta Muiznieks

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▼ Mike Murray/CAHA/NPS

Mike Murray/CAHA/NPS

05/25/2010 01:16 PM

To Michelle Bogardus/CAHA/NPS@NPS
cc Britta Muiznieks/CAHA/NPS@NPS, Thayer Broili/CAHA/NPS@NPS, Darrell Echols/CAHA/NPS@NPS
Subject DEIS issue

Michelle,

In reading through some of the DEIS comments on turtle nest management, NCWRC writes: "Considerations of nest relocation can be contentious and based on inexact science. To reduce the level of subjectivity in decision making, we recommend the NPS evaluate the applicability of sea turtle nest relocation criteria, similar to those used at Pea Island National Wildlife Refuge, that quantify geomorphic characteristics of beach width, beach slope and distance from mean high tide." In addition, in a recent phone call with Pete Benjamin, he mentioned that CAHA may have some of the same conditions as PINWR (narrow beaches due to perpetuation of the man-made dune ridge) and we may want to consider similar criteria for nest relocation.

Would you please check with someone at Pea Island NWR to see what criteria they use to determine where and when to relocate a turtle nests. Ideally, get a copy of their procedures or any other information that provides the details of how they measure and apply the criteria.

Please provide the information to Thayer, Britta and me, and provide input to Britta/Thayer regarding your opinion of the applicability of the PINWR criteria to CAHA beaches. Would using something similar reduce the subjectivity of nest relocation decisions. Then, on June 10-11, Thayer and Britta will be participating in a meeting to discuss possible changes in the ORV plan and related species management procedures, which will include a review of the turtle nest relocation procedures

Thanks,

Mike Murray
Superintendent
Cape Hatteras NS/ Wright Brothers NMem/ Ft. Raleigh NHS

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Pea Island National Wildlife Refuge
Sea Turtle Nest Relocation Procedures - 2010

Sea turtle nesting activity is quite variable on Pea Island National Wildlife Refuge beaches. The greatest threats to nests are beach erosion and prolonged inundation. Beach erosion rates on Pea Island are considered to be relatively high, sometimes averaging 27.4 ft/yr. It is not unusual to have flooding and ocean overwash with spring tides and a moderate northeast wind. Because of high erosion rates and due to extensive overwash, it is often necessary to relocate turtle nests on refuge beaches. These turtle nest relocation procedures reflect an effort to integrate coastal process factors as they affect the probability of survival for a nest. These guidelines are not optional and will be strictly adhered to when making a determination to leave or relocate a nest:

I. Is the beach width from toe-of-dune to the mean high tide less than 50 feet?
   A. Yes – Go to II
   B. No – Go to III

II. Is the slope of the beach face greater than 4^{o}?
   A. Yes - Nest will be relocated to the safe area.
   B. No – Go to III

III. Is the nest located at least 30 feet above the high tide line?
   A. Yes - Go to IV.
   B. No - Nest will be relocated to the safe area

IV. Is the nest located in one of the identified “hot spots” as shown on the attached map?
(i.e. - “Groin Area”, “Canal Zone”, “Old Sandbag Area*”, “S-Curves”, “Pipeline Dredge Disposal Area”)
   A. Yes - Nest will be relocated to the safe area*.
   B. No - Go to V.

* Nests occurring in the Old Sandbag Area and Pipeline Dredge Disposal Area can remain in place if allowable under other Sections and if they occur at a time so that hatching will occur before dredging mobilization.

V. Is the nest located in an area with one or more of the following conditions:
   - In an area where the dune was reconstructed as a result of overwash within the last 12 months?
   - In an area where dunes have been undercut by water or at the base of a nearly-vertical dune face?
   - In a low, “slough” or intertidal pool area landward of the ocean berm that could result in a flooded pool?
   - Located in an area adjacent to or near a scarp formation?
   - Located westward of the primary dune system?
   A. Yes - Nest will be relocated to the safe area.
   B. No - Nest will be marked in place and will not be moved.

A decision to relocate a nest requires moving the nest to the previously identified “safe area”. The “safe area” shall be identified and approved by the Refuge Biologist or designee. All nests needing to be relocated shall be relocated to the established safe area.

After a decision is made to leave a nest in place that decision is final. In most instances a nest will not be relocated at a later date due to natural processes/events. Certain mitigating circumstances may result in reconsidering this decision in some instances.

Procedures for nest relocation will follow those developed by the Refuge Biologist and those described in the publication entitled “Handbook for Sea Turtle Volunteers in North Carolina” by the North Carolina Wildlife Resources Commission (NCWRC). Nests will be moved to an area where potential for beach erosion or prolonged flooding is lowest as determined by best available science and sound professional judgment.

Nests relocated to the “safe area” will be placed in various sites across the beach gradient at least 50 horizontal feet above the high tide line. Nests will be placed a minimum of 25 feet apart. Nest protection procedures will follow the NCWRC volunteer handbook for nest protection guidelines. Each nest will be marked with wooden stakes on two sides and a pair of stakes on top of the dune. “Swing-tie” distances between the nest stakes and dune stakes will be recorded for future nest relocation. The same location technique will be used for nests that are left in place.

All nest sites shall be properly posted as closed areas for a minimum distance of 50 feet around the nest where possible. Pedestrian access must be considered when determining this distance but shall not be the determining factor for nest protection. Symbolic fencing shall be used to further restrict access to the nest site. Fencing can be rope or string marked with brightly colored flagging tape.

If you have questions or comments, contact Dennis Stewart, Refuge Biologist at (252) 473-1131 XT 231 or dennis_stewart@fws.gov.

From:	Britta Muiznieks
To:	matt.godfrey@ncwildlife.org
cc:	Michelle Bogardus; Tyler Bogardus; Doug McGee
Subject:	Pea Island Nest Relocation Procedures
Date:	06/07/2010 05:58 PM

Matthew-
We recently received a copy of Pea Island's Nest Relocation Procedures and do not feel they are in compliance with the NCWRC Handbook. We (e. g. resource management staff at CAHA) have been asked to look at them to see whether we might want to consider adopting these procedures/ guidelines at Cape Hatteras National Seashore. Do you know where these procedures originated from? For example, how did they determine that relocation of nests was necessary for nests with a slope of the beach face greater 4 degrees? Do you agree with their decision to relocate nests if beach width from toe-of-dune to the mean high tide is less than 50 feet? What would be your major concerns if we were to implement Pea Island's procedures as written at CAHA? Any suggestions on how to modify these guidelines to reduce the number of relocated nests to a more appropriate level? Are you aware of any other guidelines out there that could help us determine when to relocate nests that may be more appropriate to apply at CAHA. My interpretation of these guidelines is that if we were to implement them on the Seashore (as written), it would probably result in a relocation of >95% of all our nests and essentially result in a hatchery situation. Any suggestions on how we should modify our current relocation strategy on the Seashore?

Thoughts? Recommendations?

Thanks in advance,
Britta

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