NEGOTIATED RULEMAKING COMMITTEE 13th Regulatory Negotiation Meeting Wright Brothers Memorial, Kill Devil Hills, NC February 26-27, 2008

Draft Final Agenda

Objectives

- Discuss and clarify next steps of possible outcomes of final meeting
- Learn about and understand work of Integration Group
- Consensus on a complete package or on as many issues as possible
- Focus on proposals and offers (not comments or criticism)
- Decide on Committee product, if any
- Provide opportunity for public comment
- Complete work and close-down the Committee respectfully

Thursday, February 26

8:00	Gathering and Coffee
8:30	Welcome to All and Opening of the Meeting Mike Murray, NPS, Designated Federal Official (DFO)
8:40	Review Meeting Objectives and Agenda Facilitators and Agenda Planning Subcommittee
8:50	Brief Updates Since the Last Meeting and Approval of Meeting Summaries
9:00	 Discussion of Possible Committee Outcomes (i.e. Section 6 of Groundrules) Full consensus Partial consensus

- No consensus
- 9:45 Presentation of Integration Group's Work
- 10:30 Break
- 10:45 Discussion of Substantive Issues (caucus as needed)
 - Routes and Areas
 - Permits and Fees
 - ORVs & Turtle Management
 - ORVs & Natural Resources Management (including pre-nesting closures)
 - Villages
 - Vehicle Operations and Characteristics
 - ORV and Pedestrian Safety
 - Park Funding
 - Other (e.g. periodic review, carrying capacity, etc.)

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12:00 Public Comment

(up to 4 minutes per person, with 5 minutes total at the end of the public session for a brief response from Committee members to the public comments)

Specific comments are requested on the following --

- Routes and Areas or other issues addressed by the Committee
- ORV management what's important going forward?
- 12:45 Working Lunch (provided for principals and alternates)
- 1:30 Continue Discussion of Substantive Issues (caucus as needed)
- 3:15 Break

3:30 Evaluate Progress on a Package

- What's outstanding for a complete package?
- Keep negotiating?
- Stop negotiating and discuss closure?
- 5:30 Adjourn or Break for Dinner
- 6:45 Continue Discussions as Needed???
- 10:00 Adjourn (*if meeting continued after dinner*)

Friday, February 27

- 8:00 Gathering and Coffee
- 8:30 Agenda Review (revise as needed)
- 8:35 Evaluate Progress on a Package (see above)
- 8:45 Continue Discussion of Substantive Issues (caucus as needed)
- 10:45 Break

12:00 Public Comment

(up to 4 minutes per person, with 5 minutes total at the end of the public session for a brief response from Committee members to the public comments)

Specific comments are requested on the following --

- Routes and Areas or other issues addressed by the Committee
- ORV management -- what's important going forward?
- 12:45 Working Lunch (provided for principals and alternates)
- 1:30 Continue Discussion of Substantive Issues (caucus as needed)
- 3:15 Break

3:30 Committee Closure

- Committee product and next steps?
- NPS schedule

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- Closing remarks and acknowledgements
- 5:00 Adjourn or Break for Dinner
- 6:30 Continue Discussions as Needed???
- 10:00 Adjourn *(if meeting continued after dinner)*

Negotiated Rulemaking Advisory Committee for Off-Road Vehicle Management at Cape Hatteras National Seashore

Final Groundrules

I. Purpose and Enabling Statement

The Committee's function is to assist directly in the development of special regulations for management of off-road vehicles (ORVs) at Cape Hatteras National Seashore (which is the name used by the National Park Service, and for purposes of these Groundrules is referred to as the Seashore).

The Cape Hatteras National Seashore also is referred to as Cape Hatteras National Seashore Recreational Area in the United States Code. The enabling act establishing Cape Hatteras National Seashore was amended in 1940 to substitute the name Cape Hatteras National Seashore Recreational Area for Cape Hatteras National Seashore and added the proviso permitting hunting. 16 U.S.C. §459a-1 reads in part as follows: "... And provided further, That the legal residents of villages...shall have the right to earn a livelihood by fishing within the boundaries designated by the Secretary of the Interior, subject to such rules and regulations as the said Secretary may deem necessary in order to protect the area for recreational use... And provided further, That hunting shall be permitted, under rules and regulations as may be prescribed by the Secretary of the Interior in conformity with the Migratory Bird Treaty Act...." 16 U.S.C. § 459a-2 provides that "Except for certain portions of the area, deemed to be especially adaptable for recreational uses, particularly swimming, boating, sailing, fishing, and other recreational activities of similar nature, which shall be developed for such uses as needed, the said area shall be permanently reserved as a primitive wilderness and no development of the project or plan for the convenience of visitors shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing in this area...." The Committee acknowledges that the designation Cape Hatteras National Seashore or Cape Hatteras National Seashore Recreational Area has no legal or practical consequence related to the Negotiated Rulemaking.

Executive Order 11644, as amended by Executive Order 11989, requires certain Federal agencies to publish regulations that provide for administrative designation of the specific areas and trails on which ORV use may be permitted. In response, the National Park Service (NPS) published a general regulation at 36 CFR § 4.10, which provides that each park that designates routes and areas for ORV use must do so by promulgating a special regulation specific to that park. It also provides that the designation of routes and areas shall comply with Executive Order 11644, and 36 CFR § 1.5 regarding closures. The Committee will negotiate to reach consensus on

Cape Hatteras Negotiated Rulemaking Advisory Committee Groundrules Adopted by the Committee on January 4, 2008

concepts and language to be used as the basis for a proposed rule, to be published by the NPS in the *Federal Register*, governing ORV use at the Seashore. The duties of the Committee are solely advisory.

II. Objectives and Scope of Committee Activities

The Committee will serve as an integral part in the NPS development of a proposed special regulation for ORV management at the Seashore. With the participation of knowledgeable affected parties, the NPS expects to develop a practical approach to addressing ORV management and visitor experience issues related to: 1) access to beach areas for fishing and other recreational activities; 2) provision of a variety of visitor experiences on the beach including both ORV and non-ORV experiences; 3) public safety; and, 4) protection of beach environments and their associated plant and wildlife communities.¹

Within the constraints of NPS statutory and policy responsibilities to conserve natural and cultural resources and values and to provide for their enjoyment in a manner that will leave them unimpaired for the enjoyment of future generations, the Committee will evaluate and address key issues possibly including, but not limited to: 1) the designation of specific ORV routes and areas; 2) the periods of the year and times of day during which ORVs may be operated on those routes and areas; 3) other conditions that govern the operation of ORVs at the Seashore; and, 4) other management options for accessing the beach (e.g., walkovers and shuttles). Special ORV regulations for the Seashore would identify criteria used to designate appropriate ORV use areas and routes and would establish consistent ORV management practices and procedures that include the ability to adjust ORV management in response to changes in the Seashore's dynamic physical and biological environment.

The primary focus of the Committee's work shall be developing a consensus recommendation on the special regulation. The Committee may also provide input, though not necessarily a consensus recommendation, on related matters. The Charter states the Committee may provide input on "aspects of protected species management that may affect or be affected by ORV management and that are within the scope of the draft ORV Management Plan/Environmental Impact Statement being prepared concurrently with the proposed special regulations" or that directly

¹ The Committee notes that other recreational activities include, but are not limited to: beach walking, birding, dog walking, horseback riding, kayaking, kite boarding, paddle boarding, photography, picnicking, sailing, shelling, stargazing, sunbathing, surfing, swimming, volleyball, wildlife viewing and wind surfing. The Committee also notes there are numerous active and passive uses of the beach and the beach may be used everyday, day and night. The foregoing list is intended to be illustrative, and not a complete list, of all recreational activities on the beach.

Cape Hatteras Negotiated Rulemaking Advisory Committee Groundrules Adopted by the Committee on January 4, 2008

relate to the implementation of the Seashore's Interim Protected Species Management Strategy.

With respect to the parallel NEPA process NPS is conducting, information and input from the Committee may be incorporated; however, the content of NEPA documents and the NEPA process are the sole responsibility of the NPS. In this sense, rule making activities of the Committee and the conduct of the NEPA process are complementary rather than formally collaborative, with information flow between the two processes encouraged at appropriate points.

III. Negotiation Parameters

- A. The focus and starting point of the negotiated rulemaking needs to be on *how* to manage ORV use on CAHA consistent with all applicable laws, regulations, orders, and policies, rather than *if* there will be any ORV use on the beach at CAHA. The proposed regulation developed by the Negotiated Rulemaking Committee (Committee) and recommended to NPS must: (a) be consistent with and comply with all applicable laws, regulations, Executive Orders, and NPS-wide policies, (b) provide for a diversity of visitor experience, (c) include enforceable mechanisms to manage ORV use; and (d) be implementable.
- B. To the greatest extent possible, the Committee should build a new management approach to ORV use "from the ground up" that is not necessarily limited to the current Interim Protected Species Management Strategy or any other earlier management approaches. To meet the requirements of the National Environmental Policy Act (NEPA) and to generate new approaches and potential solutions, participating organizations and their representatives need to be willing to explore a range of management options and scenarios, even if they at least initially find those options unappealing or highly unlikely to be acceptable to their constituents.
- C. Management of ORV use at Pea Island National Wildlife Refuge (PINWR) will not be included in the negotiated rulemaking process, as the Refuge is under exclusive administration of the USFWS rather than NPS and under a different set of laws and regulations [16 USC § 668dd(a)(1)].²

² The Committee acknowledges that for a number of years ORVs were allowed on PINWR, however those miles have been lost to ORV use. While management of that area is outside the scope of the plan/EIS and regulatory negotiation, the Committee takes official notice of this reduction in the original area open for access by ORV. The Committee also notes that the USFWS has prohibited off-road driving within the Refuge since the mid-1970's.

Cape Hatteras Negotiated Rulemaking Advisory Committee Groundrules Adopted by the Committee on January 4, 2008

IV. Participation

- A. The Committee consists of individuals representing interests, organizations or stakeholder groups. Committee members are responsible for expressing the views of their constituency rather than their personal views.
- B. Each organization or stakeholder group shall be represented ("hold a seat") by a principal and may also be represented, in the absence of the principal, by an alternate. As used in these groundrules, the term "members" includes principals and alternates. The Secretary of the Interior must appoint all members. In the absence of the principal, an alternate will serve as a representative for the member organization or group and assumes all the rights and responsibilities of the member at the table.
- C. The members of the Committee are considered those members (principals <u>or</u> alternates) who are present at the time of deliberation and decision. Consensus is determined by those members (be they the principal <u>or</u> the alternate per "seat") present for the decision. Consensus reached during the presence of an alternate and in the absence of a principal will be binding upon the principal.
- D. Alternates have an important and valuable role in the process. They should stay abreast of all discussions, issues, and information and be able to represent fully their principal in that principal's absence. They may "exchange" seats with their principal, as appropriate, when the alternate has a unique knowledge or perspective to share. Alternates may also participate actively on subcommittees created by the Committee.
- E. The principal and alternate shall represent an organization or stakeholder group for the purposes of deliberating, reaching consensus, and obtaining ratification of consensus decisions. As ratification is an important step in completing the Committee's work, principals must keep the Committee apprised of the method for seeking ratification from their respective organizations or stakeholder group. The facilitators will work with the principals to ensure that ratification can be accomplished within the Committee's schedule.

V. Decision Making

A. The Committee will operate by consensus, which the Committee defines as unanimous concurrence of the principals, or in the absence of the principal, his or her alternate. Members may also "abstain" or "stand aside" and not offer their consent, but refrain from blocking agreement and will thus also

Cape Hatteras Negotiated Rulemaking Advisory Committee Groundrules Adopted by the Committee on January 4, 2008

refrain from future negative comment or action on the consensus. Abstaining/standing aside members shall not be counted in determining if consensus has been reached.

- B. Members should not block or withhold consensus unless they have serious reservations with the approach or solution that is proposed for consensus. Consent means that members can at least "accept," however reluctantly, the package agreement that emerges.
- C. If both the principal and the alternate are absent from a meeting in which consensus will be deliberated or decided, the absences will be equivalent to not dissenting.
- D. If representatives disagree with the approach or solution proposed, they should make every effort to offer an alternative satisfactory to all members.
- E. All consensus agreements reached during the negotiations will be assumed to be tentative agreements until members of the Committee reach final agreement. Once final consensus is achieved, Committee members may not thereafter withdraw their consensus.

VI. Agreement

- A. The goal of the Committee is to develop a Consensus Agreement Report that reflects a final consensus by the Committee on the concepts and language to be used as the basis for a proposed special regulation.
- B. If the Committee reaches consensus as defined in V.A. above, at the conclusion of the negotiations, the Committee shall transmit to NPS the Report containing the concepts and language to be used as the basis for a proposed special regulation. NPS will use this Report as the basis for its notice of proposed rulemaking. Prior to submitting a proposed special regulation for federal review approval, and publication in the <u>Federal Register</u>, NPS will circulate a draft to the Committee to check for consistency with the report. The facilitators will be available to work with the Committee to help resolve any differences of opinion about consistency. If informal discussion does not resolve the differences, the Committee may be reconvened to resolve outstanding issues.
- C. If NPS or DOI alter the proposed special regulation in its final issuance after being checked for consistency as in VI.B. above, Committee members may comment positively or negatively on those particular changes.

- D. After the Committee concurs that the language of the proposed rule is consistent with the Consensus Agreement, the National Park Service will submit the proposed rule for review, federal approval, and publication in the <u>Federal Register</u>. If possible, public review for the required NEPA draft Environmental Impact Statement will be concurrent with publication of the proposed rule for public comment. If a final consensus is reached on all issues, NPS will identify the Consensus Agreement as the preferred alternative in the NEPA process.
- E. Committee member organizations and their representatives will refrain from opposing or commenting negatively on the consensus-based language during the rulemaking process and any associated processes and will encourage that their constituents do the same.
- F. If the Committee does not reach consensus on a proposed rule, Committee members will explore the basis of the disagreement(s), and the associated reasons for the differences of opinion, and will discuss what if anything to report to NPS about the Committee's efforts. As envisioned by the Negotiated Rulemaking Act, the Committee, through the facilitators, may transmit to NPS a report specifying any areas in which the Committee reached agreement, as well as the explanation for the disagreements, a description of the interests that must be satisfied to reach an agreement, and if possible, ways to address the differences. If a non-consensus report is submitted to NPS, and as permitted by the Negotiated Rulemaking Act, any Committee member may include as an addendum to the report additional information, recommendations, or materials.
- G. If the Committee reaches final consensus on some but not all of the issues, NPS will, to the extent possible, include those areas of consensus in the proposed rule and duly consider the dialogue and proceedings generated by the negotiated rulemaking process. Committee member organizations and their representatives may oppose or comment negatively on those aspects of the proposed rule that are not based on a final consensus.
- H. If a final consensus is not reached on all issues, NPS will endeavor to incorporate all areas of consensus into the preferred alternative developed by the NPS to the degree they are compatible with other elements of the preferred alternative.
- I. Stakeholders should note that final, formal rulemaking requires review and approval by various federal entities that are beyond the authority of the National Park Service. These other government entities include the Office of Management and Budget, the Fish and Wildlife Service the Secretary of the Interior, and the President.

VII. Committee Meetings

- A. The negotiations will be conducted in accordance with the Federal Advisory Committee Act (FACA).
- B. All meetings of the full Committee will be announced in the <u>Federal Register</u> prior to the meeting and will be open to the public. Brief opportunities for oral public comment will be provided at each meeting. The Committee is not expected to respond to these comments during the oral public comment period. The time and manner of such comments shall be as determined by the facilitators. Members of the public will be permitted to file written comments to the Committee before or after meetings. Comments provided to the Committee will become part of the public record.
- C. Summaries of Committee meetings will be prepared by the facilitators and, after review and approval by the Committee, will be made available to the public. The summaries will identify points of tentative agreement and final agreement and generally be written without attribution. The summaries are not intended to be transcripts or detailed meeting minutes, but summaries of key points, issues, and ideas.
- D. Members may request of the facilitators caucuses by and among subgroups of Committee members for the purpose of discussion at any time. The facilitators also may request caucuses. No decisions, however, can be reached outside of full and public Committee deliberations.
- E. The Committee, in consultation with the DFO, may form subcommittees or work groups to advance discussion, generate options, and develop preliminary proposals. Subcommittees or work groups must be created by the full Committee, have a clear charge, and ensure participation of a diversity of interests. Any subcommittee or work group is not a decision body. Alternates may participate actively in subcommittees and workgroups. Non-Committee members may participate on subcommittees or workgroups as determined by the full Committee.
- F. The facilitators will be responsible for developing an agenda for all meetings of the Committee and the agenda will be distributed ahead of time. This agenda will be developed in consultation with the Committee and under FACA must be approved by the DFO.
- G. The Committee, in consultation with the DFO, may accept technical assistance from representatives of other organizations. The Committee by

consensus may also seek technical assistance from its members' own organizations. Areas in which technical assistance may be requested could include beach driving etiquette and outreach, pedestrian access, handicapped access, and safety. Technical advisors have no authority to make decisions on behalf of the Committee, nor can they report directly to the NPS.

VIII. Safeguards for Members and Representatives on the Committee

- A. Any member of the Committee may withdraw from the negotiations at any time by notifying the DFO in writing.
- B. All members must act in good faith in all aspects of these negotiations. Members agree that specific offers made in open and frank problem-solving conversations will not be used against any other member in future litigation or public relations. Good faith requires that individuals not represent their own personal or organization's views as views of the entire Committee, and that the views and opinions they express in the Committee deliberations are consistent with the views they express in other forums. Members and alternates understand that a decision to take legal, political or media action may seriously compromise negotiations.
- C. Participating organizations and their representatives commit to making the negotiated rulemaking process the primary and central focus of their efforts to address issues related to ORV use on the Seashore and to voluntarily curtail using other means to influence the proposed regulations during the negotiated rulemaking process. This does not mean participating organizations are relinquishing or waiving any legal rights. Principals and alternates understand that a decision to take legal, political or media action may seriously compromise good faith negotiations.
- D. Members commit to the principles of decency, civility, and tolerance. Parties must be willing to envision and shape a future for all users and people interested in the Seashore, including descendents of families living on the Outer Banks when the Seashore was established, current property owners and visitors, and those that care about the accessibility, ecology, or preservation of the national seashore and national parks. Parties also must be willing to accept there are different views (locally, regionally, and nationally) and the different stakeholders each have a legitimate interest and right to be part of determining the solutions. Committee representatives must exercise leadership within their respective constituencies to foster a climate of joint problem solving on the Committee and publicly, to keep their constituencies informed, and to ensure their constituents support rather than undermine the process.

- E. Committee members will not attribute statements to others involved in this negotiated rulemaking, seek to present or represent the views or position of other members or alternates, nor attempt to speak on behalf of the Committee as a whole in or to the media. "Media" for these purposes includes the press, television and radio, websites, and any other public information distribution mechanism. Committee members will abide by these groundrules in all communications during the negotiated rulemaking process in and out of Committee meetings. The Committee, in consultation with the DFO, may appoint a media point of contact, if it so desires.
- F. NPS or the Committee, with the facilitators, will periodically review and assess the Committee's progress to determine if the process is meeting their needs and the interests of the participants.
- G. The Committee, NPS and the facilitators will enforce these groundrules.
 - i. Personal attacks, name calling, and other such negative behaviors will be addressed immediately, either privately or publicly, by Committee members and the facilitators.
 - ii. The Committee may recommend to the DFO sanctions for violations of these groundrules.
 - iii. Poor attendance, lack of participation, not participating in good faith, or other significant violations of these ground rules are grounds for a decision by the DFO to recommend to the Secretary of the Interior that a member be removed from the Committee. If the principal is removed, that seat will be filled by the alternate. In the case that no alternate exists or that both the principal and alternate have been removed, the NPS will make every effort to fill the seat to represent that interest within the FACA approval process for membership.
 - iv. If a member does not abide by the provisions of
 - (a) Section VI.E. (not commenting negatively on areas of final consensus),
 - (b) Section VIII.D. (not attributing statements to others, etc.),
 - (c) Section IX.B, third bullet (personal attacks), or
 - (d) Section IX.B, last bullet (not sharing relevant information)

NPS, after consultation with the facilitators, will record this "breach" of these groundrules in writing, post it on the project website, include it in the administrative record, distribute it to all Committee members

and alternates for their use as they see fit, including use in any formal submittals to a court

IX. Additional Roles and Responsibilities of Representatives consistent with the Committee Charter

- A. Members on the Committee agree to the following.
 - Keep their constituencies informed about the Committee's deliberations and to actively seek their input.
 - Represent the interests and concerns of their organizations, and constituents as accurately and thoroughly as possible, and work to ensure that any agreement developed by the Committee is acceptable to their organization.
 - Arrive at the meetings prepared to discuss the issues on the agenda, having reviewed the documents distributed in advance.
 - Strive throughout the process to bridge gaps in understanding, to seek resolution of differences, and to pursue the goal of achieving consensus on the content of the regulations under discussion.
 - Make a good faith effort to participate in all scheduled meetings or activities. If a member is not able to attend a given meeting, his or her designated alternate shall participate in the member's absence. Poor attendance may lead to a recommendation by the NPS to the Secretary of the Interior that a member be dismissed from the Committee.
- B. In order to facilitate an open and collaborative discussion, the participants in this negotiated rulemaking also agree to abide by the following rules (these expectations also apply to attendees of Committee meetings, subcommittees, and workgroups).
 - Only one person will speak at a time and no one will interrupt when another person is speaking.
 - Each person will express his or her own views his or her organization's and constituents' views, rather than speaking for other Committee participants.
 - Each person will refrain from making personal attacks, name calling, distributing personal or inaccurate information about other participants, and other such negative behaviors.

- Each person will make every effort to stay on track with the agenda, and avoid grandstanding and digressions in order to move the negotiations forward.
- Committee members will share all relevant information with other Committee members in a timely manner. Members and alternates understand that a decision to withhold or not share key information in a timely manner may seriously compromise negotiations.

X. Role of the Facilitators

- A. The facilitators will serve at the discretion of the full Committee. The facilitators will be responsible for helping to ensure that the process runs smoothly, developing meeting agendas, preparing and distributing draft and final summaries, generating draft agreements, and helping the parties resolve their differences and achieve consensus on the issues to be addressed by the Committee.
- B. The facilitators will be available, to the extent schedule and budget allow, to facilitate Committee sessions, caucuses, subcommittees and work groups.
- C. The facilitators will be available to consult confidentially with Committee participants during or between meetings. Facilitators, if asked, are required to hold confidences even if that means withholding information that the facilitators prefer would be made available to the full group. Confidentiality protections do not extend to threats or reports of criminal action.
- D. The facilitators may engage in shuttle diplomacy among various parties during the negotiation. Within the bounds of the Negotiated Rulemaking Act and the FACA, these deliberations may be conducted in confidence.
- E. The facilitators have no decisionmaking authority and cannot impose any solution, settlement, or agreement among any or all of the parties.
- F. The facilitators will abide by the Ethical Standards of the Association of Conflict Resolution. In part, these standards require that: "The neutral must maintain impartiality toward all parties. Impartiality means freedom from favoritism or bias either by word or by action and a commitment to serve all parties as opposed to a single party."
- G. Parties will express any concerns about the facilitator' role or action: first, to the facilitators directly; or, as needed to: 1) the U.S. Institute for Environmental Conflict Resolution; and/or, 2) the NPS.

XI. Consistency

These groundrules are intended to be consistent with the Committee Charter and all applicable laws and regulations. In the event of any inconsistency or conflict, the statute, regulation, or Charter shall govern.

Overview of Recreational Use maps.

Here is a quick overview of the maps and their purpose as well as the recreational activities identified on them. (A more comprehensive written document, regarding each recreational activity, can still being compiled.)

Purpose:

The purpose of the maps/overview is to demonstrate the desired recreational experiences and needs sought by the visiting public and the relevance of ORV accessibility. Each of these areas contains essential elements, such as physical attributes, and the obvious need for ORV accessibility in order for visitors to enjoy the sought-out experience.

<u>Criteria</u>

These criteria are vital for the desired visitor experiences which have been traditionally expected and are a part of what makes our Seashore uniquely attractive. (Desired visitor experience is not limited to those out of town visitors on whom our economy is almost completely dependent upon, but also includes the residents that reside within the boundaries of the Seashore, the most frequent visitors to the Seashore.)

Visitor experience will be significantly impaired if access is denied to the majority of those whose seek out these recreational opportunities. Impaired visitor experience results in less visitation which results in economic devastation to the eight villages located within the boundaries of the Seashore itself, along with broader reaching impacts to neighboring towns, local and state governments. Negotiated Rulemaking is a NEPA process which requires economic impact to be taken into consideration. The final plan must take into consideration economic, historical and logistical use in order to viable

The purpose of the Executive Order 11644 was to "...establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands and to minimize conflicts among the various uses of those lands". It was not intended to be used to prevent the public from recreating on and enjoying the use of public lands.

It is imperative that ORV use be recognized for exactly what it is: A historical means of access to an area especially attractive for recreational opportunities. The use of an ORV is not considered a recreational activity in this Seashore. These recreational opportunities sought, allow the public to enjoy the Seashore's resources and values. Denying access to the essential elements required for the recreational opportunities, many of those are outlined in the Enabling Legislation (1), denies the Seashore's current visitors the opportunity to enjoy the park's resources and values (2), it also certainly denies future generations the opportunity! This is inconsistent with the Park Services Management Policies. (3) The recreational activities outlined below are activities which <u>do not</u> cause harm or impairment to the parks resources or values, nor are there no "unacceptable impacts" (4) associated with them. All of these recreational activities are historical and traditional uses and meet the requirements outlined in the U.S.C. Code. (5)

Birdwatching/Wildlife Viewing

Birding opportunities abound within the Seashore; however viewing shorebirds can only take place at the shore, where the birds are present. A wide variety of shorebirds is preferable. The areas denoted are the maps have been identified with the assistance of the Cape Hatteras Bird Club, in particular Neal and Pat Moore and *"The North Carolina Birding Trail"* publication, which includes input from David Allen, NCWRC and Walker Golder from Audubon.

Fishing

Access to the shoreline is first and foremost when it comes to essential elements required in order to participate in this recreational opportunity. Second is the off-shore structure, current, etc. associated with that shoreline. Surf fishing opportunities abound, but offshore structure, etc. dictate where the best areas are for fishing especially when one is targeting specific types of fish. One must keep in mind that fish are migratory and do not necessarily remain in one location. Many visitors target only those fish that are edible, while many others fish solely for sport and practice catch and release. Large Red Drum, the most targeted game fish from the surf, has to be released by law. The majority of those who surf fish target both types of fish. No matter the preference, access to they key fishing areas is vital to the enjoyment of surf fishing. There are at least 9 surf fishing tournaments held with in the Seashore each year and bring much needed business during the shoulder seasons.

The areas denoted on the map were identified by members of the Cape Hatteras Anglers Club, and with input from local fishing enthusiasts and tackle shop employees...

It should be noted that The Dare County Parks and Recreation Department also offers surf fishing camps during the summer to our youth and accesses ORV areas as well as piers. Without ORV access there would be no place for them to park in order to teach our children about fishing!

Horseback riding

Currently access to ORV areas is vital to equine interests, due to current park policy limiting horses to ORV areas. While recognizing that the local management policy may be modified to permit horses in non-ORV areas, the accessibility of the non-ORV areas is still critical for those trying access the beach via horseback. Not all local horse owners have trailers to transport their horses to other areas in which to ride and it is time consuming and more costly. Allowing horses in areas that are seasonally closed in front of the villages is dangerous for both the public and the horses, and will cause user conflicts. The largest equestrian user on Hatteras Island accesses the beach via trails in the woods near her house and has a very successful established riding business that provides a unique visitor experience, via horseback to hundreds of park visitors every year. She cannot relocate this business. Many of the horse owners volunteer their time and horses to our community by participating in school events, parades, girl scouts, therapeutic riding and working with disadvantaged students. The areas denoted on the maps were identified by Equine Adventures, local horse owners and equestrian interests from Hyde County, Mainland Dare County and Currituck County.

Shelling

Shelling/beachcombing is a huge attraction, especially for those who cannot partake in more strenuous physical activities. In 1965, the Scotch Bonnet, was named the state shell of North Carolina. Scotch Bonnet shells wash ashore in abundance on North Carolina's Outer Banks, because the Gulf Stream moves tropical waters close to the North Carolina coast. After storms, hundreds of Scotch Bonnets may be washed ashore on the Outer banks especially between Cape Hatteras and Cape Lookout due to the close proximity of the Gulf Stream to that section of the coast. They are rare elsewhere in the state. Seeking Scotch Bonnets, is an attraction which draws many shell enthusiasts to our Seashore, along with the wide variety of other shells to be found. Shell beds appear and disappear from week to week. ORV access is vital to seeking out shell beds, the points and spits as well as the South facing beach are prime shelling areas.

This info denoted on the maps were identified by Dewey Parr, native resident, business owner and local shell authority- <u>www.outerbanksshells.com</u> as well as information gathered from the North Carolina Shelling Club and from VisitNC.com.

Sea Glass collecting has emerged as the newest form of beachcombing and the North American Sea Glass Association (NASGA) has come into being due to the popularity of Sea Glass collecting. *By The Sea Jewelry* is owned by Linda Jereb who has lived in the Outer Banks for over 20 years. She was one of the founding members of NASGA. One of the current board members, Richard LaMotte, author of *Pure Sea Glass* has visited the Outer Banks numerous times, for book signings and has given lectures about Sea Glass at the NC Aquarium in Manteo.

NASGA also works closely with The American Shore & Beach Preservation Association and recognizes that the shores, beaches and other coastal resources of America provide important quality-of-life assets within the reach of the largest possible number of people in accordance with the ideals of a democratic nation. We pursue this mission by means of:

- Protecting and improving healthy and diverse recreational opportunities.
- Managing, protecting and enhancing environmental resources.
- Encouraging responsible and sustainable economic development.
- Preserving aesthetic values.
- Reducing damage from natural hazards and human activities.
- Mitigating human impacts to natural processes.

This Association is dedicated to preserving, protecting and enhancing the beaches, shores and other coastal resources of America.

Swimming

Where there is water, visitors want to swim. Areas in front of villages and campgrounds have a higher seasonal swimming use due to easy access by those renting Oceanside homes, motel rooms or campgrounds, not necessarily due to preference. Public parking is very limited and/or non existent for visitors who are not renting an Oceanside house. The maps highlight the most desirable and safest areas for swimming due to off-shore structure, water temperature and the presence of lifeguards. It should be noted that despite a lifeguarded beach designation on the map for the Village of Buxton, seldom in the past 8 years has there actually been a lifeguard on duty here. It is sporadic and one year the lifeguard quit mid-season and was never replaced. The areas denoted on the maps were identified by the NPS maps designating lifeguarded beaches and by Judy Swartwood based on her experience with the visiting public, listening the needs and desires of the Mothers like herself of young children and her own experiences in seeking safe areas for her son to swim...

Watersports

Water: without it, there are no water sports! Again, access to the shoreline is the essential element needed. Access to the areas of shoreline that provide the best recreational opportunities for watersports is critical. The watersports most enjoyed by visitors to our Seashore include kayaking, kite boarding, paddle boarding, skim boarding, surfing and windsurfing. Each of these activities are dependent on shoreline access and have varying requirements based on wind direction, open water, water depths, consistent wave action, curved shoreline. Shoreline access is especially vital in seeking these areas that are primarily dependent on off-shore wind direction and speed. Watersports competitions also draw large numbers of out of town visitors. These areas denoted on the maps were identified by the local experts representing the Watersports Industry, Trip Foreman and Matt Nuzzo

CRITERIA

(1) The Cape Hatteras National Seashore Enabling legislation The Cape Hatteras National Seashore Enabling legislation(1. (Aug. 17, 1937, ch. 687, Sec. 4, 50 Stat. 670; June 29,1940, ch. 459, Sec. 1, 54 Stat. 702; Mar. 6, 1946, ch. 50, 60 Stat. 32.) emphases recreational opportunities for visitors to the Seashore, "except for certain portions of the area, deemed to be especially adaptable for recreational uses, particularly swimming, boating, sailing, fishing, and other recreational activities of similar nature, which shall be developed for such uses as needed, the said area shall be permanently reserved as a primitive wilderness and no development of the project or plan for the convenience of visitors shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing in this area..."

(2) (from NPS Management policies) "1.4.6 What Constitutes Park Resources and Values" "The "park resources and values" that are subject to the No-impairment standard include:

* the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural sound scapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;

* appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;

* the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and

* any additional attributes encompassed by the specific values and purposes for which the park was established"

Enjoyment of Park Resources and Values: "The fundamental purpose of all parks also includes <u>providing for the enjoyment of park resources and values by the people of the United States</u>. The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress, recognizing that the enjoyment by future generations of the national parks can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. This is how courts have consistently interpreted the **Organic Act. 1.4.5 (1.)**"

(3) **Management Policies 2006** Enjoyment of Park Resources and Values "The fundamental purpose of all parks also includes <u>providing for the enjoyment of park resources and values by the people of the United States</u>. The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress, recognizing that

the enjoyment by future generations of the national parks can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. This is how courts have consistently interpreted the **Organic Act. 1.4.5** (1.)"

(4) **"1.4.7.1 Unacceptable Impacts:**

* be inconsistent with a park's purposes or values, or

* impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or

*create an unsafe or unhealthful environment for visitors or employees, or

* diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or

* unreasonably interfere with:

1. park programs or activities, or

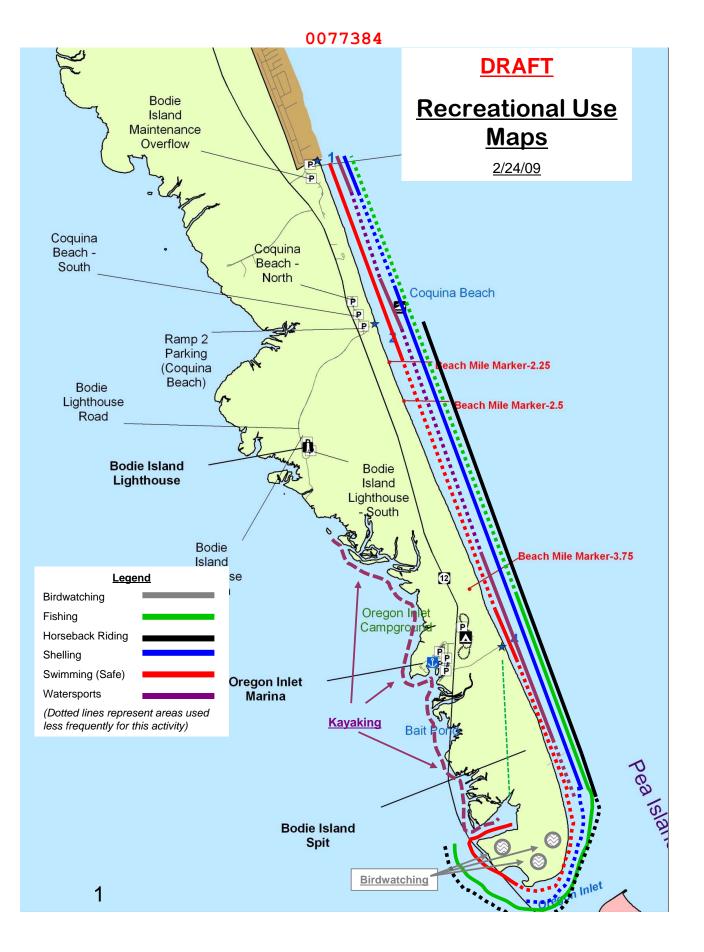
2. an appropriate use, or

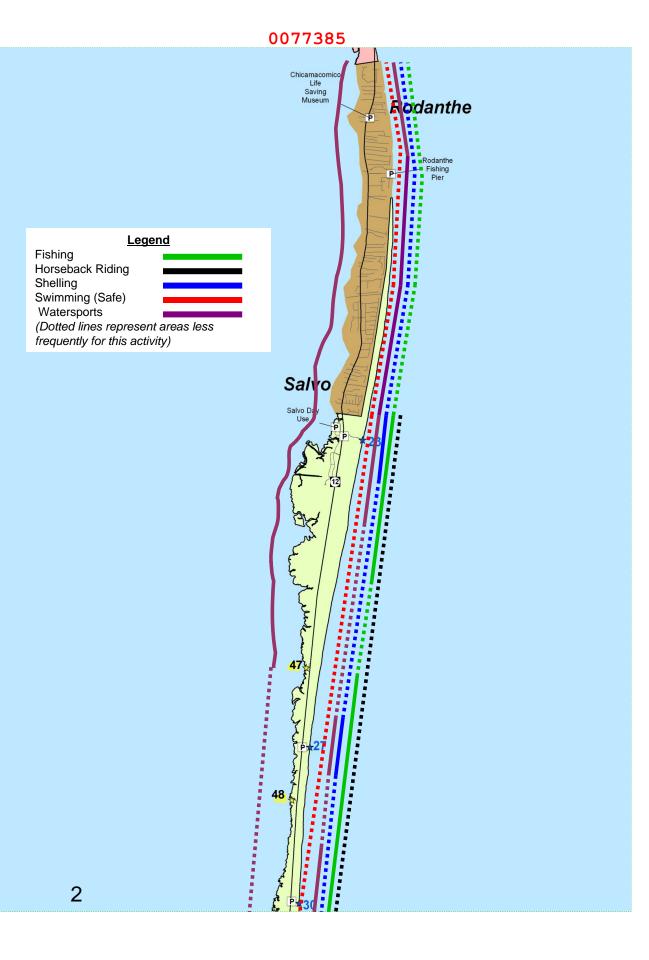
3. the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.

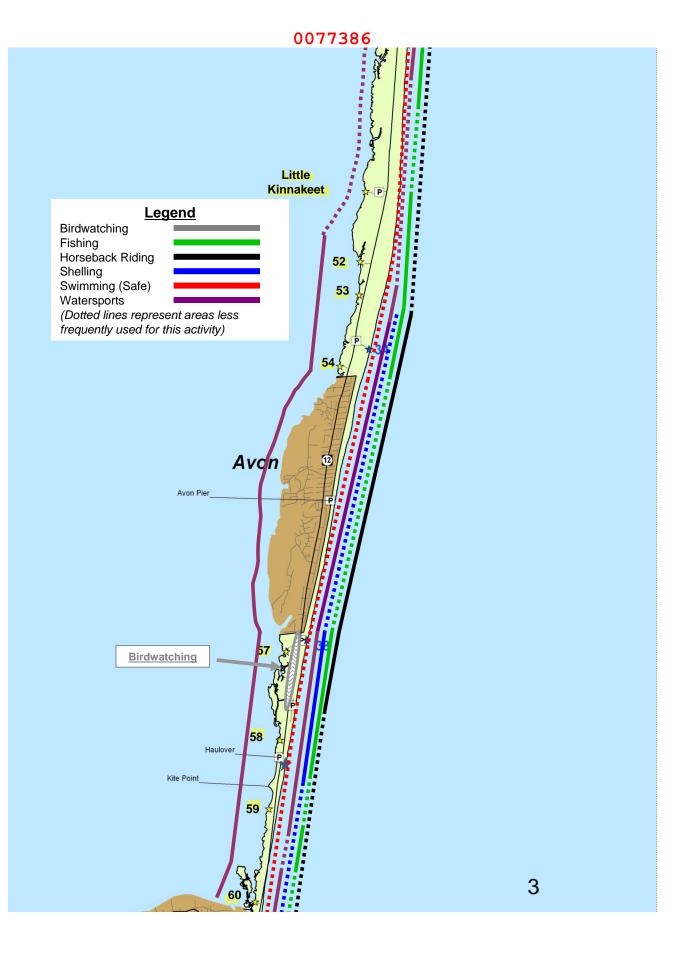
4. NPS concessioner or contractor operations or services."

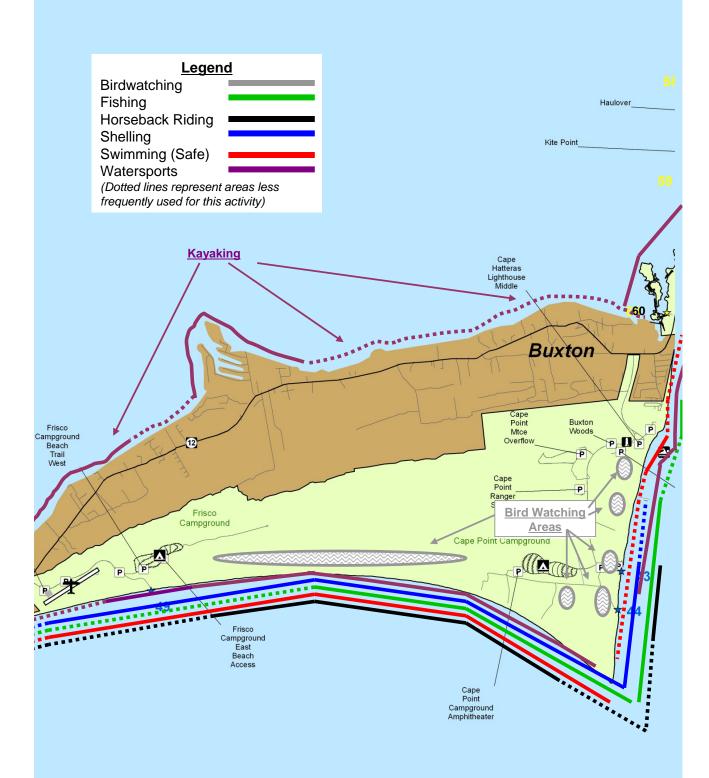
(5) U.S.C. Code

16 U.S.C. Section 1a-1 states, "The authorization of activities shall be conducted in the light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

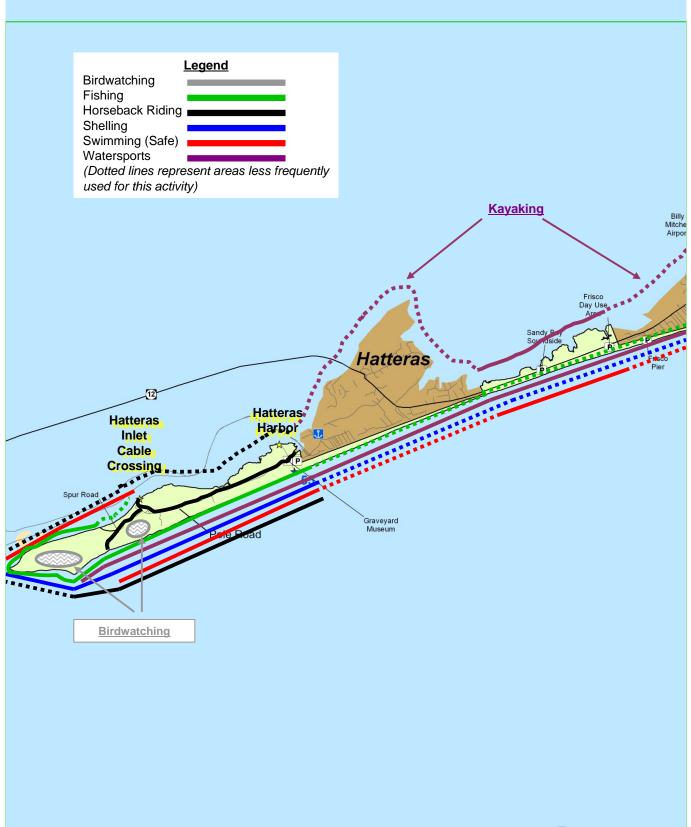


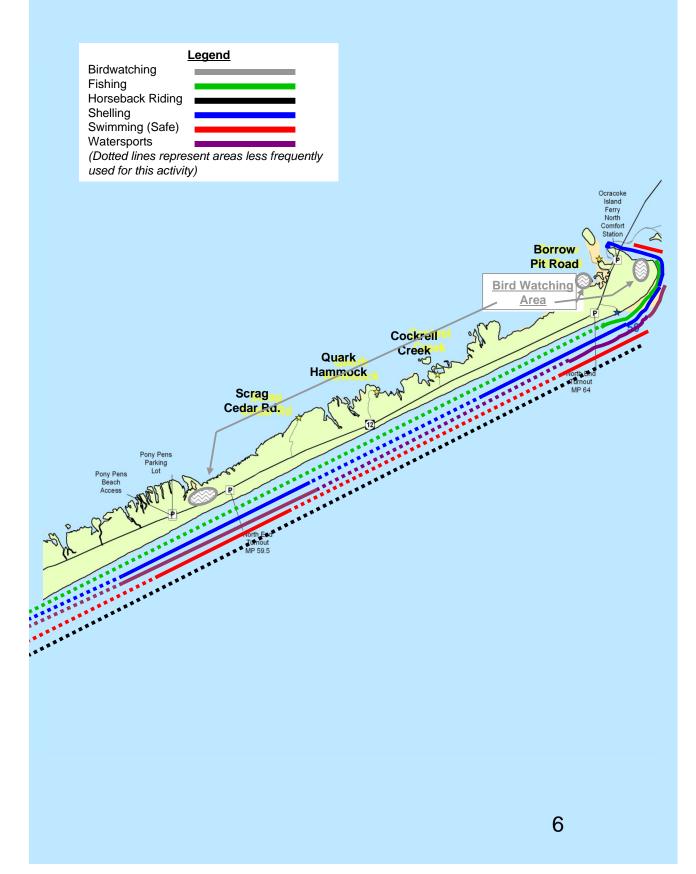


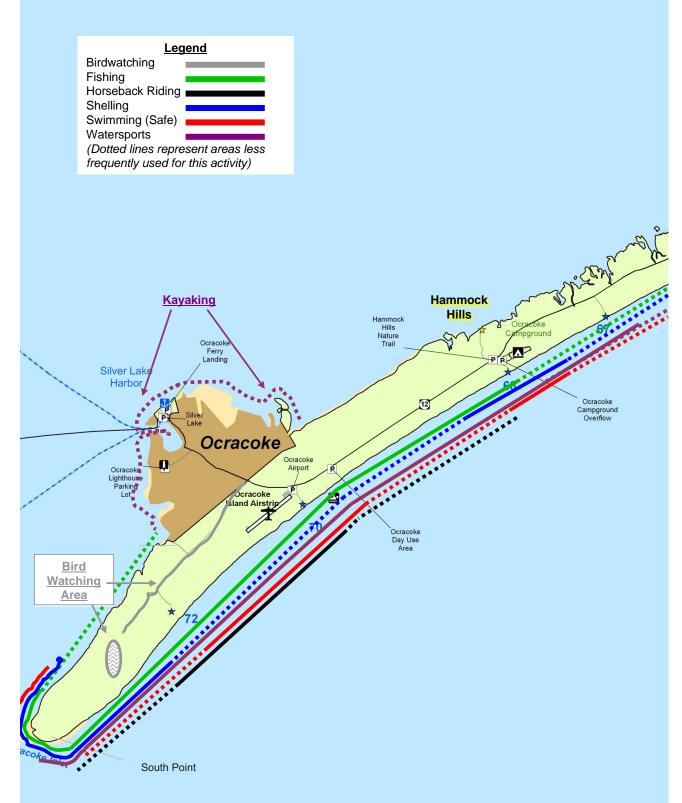












Cape Hatteras National Seashore Negotiated Rulemaking Process Summary

Prepared by the Facilitation Team Presented February 26, 2009 Kill Devil Hills, NC

Reg Neg Committee Summary

TOTAL OF 11 FULL REG NEG COMMITTEE MEETINGS

- First Reg Neg Committee meeting: Jan 3-4, 2008
- 10 additional Committee meetings Feb 26-27, 2008 Feb 26-27, 2009
- 7 Subcommittees, in-person and phone meetings over many months:
 - Agenda Planning
 - Natural Resources
 - Vehicle Characteristics and Operations
 - Village Closures
 - Routes and Areas
 - Socioeconomic
 - Permits/Passes/Fees

Integration Workgroup

- Charge: "bring back one proposal or recommendation for Committee consideration" (February 3, 2009 Committee Meeting)
- Meetings and Topics
 - All day Meetings -- February 11 &13, and 16 & 17
 - Conference calls -- Feb 23 & 24
 - In person meeting -- Feb 25
 - Discussed Routes And Areas, Night Driving And Lighting, Villages, Permits/Passes/Fees, Natural Resource Protection, Vehicle Characteristics And Operations

Integration Workgroup Process

- February 13 -- Facilitators, upon group request and for discussion only, put forward a "working single-line map" of Routes and Areas based on previous work and discussions by Committee, Subcommittees and Workgroup
- Integration Group explored different "package" options on Routes and Areas, Resource Protection Measures, and a Range of Other Issues

Integration Workgroup Process

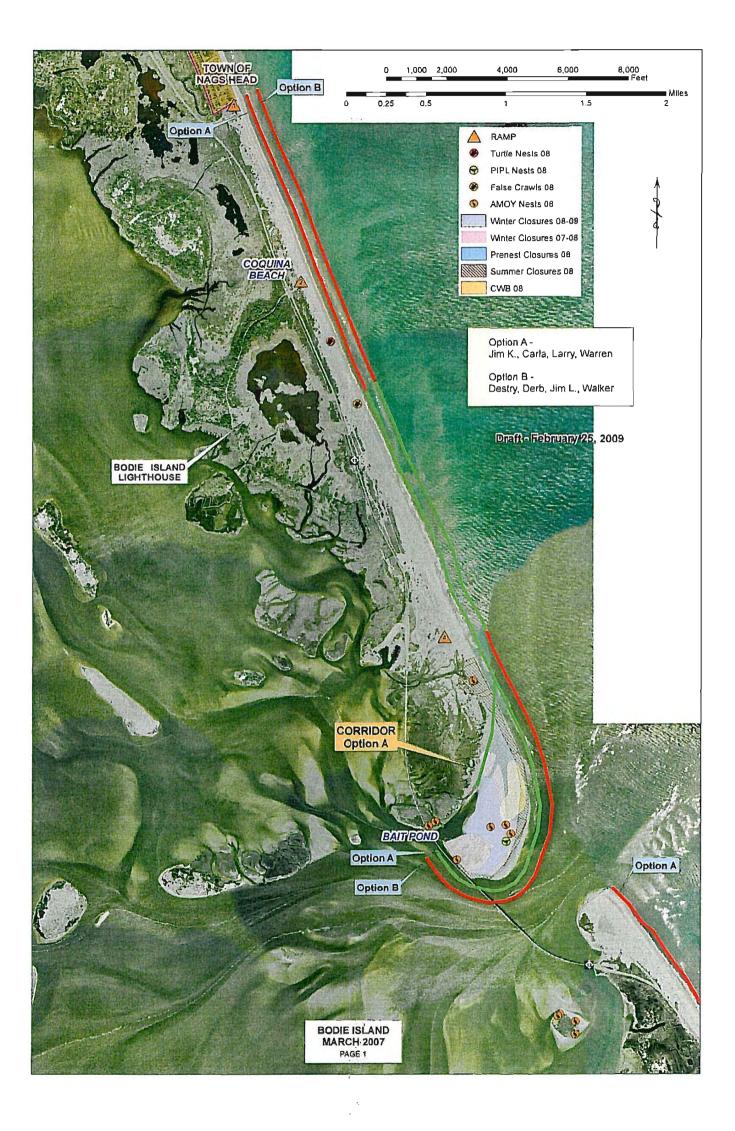
- Feb 17, Noon First Package Option
- Feb 17, 2:00 pm Second Package Option
- Feb 21, 8:45 am Package Option A
- Feb 23, 4 pm Discussed status by phone
- Feb 24, Noon Package Option B
- Feb 24, 4pm Phone Call to discuss status
- Feb. 25, Workgroup recommended the Facilitators present process overview and the Workgroup participants present the last packages developed, to the Committee

Review of Options A & B

- Presentation of Options
- Other Workgroup participants who contributed to that option offer any additions
- Each Committee member provides comments on the Option -- up to 2 minutes
- Second option presented same format
- Each member comments up to 2 minutes
- Test for Consensus on each Option

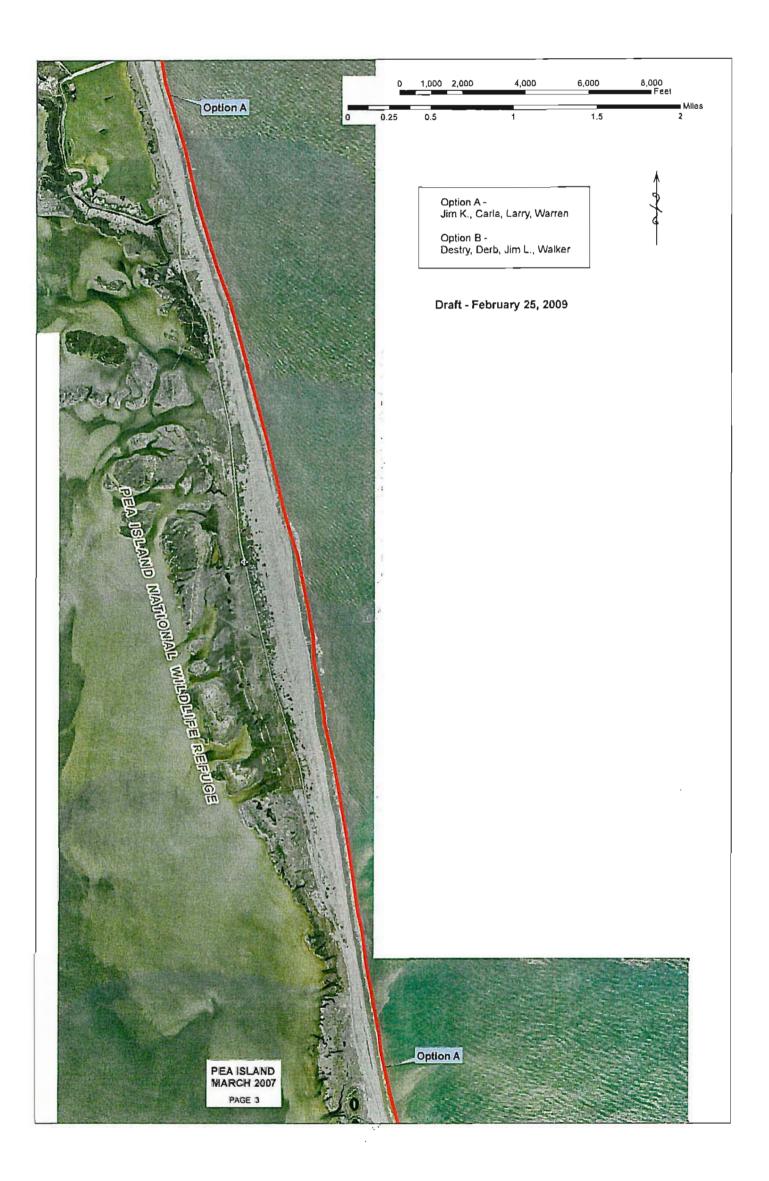
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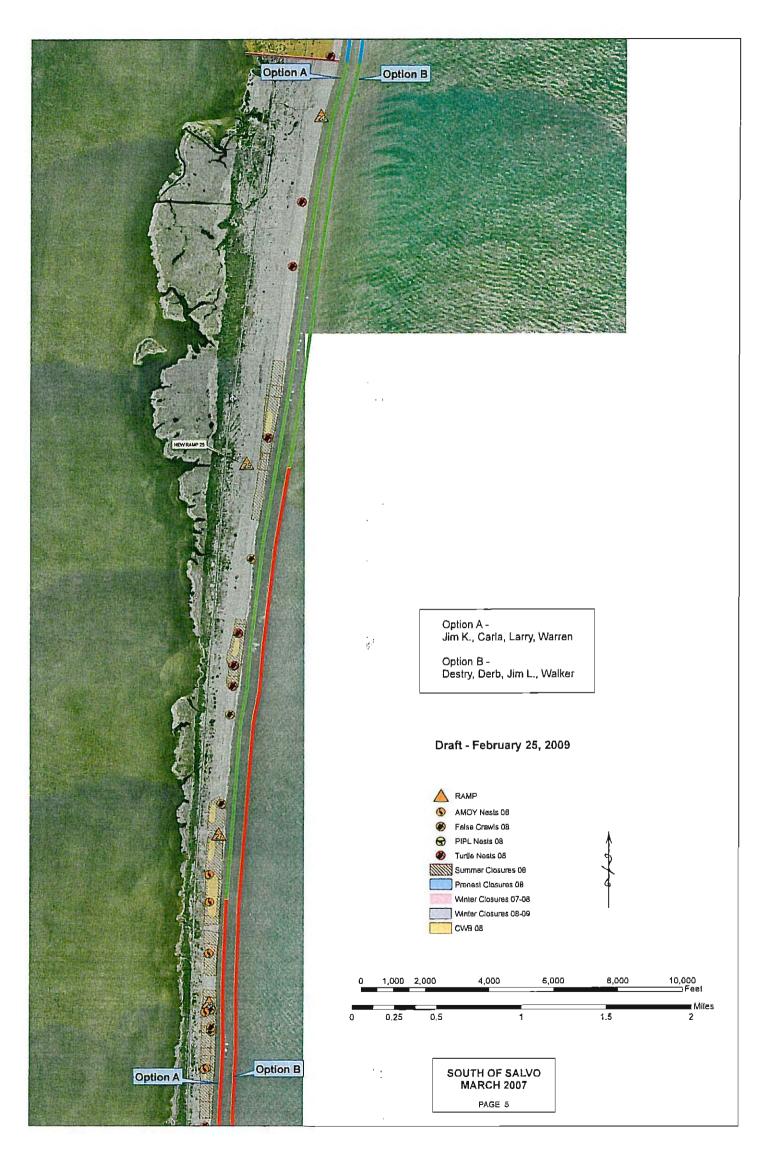


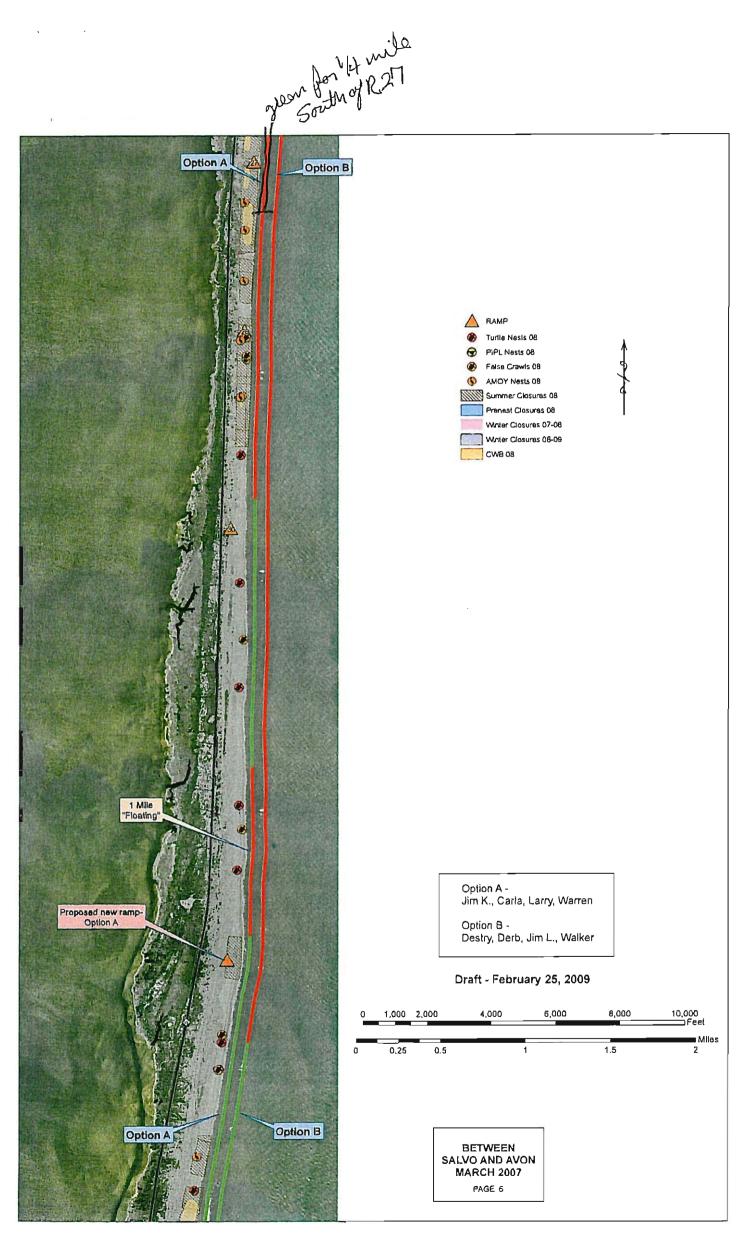


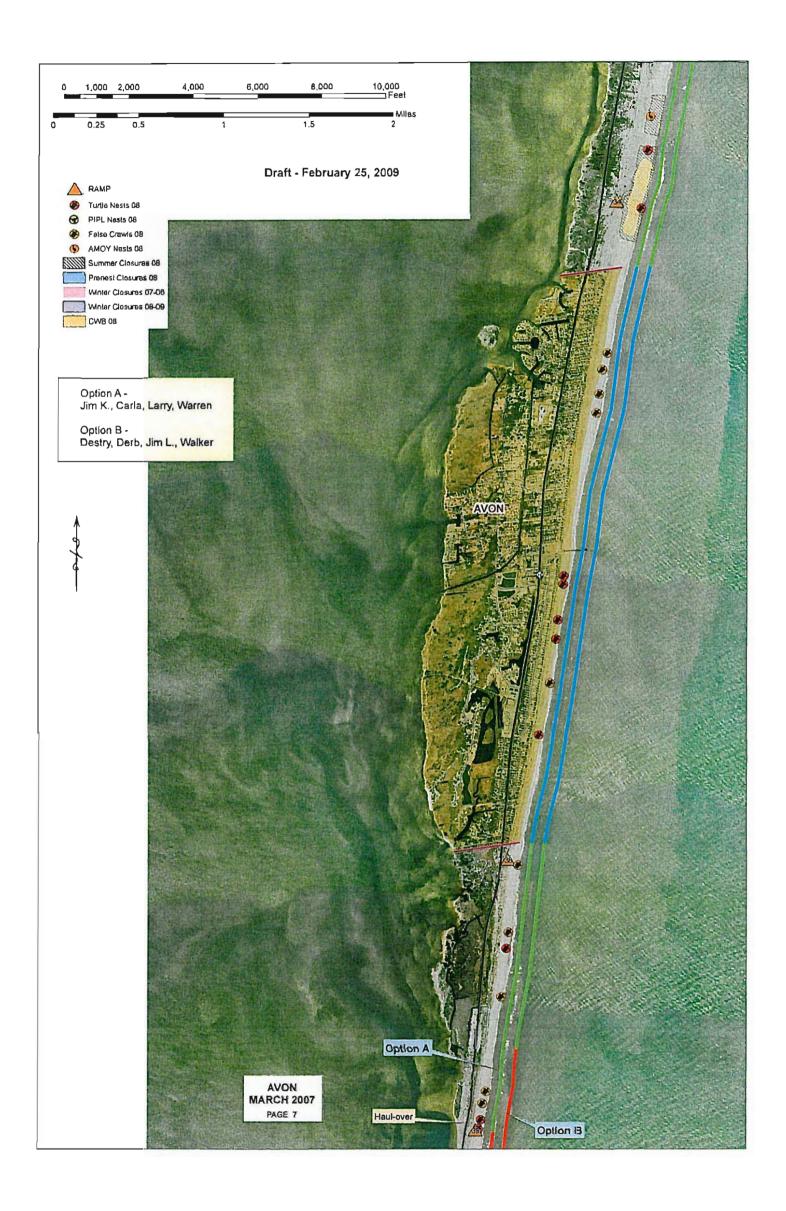


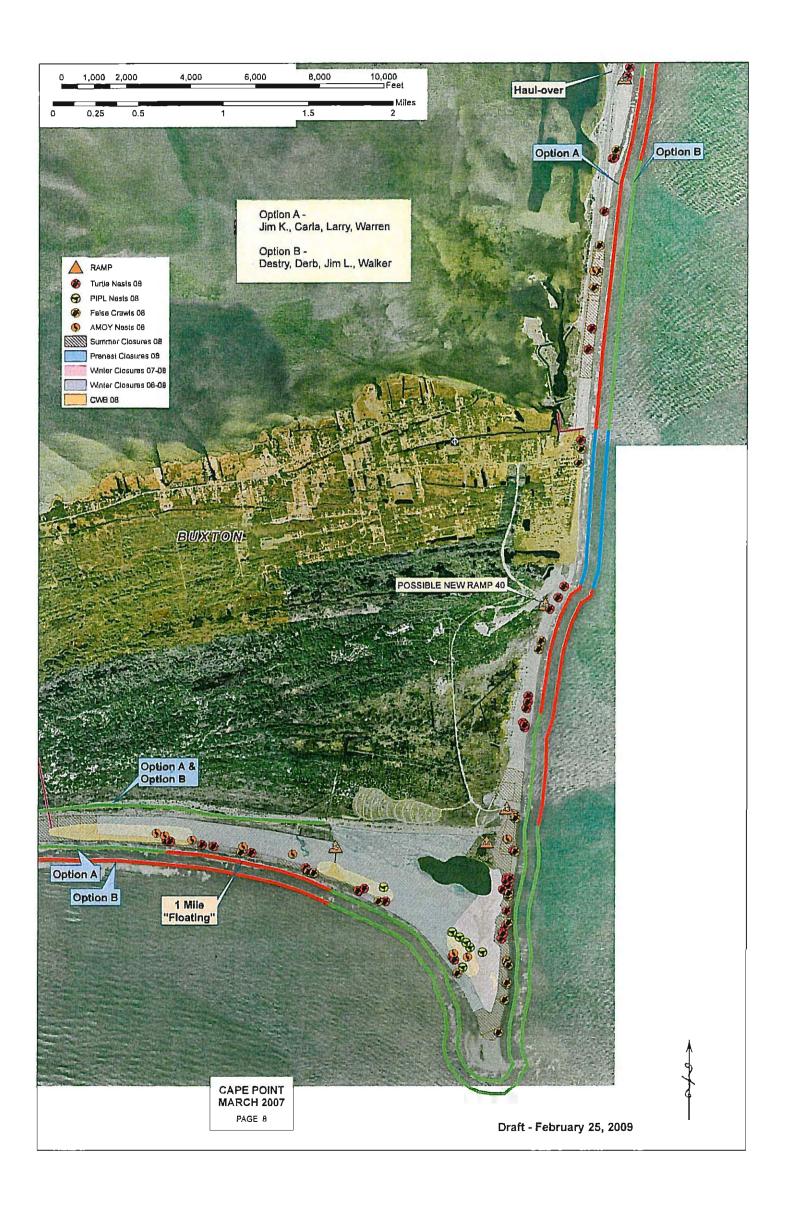
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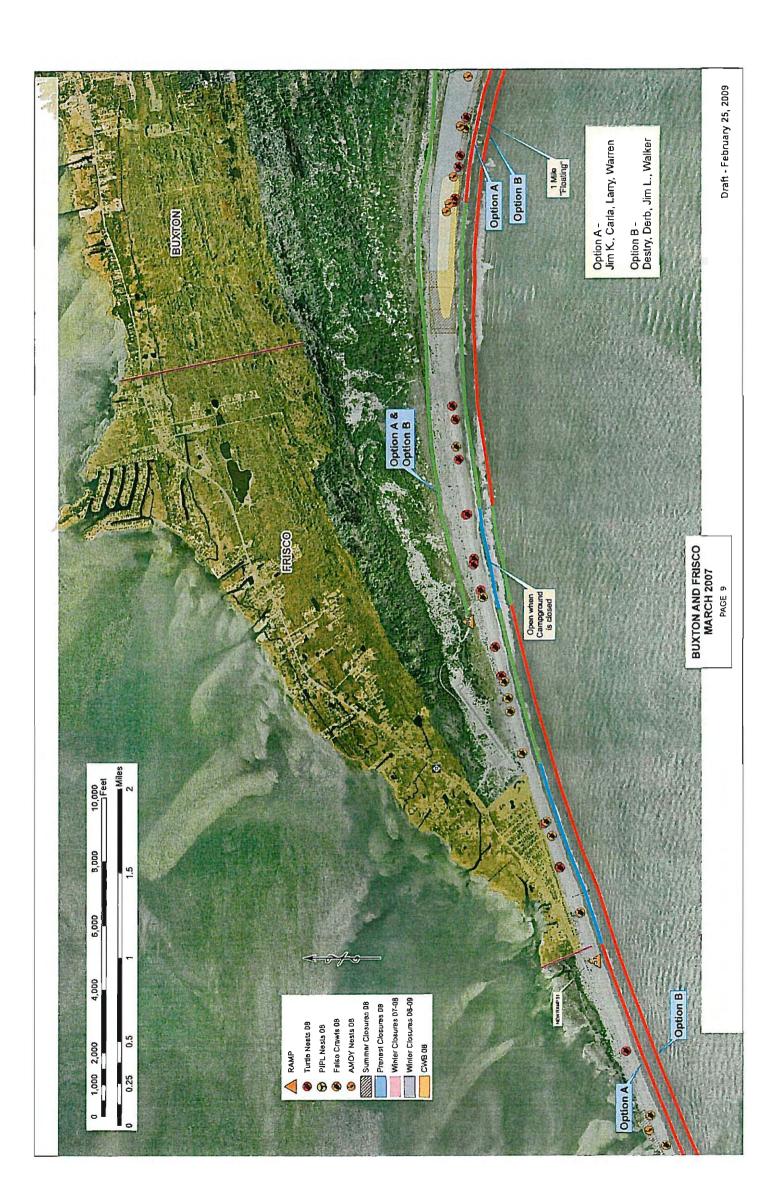


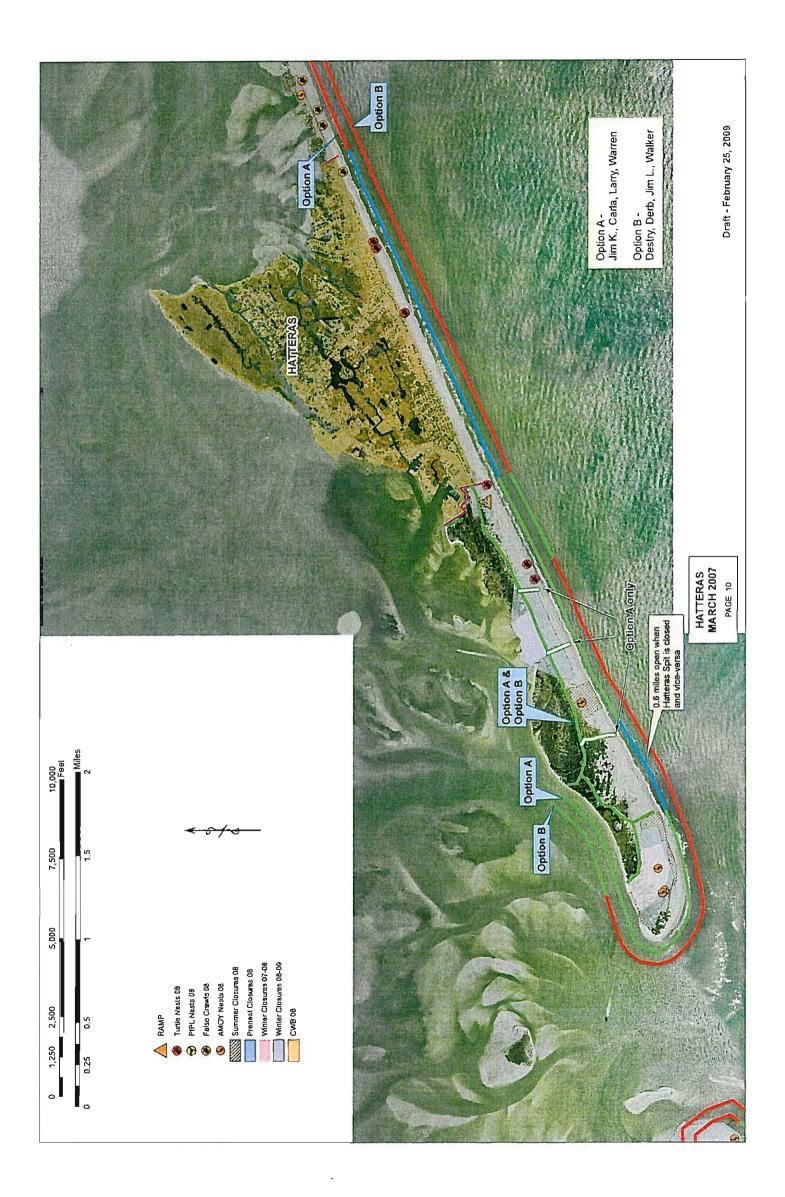


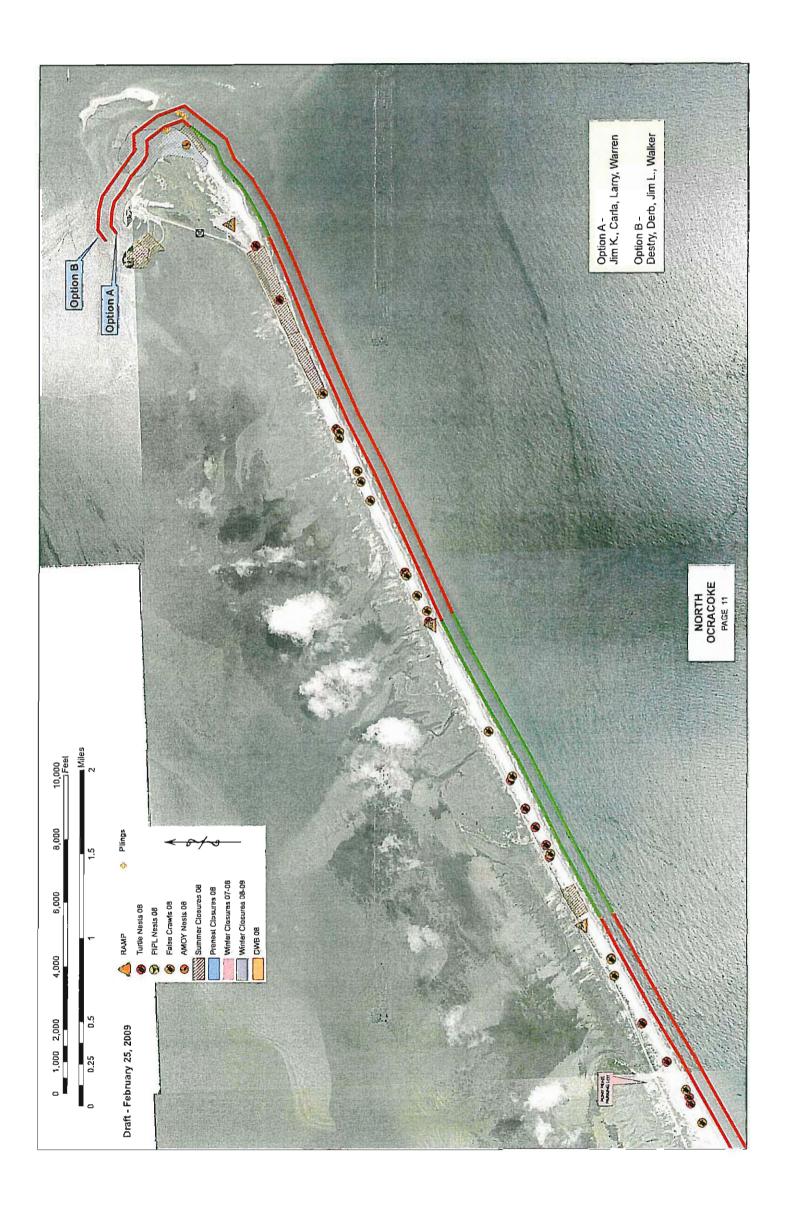


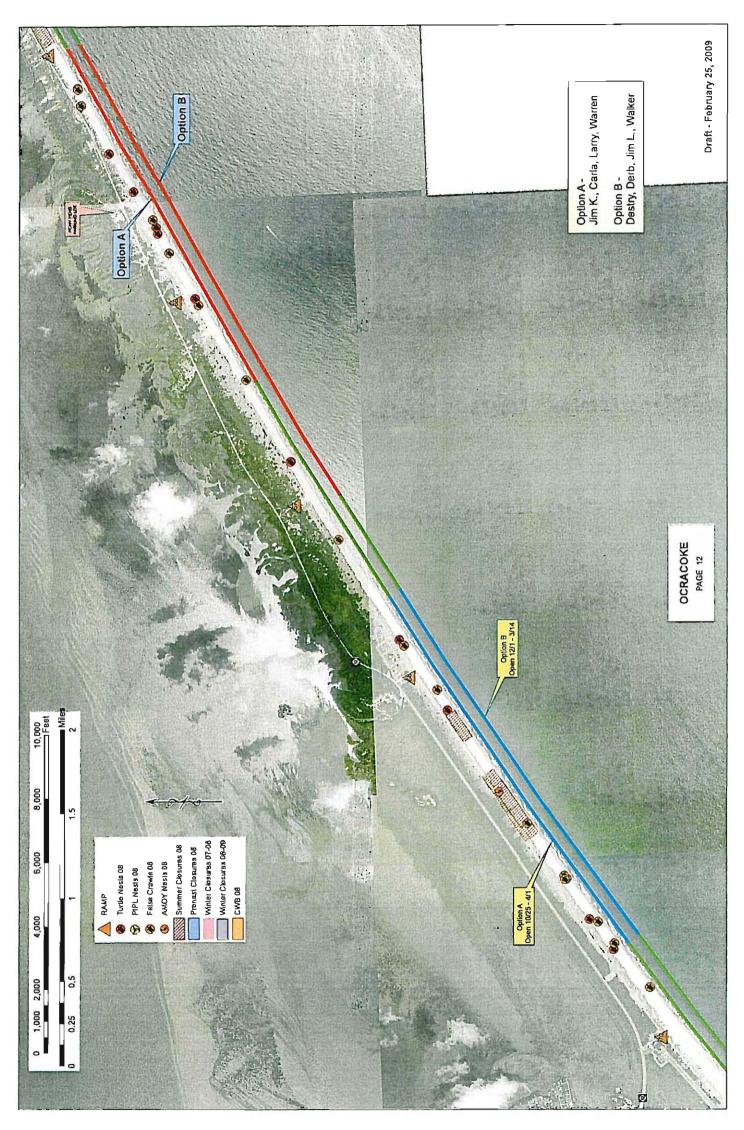


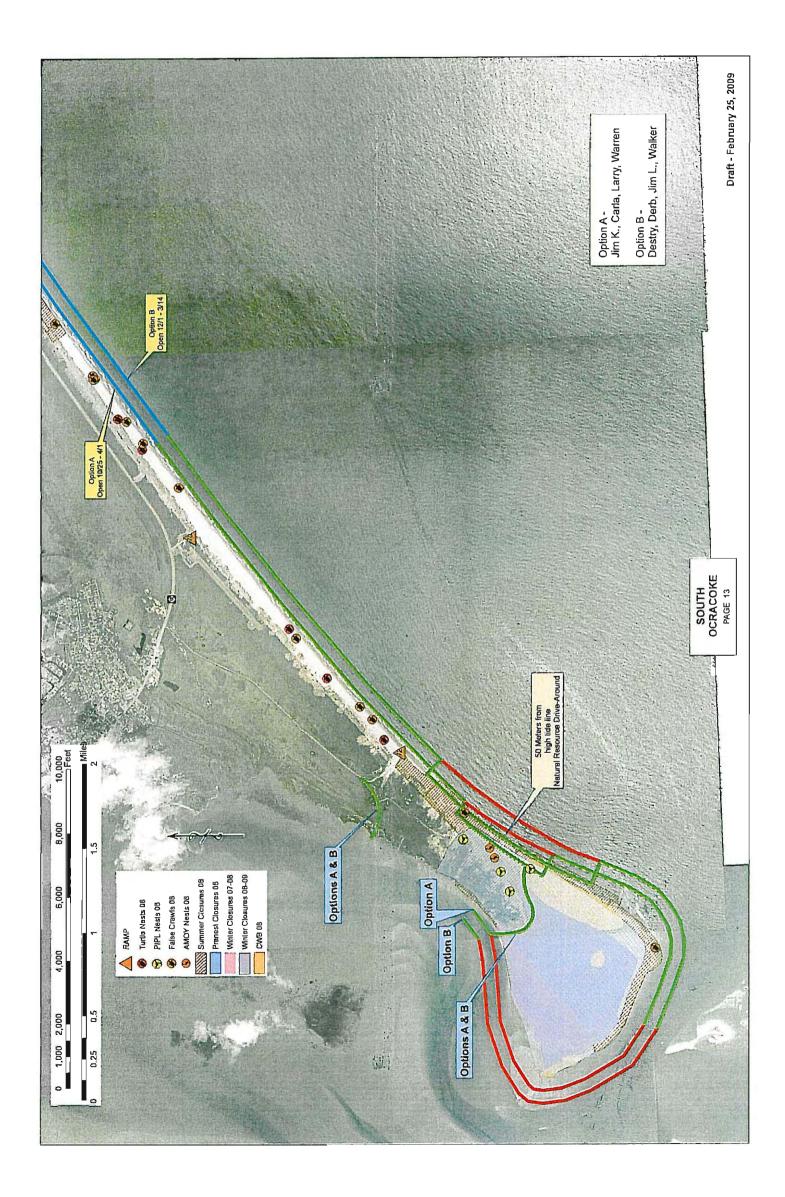












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INTEGRATION GROUP

Topic	Proposal #1	Proposal #2	Counter to Proposal #2
Permits	 ORV Special Use Permit Education required No fee, and no fee increase for 7 years 	 ORV Special Use permit Education required Fee based on NPS recommendation for amount /timing/scenarios for implementing 	 ORV Special Use permit Education required Fee is \$5/vehicle/day; \$10/vehicle/week; or \$30/vehicle/year. Discounts for residents, seniors, economic hardship, disabled, veterans, active duty military All fees used to adm. ORV permit, for ORV related improvements/maintenance and LE
Vehicle/Ops Characteristics	 Per Committee draft Motorcycles allowed in front of villages 	 Per Committee draft No motorcycles allowed on oceanside 	 Per Committee draft Motorcycles allowed with free special use permit that includes education
Villages	All villages open to ORVs, closed seasonally from 5/15-9/15, and subject to safety and resource closures	 North (East facing) villages open - any seasonal dates ok, no closures during any season also ok. Frisco and Hatteras closed year round. 	 All villages seasonally closed to ORVs East facing closed 5/15 – 9/15 South facing closed 3/01 – 10/31, Easter week, Thanksgiving week
Park Funding	Support increase in operations funding for NPS	Same	Same
Natural Resources	SM2 everywhere	 SM2 at points and spits SM1 elsewhere 	 SM2 at <u>all</u> points and spits, incl Cape Pt. and West to Ramp 47 SM1 elsewhere as outlined in NPS draft Alt. E 11/05/08. (unless otherwise specified in

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INTEGRATION GROUP (2/17/09)

]	Rev. 2/20/08 for Proposal #3	
Topic	Proposal #1	Proposal #2	Counter to Proposal #2
			map proposals)
Turtle Management	Night Driving	Night Driving <i>Option #1:</i>	 <u>Night Driving</u> Restriction Dates: Tuesday after Memorial Day weekend to
	• Restriction Dates: Tuesday after Memorial Day weekend to sunrise/set Friday night of	• Restriction Dates: 5/1-11/15	sunrise/set Friday night of Labor Day weekend
	 Labor Day weekend Park and Stay - parking pens with SM2 buffers and escorts off beach 	• Park and Stay (25 vehicles per spit, 50 at Cape Pt); 911 escape with escort; self-contained vehicle or vehicle with a toilet, with a special use permit	• Park and Stay - (25 vehicles per spit, 50 at Cape Pt, 50 at South Ocracoke); 911 escape with escort; self-contained vehicle or vehicle with a toilet, with a special use permit, parking pens with SM2 buffers, no escort off beach
	 Time: 1 hr after sunset to ½ hour after sunrise/after beach has been cleared by turtle patrol 	• Time: Sunset to after beach has been cleared by turtle patrol in AM	 Steward at all locations Time: 1 hr after sunset to ¹/₂ hour after sunrise, NPS utilizing
	Lighting	Lighting	additional ATV/personnel to clear OHV areas as soon as
	• County ordinance through land use plan for new construction contingent on and in place on/before rule in effect; PR/Education effort by county and partners	• County ordinance	 practicable in AM, time being of the essence. <u>Lighting</u> County Ordinance
		<i>Option #2:</i>	
		If routes and areas accepted as proposed	

FOR DISCUSSION PURPOSES ONLY

Topic	Proposal #1	Proposal #2	Counter to Proposal #2
		(see below), then turtle-related management to be determined by recommendation by FWS and WRC.	
Pre-Nesting Closures Areas other than Points and Spits	n/a	Apply anywhere with bird activity during last ten years that has appropriate habitat: Shorebirds (3/15), CWOB (4/1)	Apply pursuant to Draft NPS Alt. E 11/05/08
Routes/Areas	2/13/09 Discussion Draft Maps	2/13/09 Discussion Draft Maps with the changes described below (see **)	2/13/09 Discussion Draft Maps with the changes described below (see

*** Proposal #3 - Changes/Additions to 2/13/09 Discussion Draft Maps Proposal #2:

General principles:

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- 1. Non-breeding closures described below are open to pedestrians.
- 2. Where science allows, based on NPS judgment, exterior water-side pre-nesting boundaries will lie inland of the waterline 50m (or distance allowed).

FOR DISCUSSION PURPOSES ONLY

INTEGRATION GROUP

(2/17/09) Rev. 2/20/08 for Proposal #3

Specific proposals to maps:

- 3. Bodie Island:
 - a. Alt. E, SM2 as proposed in 11/05/08 proposal from NPS, except that the ending date is determined the earlier of 8/31 or 2 weeks after the last chick has fledged.
 - b. Route extends around spit to Bait Pond.
- 4. Map 4, 5, 6 and 7:
 - a. ¼ mile south of Ramp 27 to ¼ mile north of ramp 30 is permanent 12 month closure (Red) plus SM1 buffers during breeding season.
 - b. Between Ramp 23 and Ramp 34 there will be an additional 1 mile floating closure area effective 12 months, that will move to accommodate breeding birds (breeding season) and/or migrating birds in non-breeding season, managed under SM2 in the breeding season. "Floating zone" location to be determined by NPS.
 - c. New ramps at mile 25 and 32.5
- 5. Map 7 and 8:
 - a. From Southern border of Avon to Haulover (approx. 2 miles) is ORV (green)
 - b. From Haulover to northern line of Buxton village is closed (red)
 - c. From north boundary of Buxton to old light house site is blue (designated ORV area closed seasonally according to east facing beaches in chart).
 - d. From proposed new ramp 40 to 0.7 miles north of ramp 43 is closed (red).
 - e. From 0.7 miles north of ramp 43 to ramp 44 is open to ORV (green)
 - f. From ramp 44 south and west to ramp 45 is SM2, except that the ending date is determined the earlier of 8/31 or 2 weeks after the last chick has fledged.
 - g. From ramp 45 to ramp 49 retain interdunal road and install new ramp 47.
- 6. Map 9:
 - a. Between ramps 45 and 47 is a 1 mile floating 12 month closure area. In non-breeding season there is to be an access corridor behind the 12 month closure area 50M from waterline if not at the dune line. Corridor must be wide enough to accommodate horse-back riders and vehicles.
 - b. From ramp 49 eastward approximately 0.5 miles is a seasonally closed area for pedestrian use. Closure to ORV occurs when campground is open. ORV corridor (width determined by NPS) at the base of the dune during ORV closure. Signage alerting pedestrians to be installed @ walkover.
 - c. Frisco village is open seasonally according to south facing beaches in chart.

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INTEGRATION GROUP

(2/17/09) Rev. 2/20/08 for Proposal #3

7. Map 9 and 10:

a. West boundary of Frisco to east boundary of Hatteras is closed to ORV (red).

- 8. Map 10:
 - a. Hatteras village is open seasonally according to south facing beaches in chart.
 - b. West boundary of Hatteras to Bone road is open to ORV (green)
 - c. From Bone road to Pole road terminus is open when inlet is closed during breeding season and Bone road to Pole road terminus is closed when inlet is open.
 - d. Pole road from origin at Hatteras village to its exit on the beach is designated a route. Sound side access at coast guard station is a route. Cable Crossing road to sound is a route. Spur road is a route. Crossovers between Bone road and the beach on either side of the Isabell washout are routes. Bone road is a route.
 - e. From Pole road terminus to the rip is open to ORV (green) subject to SM2 management during breeding season.
 - f. From the rip to the Cable Crossing is a route.

Ocracoke:

- 9. From ramp 59 north open to pilings (green).
- 10. ¾ of a mile north of 67 to ¾ mile south of 67 is a route (green)
- 11. Blue route in front of campground closed to ORVs coinciding with dates campground is open.
- 12. We reject proposal to extend waterline closure by ¼ mile on both ends.

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FOR DISCUSSION PURPOSES ONLY

INTEGRATION GROUP

Topic	Proposal #1	Proposal #2	Counter to Proposal #2	Proposal #2B 2-23-09
Permits	 ORV Special Use Permit Education required No fee, and no fee increase for 7 years 	 ORV Special Use permit Education required Fee based on NPS recommendation for amount /timing/scenarios for implementing 	 ORV Special Use permit Education required Fee is \$5/vehicle/day; \$10/vehicle/week; or \$30/vehicle/year. Discounts for residents, seniors, economic hardship, disabled, veterans, active duty military All fees used to adm. ORV permit, for ORV related improvements/maintenance and LE 	 ORV Special Use permit Education required fees should be reasonable, and set for cost recovery, to include resource management costs necessitated by ORV use.
Vehicle/Ops Characteristics	 Per Committee draft Motorcycles allowed in front of villages 	 Per Committee draft No motorcycles allowed on oceanside 	 Per Committee draft Motorcycles allowed with free special use permit that includes education 	 Per Committee draft Motorcycles allowed in front of N. villages, excluding Frisco and Hatteras Villages
Villages	All villages open to ORVs, closed seasonally from 5/15- 9/15, and subject to safety and resource closures	 North (East facing) villages open - any seasonal dates ok, no closures during any season also ok. Frisco and Hatteras closed year round. 	 All villages seasonally closed to ORVs East facing closed 5/15 – 9/15 South facing closed 3/01 – 10/31, Easter week, Thanksgiving week 	 North (East facing) villages open - any seasonal dates ok, no closures during any season also ok. Frisco and Hatteras closed year round.
Park Funding	Support increase in operations funding for NPS	Same	Same	Same
Natural Resources	SM2 everywhere	 SM2 at points and spits SM1 elsewhere 	 SM2 at <u>all</u> points and spits, incl Cape Pt. and West to Ramp 47 SM1 elsewhere as outlined in NPS draft Alt. E 11/05/08. (unless otherwise specified in map proposals) 	see attached: "Natural Resource Protection"
Turtle Management	Night Driving	Night Driving Option #1:	 Night Driving Restriction Dates: Tuesday after Memorial Day weekend to 	Night Driving Option #1:

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		INTEGRATION	GROUP	
		(2/17/09)	
		Rev. 2/20/08 for P	roposal #3	
Topic	Proposal #1	Proposal #2	Counter to Proposal #2	Proposal #2B 2-23-09
	 Restriction Dates: Tuesday after Memorial Day weekend to sunrise/set Friday night of Labor Day weekend Park and Stay - parking pens with SM2 buffers and escorts off beach Time: 1 hr after sunset to ½ hour after sunrise/after beach has been cleared by turtle patrol Lighting County ordinance through land use plan for new construction contingent on and in place on/before rule in effect; PR/Education effort by county and partners 	 Restriction Dates: 5/1- 11/15 Park and Stay (25 vehicles per spit, 50 at Cape Pt); 911 escape with escort; self-contained vehicle or vehicle with a toilet, with a special use permit Time: Sunset to after beach has been cleared by turtle patrol in AM Lighting County ordinance 	 sunrise/set Friday night of Labor Day weekend Park and Stay - (25 vehicles per spit, 50 at Cape Pt, 50 at South Ocracoke); 911 escape with escort; self-contained vehicle or vehicle with a toilet, with a special use permit, parking pens with SM2 buffers, no escort off beach Steward at all locations Time: 1 hr after sunset to ½ hour after sunrise, NPS utilizing additional ATV/personnel to clear OHV areas as soon as practicable in AM, time being of the essence. Lighting County Ordinance 	 Implement Atlantic Loggerhead Recovery Plan Restriction Dates: 5/1-11/15 No night driving: ½ hr after sunset until beach has been cleared by turtle patrol in the morning. Option #2: Lighting County ordinance : Turtle-related management to be determined by recommendation by FWS and WRC.
		Option #2: If routes and areas accepted as proposed (see below), then turtle-related management to be determined by recommendation by FWS and WRC.		
Pre-Nesting	n/a	Apply anywhere with bird	Apply pursuant to Draft NPS Alt. E	Apply anywhere with bird

FOR DISCUSSION PURPOSES ONLY

INTEGRATION GROUP

(2/17/09)

Rev. 2/20/08 for Proposal #3

Topic	Proposal #1	Proposal #2	Counter to Proposal #2	Proposal #2B 2-23-09
Closures Areas other than Points and Spits		activity during last ten years that has appropriate habitat: Shorebirds (3/15), CWOB (4/1)	11/05/08	activity during last ten years that has appropriate habitat: Shorebirds (3/15), CWOB (4/1)
Routes/Areas	2/13/09 Discussion Draft Maps	2/13/09 Discussion Draft Maps with the changes described below (see **)	2/13/09 Discussion Draft Maps with the changes described below (see ***)	As described below: Proposal #2B

Proposal #2B – Changes/Additions to 2/13/09 Discussion Draft Maps:

Cape Hatteras National Seashore Advisory Committee established consisting of representation from the following representation: 3 environmental/natural resource organization (Audubon, SELC, Defenders, NRDC or similar organization), 3 vehicle use, 1 Pedestrian Access, 1 Local Government, NCWRC, and USFWS.

Bodie Island

Page 1: Ramp 4 to inlet closed to vehicles.

- Hatteras Island
- Pages 4-8: Ramp 25-33 and a one-mile area centered on the Haulover Rd closed to ORVs year-round (white); remainder open to the northern end of Buxton
- Page 7-8:
 - Move and expand parking lot shown on 2/13/09 map to the fish cleaning table area
 - Restore historic pedestrian only area from south groin at old Lighthouse site to Ramp 43 closed to ORVs year-round
 - From 0 Ramp 43 around Cape Point to South Beach ending at Ramp 45, open to ORVs (green)
 - Eliminate upper beach ORV route on South Beach
 - Ramp 45 to 0.5 mi east of Ramp 49 closed to vehicles
 - Retain interdunal road
- Page 9:
 - Frisco closed to ORVs year-round per villages above (white)
 - Restore historic pedestrian only area from Frisco Village east to Ramp 49 closed to vehicles
 - Eliminate upper beach ORV route on South Beach (overlap with page 8)

FOR DISCUSSION PURPOSES ONLY

INTEGRATION GROUP

(2/17/09)

Rev. 2/20/08 for Proposal #3

• Page 10:

- Hatteras village closed to ORVs year-round per villages above (white)
- Pre-nesting closure established 3/15 to include all suitable nesting habitat and nesting sites active in the past 10 years.
- 0.5 mil west of Ramp 55 to inlet ocean beach closed to vehicles
- Eastern spurs off of pole road closed to ORV, parking area established at terminus of pole road.
- Pole road remains open, soundside roads remain open

Ocracoke Island

- Page 11: No ORV route at north end of Ocracoke
- Page 12: Change dates on blue line in front of campground open to ORVs from 12/1-3/14, closed 3/15-11/30
- Page 13: Expand upper beach corridor (rectangle) by 0.25 miles on both ends

Natural Resource Protection

Survey Time and Frequency	Piping Plover	American Oystercatcher and Wilson's Plover	Colonial Waterbirds		
All Species	Zone of ocean backshore at least 10m wide and running the length of the Seashore is closed to ORV use. This zone should be adjacent to the toe of the primary dune wherever a primary dune exists.				
All Bird Species	I Bird Species Species Management 1 (SM1): Will use larger, longer lasting buffers with less monitoring to alleviate the need for const monitoring and frequent fencing changes. Will be applied at all resource areas other than Cape Point and S. Ocracoke staffing requirements TBD by NPS. Species Management 2 (SM2): at Cape Point and S. Ocracoke only at the discretion of NPS. Estimated staffing requirements TBD by NPS.				
	This method is less predictable for Seashore	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.			
	ment SM1 as described, or determines that SM1 S Protocol Option A or B for breeding species.				
	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				

FOR DISCUSSION PURPOSES ONLY

INTEGRATION GROUP

Provide statements		. 2/20/08 IOI 1 Toposal #5			
	protect natural resources.				
	Disturbance is defined as follows: "Human disturbance is any activity that changes the contemporaneous behavior or physiology of one or more individuals within a breeding colony of waterbirds" (Nisbet 2000). This definition shall be applied to nesting Colonial Waterbirds, Piping Plover, Wilson's Plover, American Oystercatcher, and non-breeding shorebirds. 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.				
Pre-Nesting Surveys	SM1, SM 2: By March 1, all potential habitats will have been evaluated. PIPL prenesting closures will be recommended based upon that habitat evaluation. Those closures will installed by March 15. 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. Survey for Wilson's plover during piping plover surveys. Prenesting buffers will not be modified in cases where the beach erodes into the buffered habitat. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years:	 SM1: March 15 – July 15 survey historic breeding areas (last ten years) at least 3 times per week. SM2: 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 prenesting closures allow pedestrian and/or ORV access corridors, survey daily. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years: 	 SM1: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week. SM2: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week lf/when CWB are observed in an area, observe 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. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years: 		

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Pre-Nesting Buffers	SM1: Areas designated as SM1 Resource Areas will not allow ORV or pedestrian access during the pre-nesting period.				
	<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. Pre-nesting closures will be established at all nesting sites active in the previous 10 years.				
	Bodie Island: Due to location of waterbird colonies and shorebird nesting sites, and the location of nesting habitats for these species, the closure of the pedestrian corridor will begin at the northernmost boundary of the pre-nesting closures as delineated in Alt E. Cape Point: North side corridor to be not more than 50m wide; Hatteras Inlet: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years; S. Ocracoke: established as described above (page 13, revised map 2/13/09); N. Ocracoke: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years.				
	Deliberate attempts to harass or disturb birds	, or vandalize fencing, will result in imr	nediate closure of the corridor.		
	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.	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.	SM1/SM2: Pre-nesting closures will be established for CWB by April 1 in areas that had a colony (or colonies) in the past 10 years, if habitat is still suitable. Closures will be removed if no breeding activity is seen in the area by July 31, or two weeks after the site has been abandoned by CWB, whichever comes later. NPS natural resource staff will conduct an annual assessment of colonial waterbird breeding habitat to plan pre-nesting closures that are adapted to current habitat and physiographic conditions.		
Courtship/Mating Surveys:	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.				
		ed exhibiting territorial or courtship beh	avior in suitable habitat, or if scrapes are observed		

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	once birds are observed in the area. <u>SM2</u> : PIPL monitored as described for SM1. If	AMOY or CWB are observed exhibiting to urtship behavior, observe daily. Survey p	aabitat 2 times per week; increase to 3 times week erritorial or courtship behavior in suitable habitat, otential new habitat 2 times per week; increase to
Courtship/Mating Buffers:	<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. If nest buffer is less than 75 m observe nesting activity daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is observed. Observations; observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.	 <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. <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 increased in 50 m increments if disturbance occurs. If, in the judgment of NPS Resources Management staff, a pair has abandoned a territory and established a new territory at 	 SM1: Outside of existing pre-nesting closure, or inside the closure but within 300 m of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, a 300 meter buffer will be established around the scrape locations. SM2: Outside of existing pre-nesting closure, or inside the closure but within the buffer distance prescribed below of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, establish a 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.

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(2/17/09)

	Rev	2/20/08 for Proposal #3 another location, the buffer may be removed at the abandoned territory after two weeks with no activity.	
Nesting Surveys:	Nesting survey (walk-through to looks for nests) conducted every 3 days.	Nesting survey (walk-through to looks for nests) conducted when observations suggest a nest is present.	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.
Nest Observation:	SM1, SM2: Observe nests daily from a distance that does not disturb the birds, based on professional judgment. Approach nests once per week to observe and record data. If nest buffer is less than 75 m observe nest daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is 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.	<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). <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.	<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. <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.
Nesting Buffers:	<u>All species</u> : The park retains the discretion t unprotected areas, a closure will be establish immediate vicinity of paved roads, parking lo resource protection to the maximum extent p	ned immediately when a nest with egg(s ts, campgrounds, buildings and other fa	depending on staffing and bird behavior. In s) is found. When nesting occurs in the acilities, NPS retains the discretion to provide o remain operational. Buffers will remain in place

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	(2/17/09)						
	Rev. 2/20/08 for Proposal #3						
	for 2 weeks after a nest is lost to determine if pair will re-nest, if no other species nesting in area. <u>SM1, SM2</u> : NPS shall not reduce buffers to accommodate ramp access. After July 31, closures will be removed outside of prenesting closures two weeks after all nesting is complete or all chicks in area have fledged, whichever is later.						
	Deliberate attempts to harass or disturb birds first act, an additional 100m for the second ac	, or vandalize fencing, shall result in in ct, and 500m for the third act.	nmediate expansion of the buffer by 50m for the				
	first act, an additional 100m for the second ac <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 buffer falls within the intertidal zone a full-beach closure will result. 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. 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, buffer will be expanded by 50 m if human disturbance is observed. Observations will continue until 50	 ct, and 500m for the third act. <u>SM1</u>: Use buffer of 300 m. <u>SM2</u>: Use buffer of 150 m around nests occurring outside of existing closures. <u>All</u>: Establish buffer immediately when nest is located. Increase buffer in 50 meter increments if necessary to prevent human disturbance. If the buffer falls within the intertidal zone a full-beach closure will result. For AMOY nests that occur inside a pre-nesting closure at one of the points or spits <u>and</u> 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. 	 <u>SM1</u>: Use buffer of 300 m for all species. <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. <u>All</u>: 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. Colony will be monitored daily for presence of new nesting activity and buffers will be adjusted as needed. For a colony that occurs inside a 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. 				
	additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.						

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Deep through	n/a		n/a
Pass-through Corridors during Courtship/Mating and Incubation		n/a	11/ a
Adult Foraging Surveys & Buffer:	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 <u>daily</u> . If observe foraging outside of buffer on two consecutive surveys, establish or expand the buffer using flexible increments based on observed bird behavior to include foraging site if the foraging area is associated with a prenesting closure. These closures 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.	No additional buffers/closures.	No additional buffers/closures.
Unfledged Chicks Surveys:	SM1.: Observe brood once daily. SM2.: Observe brood at least 1 hour each in am and pm daily. Have monitor(s) present during periods of ORV or pedestrian access. Observations end once chicks have fledged. Chicks are considered fledged at 35 days or are observed in sustained flight of >15 m.	<u>SM1.</u> : Observe brood at a minimum every other day. <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.	Colonies will be surveyed by foot during the "peak" hatching period which should fall 21 days after initial nest counts. A follow-up survey by foot should be conducted during the "peak" fledge which should fall 20 days after hatch counts. <u>SM1</u> : Observe colony every other day. Tern and skimmer chicks will often move 100m or more from their colony site, often toward the nearest shoreline.

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INTEGRATION GROUP (2/17/09)

Rev. 2/20/08 for Proposal #3			
			SM2: Observe colony daily. Observations end after no unfledged chicks have been observed on 3 consecutive survey days. Closure can be removed after August 31 or two weeks after all chicks have fledged, whichever is later.
Unfledged Chick Buffers:	 <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. <u>SM1</u>: For the first 2 weeks after hatching, establish a 1000 m buffer for ORVs . Based on mobility of the brood, at the discretion of park management, the buffer can be reduced after the first two weeks to 500 m for ORVs and 200 m for pedestrians (at Cape Point and South Point). Points and spits would only be accessible from 7 a.m. to 7 p.m. as long as unfledged PIPL chicks are in the area and only if prescribed buffers can be maintained. The 7 a.m. opening (shall) be delayed until the chicks have been located. If chicks are highly mobile, the 1000 m buffer may need to be maintained. Buffer moves with chicks. Vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to PIPL chicks because of steep topography, dense vegetation, or other naturally occurring 	<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);. 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. <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	<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. <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.

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	Rev. obstacles. 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.	2/20/08 for Proposal #3 when chicks are mobile. Buffer moves with chicks. The closure will extend for 200m on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure will extend from the ocean side low water line to the bayshore low water line or to the dune line if no bayshore habitat exists. All: ORV access would not be allowed until 2 weeks after AMOY chicks have fledged (observed flight of 30 meters);				
	closed to ORVs for an additional 2 weeks). If birds and chicks. Closure can be removed a with Black Skimmers. At sites with Black Ski fledged, which ever is later.	Dogs are prohibited within 100m of all n after July 31 or two weeks after all chick mmers, closure can be removed after A				
Non-breeding / Wintering Survey	points and spits July 1 through May 31 followin Survey (ISS) protocol will be used to document NPS will document the distribution and abund	ng the existing NPS winter monitoring pr t other migrating/wintering species. ance of migrating and wintering shorebin	AMOY, WIPL, and REKN 3 times per month at the otocol. In addition, the International Shorebird rds within the Seashore, following the			
	International Shorebird Survey (ISS) protocols Non-breeding shorebird surveys will begin on					
	Survey sites TBD, but should include Cape Poir beaches between Buxton and Salvo, Hatteras V		soundside habitats), and selected ocean facing			

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(2/17/09) Rey. <u>2</u>/20/08 for Proposal #3

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Non-breeding / Wintering Areas	Non-breeding and wintering areas will be co	nsidered natural resource protection ar	eas.	
	Cape Point and Inlets: An annual migrating/wintering habitat assessment will be conducted at the points and spits by NPS. Migrating/wintering resource closures will be established and will be based on foraging, resting, and roosting habitats used by migrating and wintering Piping Plovers, Red Knots, and other shorebirds in the past 10 years, and suitable habitat types based on the results of the annual surveys. ORV use will not be permitted within 75m of mean high water at terminus of Pole Road, Hatteras Inlet. S. Ocracoke: Corridor passing non-breeding/ wintering ocean beach closure will be pass-through only.			
	Other Areas: To benefit Red Knots, Willets, Sanderlings, Black-bellied Plovers, Piping Plovers, and all other species of migrating and wintering shorebirds, NPS will establish resource protection areas for migrating and wintering shorebirds (open to pedestrians, unless closed for breeding birds or other reasons) that will provide relatively less disturbed foraging, resting, and roosting areas for migrating and wintering birds. Migrating/wintering resource closures will be maintained year round. Dogs will be prohibited within 100m of all migrating/wintering resource closures. The following activities are compatible with the non-breeding/wintering shorebird resource protection areas: fishing, beach walking, birding, kayaking, kite boarding, paddle boarding, photography, picnicking, sailing, shelling, stargazing, sunbathing, surfing, swimming, wildlife viewing and wind surfing. The activities listed above singly or collectively could result in disturbance that is incompatible with protection of habitat for migrating and wintering shorebirds. Human disturbance in these areas will have to be monitored and should any single activity or collective activities become excessive (definition TBD), NPS will implement seasonal or additional restrictions on compatible uses. Within 12 months of the implementation of ORV regulations, NPS will initiate a study of migrating/wintering resource areas in cooperation with USGS or major university. Should this study or future research indicate additional restrictions are needed, NPS will implement such restrictions.			
1				
Data Collected	(Cohen 2005) and use GPS to document nest locations. Record locations where territorial/ courtship behavior occurs, including scrape locations.	Collect data as recommended by USGS (<i>Meyers 2005</i>) and use GPS to document nest locations.	Collect data as recommended by USGS (<i>Erwin</i> 2005) and use GPS to document colony locations.	
	Estimate where adult and chick foraging occurs. Chicks should never be disturbed to obtain this information.			

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Future Research	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.		
Goals, Objectives, and Desired Conditions	the best available scientific data regarding habitat conditions, historical distribution and abundance of breeding populations, carrying		
	n of 7 field personnel is required to meet the daily monitoring requirements on the Park's 67 miles of shoreline). NPS will follow ations in the Atlantic Loggerhead Recovery Plan.		
Survey Time and Frequency			
	Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches before public ORV use. Daily surveys for nests end September 15, or two weeks after the last sea turtle nest or crawl was found, whichever is later. Periodic monitoring (e.g., every two to three days) for unknown nesting and emerging hatchlings will continue, especially in areas of high visitation from that date until November 15.		
Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed wa following severe storm events. Nest observations stop when all nests have hatched or excavation indicates that the n viable.			
	Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.		
Data Collected	Follow the North Carolina Wildlife Resources Commission Handbook and record:		
	-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 -Necessary protective measures for nest and hatchlings -Information regarding any post hatching nest excavation and analysis		
	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 hatchings found during excavations will be released after dark on the same day as excavation.		

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	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.
Nest Closures/ Buffers	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.
	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:
	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).
	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.
	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.
	Use light filtering fence behind nests nearing hatch dates to block light pollution from the villages and vehicles operating on the beach after dark.
	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.
Night Driving	Night driving restrictions will begin May 1st and continue until November 15 th .
Restrictions	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.
Nest Relocation	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.
	When a nest is found, staff assesses need for nest relocation and follows relocation guidance identified in the NCWRC handbook.
	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.
	If a nest is threatened by an imminent storm event, NPS will consult with NCWRC to determine appropriate action.
Light Management	Establish turtle friendly lighting standards and/or reduce light for all Seashore (NPS) structures.
	Encourage concessioners to install turtle friendly lighting.
	Develop educational material to inform visitors about their impact on the success of sea turtle nests.

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(2/17/09) Rev. 2/20/08 for Proposal #3

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.
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.
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.
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 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.

INTEGRATION GROUP (2/17/09) Rev. 2/20/08 for Proposal #3

Table 1. Shorebird / Waterbird Buffer Summary

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

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LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Routes and Areas Comparison: 2/25/09

TOPIC	OPTION A Jim K., Carla, Larry, Warren	OPTION B Destry, Derb, Jim L., Walker	OVERLAP (Prepared by Facilitators/NPS)
BODIE ISLAND			
Ramp 1 to 3			Not a ORV route
Ramp 3 to 4			ORV Route
Ramp 4 to Point	Ramp 4 around to spit to Bait Pond a ORV route	Ramp 4 to inlet closed to vehicles.	
	Non-breeding season ORV corridor to Bait Pond from Oceanside route		
HATTERAS ISLAND			
South Border of Salvo to 25			ORV Route
Ramp 25 to new ramp 33	¹ / ₄ mile south of 27 to ¹ / ₄ mile north of 30 not a route Between Ramp 23 and 34, 1 mile floating closure effective 12 months for breeding and/or migrating birds in non-breeding season New ramps at 25 and 32.4	Not a ORV route	
New Ramp 33 to North Avon border			ORV Route
Ramp 38 to Buxton Line	From Southern border of Avon to Haulover (about 2 miles) is ORV route From Haulover to northern line of Buxton village is not a ORV route	1-mile area centered on Haulvoer is not a ORV route	
Buxton Line to 43	From north boundary of Buxton to old light house site is ORV route subject to east facing beach village closures From proposed new ramp 40 to 0.7 miles north of ramp 43 is not a ORV route From 0.7 miles north of ramp 43 to Ramp 43 a ORV route	Restore historic pedestrian only area from south groin at old Lighthouse site to Ramp 43 – not an ORV route	Move and expand parking lot shown on 2/13/09 map to the fish cleaning table area near Ramp 43?
Ramp 43 to 45			ORV Route

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LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Routes and Areas Comparison: 2/25/09

TOPIC	OPTION A Jim K., Carla, Larry, Warren	OPTION B Destry, Derb, Jim L., Walker	OVERLAP (Prepared by Facilitators/NPS)
Ramp 45 to 49	Install new Ramp 47 45 to 49 ORV Route and Between ramps 45 and 47 is a 1-mile floating 12 month non-ORV area. In non- breeding season there is to be an access corridor behind the non-ORV area 50M from waterline if not at the dune line. Corridor must be wide enough to accommodate horseback riders and vehicles. Ramp 49 eastward 0.5 miles is seasonally closed to ORVs when campground open with a dune-line ORV corridor for passage and signage alert for pedestrian walkover	Ramp 45 to 0.5 mi east of Ramp 49 not a ORV route	Extend interdunal road ORV route between 45 and 49 0.5 Mile east of 49 to 49 is a ORV route
Ramp 49 to Frisco Border	Not a ORV Route	Is a ORV Route	
West border of Frisco to East border of Hatteras			Not an ORV areas
Ramp 55 to Hatteras Spit	West boundary of Hatteras to Bone road is a ORV route From Bone road to Pole road terminus is open when inlet is closed during breeding season and Bone road to Pole road terminus is closed when inlet is open. Pole road from origin at Hatteras village to its exit on the beach is designated a ORV route. Sound side access at coast guard station is a route. Cable Crossing road to sound is a route. Spur road is a route. Crossovers between Bone road and the beach on either side of the Isabel overwash fans are routes. Bone road is a route. From Pole road terminus to the rip is a	0.5 mil west of Ramp 55 to inlet ocean beach closed to vehicles Eastern spurs off of pole road closed to ORV, parking area established at terminus of pole road.	West border of Hatteras to 0.5 mile east of Ramp 55 a ORV route Pole Road, Spur Road, and Roads to Sound are ORV Routes Soundside a route (?)

Page 2

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LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Routes and Areas Comparison: 2/25/09

TOPIC	OPTION A Jim K., Carla, Larry, Warren	OPTION B Destry, Derb, Jim L., Walker	OVERLAP (Prepared by Facilitators/NPS)
	ORV route. From the rip to the Cable Crossing is a route.		
OCRACOKE			
North Ocracoke to Ramp 59	From Ramp 59 north to pilings a ORV route.	North Ocracoke spit to 55 not a ORV route	North of pilings not a ORV route
Ramp 59 to new Ramp 62			Not a ORV route
Ramp 62 to Ramp 64			A ORV route
Ramp 64 to 67	³ / ₄ north of 67 to 67 is a ORV route	64 to 67 not a ORV Route	A ORV route from 64 to 3/4 mile north of 67
Ramp 67 to ¾ mile South			ORV Route
³ ⁄ ₄ mile South of 67 to ³ ⁄ ₄ mile(?) north of Ramp 70	Closed to ORVs when campground is open	Closed to ORVs from 3/15 to 11/30	ORV route, subject to seasonal closure for pedestrians/campgrounds/etc. described in other columns in differences
North of Ramp 70 to 72			ORV Route
72 to South Point	Approximately 1 mile (?) ORV corridor 50 m above the Oceanside with waterline closure for habitat.	Approximately 1.5 mile (?) ORV corridor 50 m above the Oceanside with waterline closure for habitat.	ORV route from 72, around point, to breeding/non-breeding closure on with differences as to a corridor noted in other columns. Non-breeding soundside access from Oceanside corridor around edge of vegetated area to soundside and parking

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TOPIC	OPTION A Jim K., Carla, Larry, Warren	OPTION B Destry, Derb, Jim L., Walker	AREAS OF OVERLAP (caveated in <i>italics</i> as needed)
OVERLAP OR PARTIA			· · · · · · · · · · · · · · · · · · ·
Park Funding	Same	Same	Support increase in operations funding for NPS
Vehicle/Ops Characteristics	 Per Committee draft Motorcycles allowed with free special use permit that includes education 	 Per Committee draft Motorcycles allowed in front of N. villages, excluding Frisco and Hatteras Villages - 	Per Committee draft (copies provided separately) Motorcycles NOT agreed to, see differences in other columns
Routes/Areas	2/13/09 Discussion Draft Maps with the changes described below	2/13/09 Discussion Draft Maps with the changes described below	See separate document for areas of overlap and difference
Villages	 All villages seasonally closed to ORVs East facing closed 5/15 - 9/15 South facing closed 3/01 - 10/31, Easter week, Thanksgiving week 	 North (East facing) villages open - any seasonal dates ok, no closures during any season also ok. Frisco and Hatteras closed year round. 	 North (east facing villages) closed to ORVs 5/15/ to 9/15 South facing villages closure approach not agreed to, see differences in other columns
Permits	 ORV Special Use permit Education required Fee is \$5/vehicle/day; \$10/vehicle/week; or \$30/vehicle/year. Discounts for residents, seniors, economic hardship, disabled, veterans, active duty military All fees used to adm. ORV permit, for ORV related improvements/maintenance and LE 	 ORV Special Use permit Education required Fees should be reasonable, and set for cost recovery, to include resource management costs necessitated by ORV use. 	 ORV Special Use permit No limit to number of permits Available through multiple means such as web, in-person, etc. Permit assigned to person with valid driver's license and vehicle registration Park will prepare annual report on permit system Education required Fee amount is NOT agreed to, see differences in other columns
Natural Resources	 SM2 at <u>all</u> points and spits, incl Cape Pt. and West to Ramp 47 SM1 elsewhere as outlined in NPS draft Alt. E 11/05/08. (unless otherwise specified in map 	See attached: "Natural Resource Protection"	 SM2 at points and spits (including Cape Point to Ramp 47) SM1 elsewhere All details of proposals not fully

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TOPIC	OPTION A Jim K., Carla, Larry, Warren	OPTION B Destry, Derb, Jim L., Walker	AREAS OF OVERLAP (caveated in <i>italics</i> as needed)
	proposals)	Destry, Derb, shir E., Walker	discussed nor agreed to
Advisory Committee	Not discussed	Not discussed	The NPS should establish a diverse stakeholder committee/group to provide periodic input on Park ORV, pedestrian, and natural resource policies.
			Contingent on further NPS consideration
DIFFERENCES			
Night Driving/Lighting	Night Driving - Restriction Dates: Tuesday after Memorial Day weekend to sunrise/set Friday night of Labor Day weekend - Park and Stay - (25 vehicles per spit, 50 at Cape Pt, 50 at South Ocracoke); 911 escape with escort; self- contained vehicle or vehicle with a toilet, with a special use permit, parking pens with SM2 buffers, no escort off beach - Steward at all locations - Time: 1 hr after sunset to ½ hour after sunrise, NPS utilizing additional ATV/personnel to clear OHV areas as soon as practicable in AM, time being of the essence. Lighting - - County Ordinance	Night Driving Option #1: - Implement Atlantic Loggerhead Recovery Plan - Restriction Dates: 5/1-11/15 - No night driving: ½ hr after sunset until beach has been cleared by turtle patrol in the morning. Option #2: Lighting - County ordinance - Turtle-related management to be determined by recommendation by FWS and WRC.	 <u>Night Driving</u> Night driving restrictions needed (details not agreed to) <u>Lighting</u> County ordinance
Pre-Nesting Closures Areas other than Points and Spits	Apply pursuant to Draft NPS Alt. E 11/05/08	Apply anywhere with bird activity during last ten years that has appropriate habitat: Shorebirds (3/15), CWOB (4/1)	

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LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Issues Comparison: 2/25/09

ADDITIONAL ISSUES AND IDEAS IDENTIFIED BY THE INTEGRATION GROUP

ORV Safety closures &	Per Committee draft (copies provided separately)
•	Per Committee draft (copies provided separately)
Pedestrian Safety	
Ramps, Parking Lots, and	To support the ORV routes and non-ORV areas designated by the
Infrastructure	Committee, new or improved ramps, parking lots, and interdunal
Improvement	roads will be developed with appropriate signage, educational
	elements, air stations, and restrooms. Preferably, each ORV route
	will have an egress/exit ramp on each end of the route and each
	pedestrian area will have sufficient boardwalks or trails for access.
Soundside Access	If not delineated in routes and areas maps from the Committee, ORV
Soundshie Heeess	access will be provided to soundside at existing points, designated as
	routes, with sufficient maintenance for clear passage and route
	· -
	signage to prevent impacts to vegetation, recognizing these routes
	may be maintained in a more "undeveloped" or natural condition.
Education	On-going resource and safety education for all users of the Park –
	pedestrians, ORV drivers, and any others is an important and
	essential element of a final overall ORV management plan and
	natural resource protection effort.
Periodic Review	Due to changing geomorphological conditions, visitor use, and other
	dynamic factors, the NPS will engage in a periodic review of the
	ORV plan at least once every 5 years.
Commonoial Fishing	
Commercial Fishing	Use of ORVs by commercial fishermen will be managed separately
	under a Commercial Fishing Special Use Permit
Habitat Management on	On Cape Point, the NPS will explore means of habitat management
Cape Point	including vegetation, positive decoys for CWBs.

LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Issues Comparison: 2/25/09

Natural Resource Protection Table as Part of Option B:

Survey Time and Frequency	Piping Plover	American Oystercatcher and Wilson's Plover	Colonial Waterbirds
All Species	Zone of ocean backshore at least 10m wide adjacent to the toe of the primary dune where		e is closed to ORV use. This zone should be
All Bird Species	Species Management 1 (SM1): Will use large monitoring and frequent fencing changes. W staffing requirements TBD by NPS. Species Management 2 (SM2): Will use sma at Cape Point and S. Ocracoke only at the di This method is less predictable for Seashore requires additional skilled staff, and requires If NPS is unable to survey, monitor, or protect or SM2 are inadequate to protect natural reso NPS is committed to implementing science-b additional data, and scientific studies, may in protect natural resources.	er, longer lasting buffers with less moni fill be applied at all resource areas other ler buffers and require more frequent r scretion of NPS. Estimated staffing re- visitors, relies on variable closure and additional resources. et areas as described, unable to implem burces, then NPS will implement USGS ased resource protection and manage dicate that species management and p	er than Cape Point and S. Ocracoke. Estimated nonitoring and fencing changes. Will be applied
		ony of waterbirds" (Nisbet 2000). This	definition shall be applied to nesting Colonial
	Dogs are prohibited within 100 yards of all na shorebirds. Pet restrictions and leash regula		ral resource areas for migrating and wintering

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Pre-Nesting Surveys	 SM1, SM 2: By March 1, all potential habitats will have been evaluated. PIPL prenesting closures will be recommended based upon that habitat evaluation. Those closures will installed by March 15. 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. Survey for Wilson's plover during piping plover surveys. Prenesting buffers will not be modified in cases where the beach erodes into the buffered habitat. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years: 	 SM1: March 15 – July 15 survey historic breeding areas (last ten years) at least 3 times per week SM2: 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 prenesting closures allow pedestrian and/or ORV access corridors, survey daily. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years: 	 SM1: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week. SM2: April 1 – July 15 survey historic Least Tern, Common Tern, and Gull-billed Tern breeding areas (last ten years) at least 3 times per week. April 1 – Aug 15 survey historic Black Skimmer breeding areas (last ten years) at least 3 times per week lf/when CWB are observed in an area, observe 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. Bodie Island, Cape Point & South Beach, Hatteras Inlet, N & S Ocracoke Island, and historic nesting areas active in the past 10 years:
Pre-Nesting Buffers	<u>SM1</u> : Areas designated as SM1 Resource A SM2: Areas designated as SM2 may have a		access during the pre-nesting period.
	(including but not limited to territorial behavior activities) is observed. Standard buffer dist	or, courtship, mating, scraping, confirme ances in Table 1 will apply immediately	ed scrapes, and other breeding or nest building / upon observation of nesting activity and will not ablished at all nesting sites active in the previous

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	Bodie Island: Due to location of waterbird colonies and shorebird nesting sites, and the location of nesting habitats for these species, the closure of the pedestrian corridor will begin at the northernmost boundary of the pre-nesting closures as delineated in Alt E. Cape Point: North side corridor to be not more than 50m wide; Hatteras Inlet: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years; S. Ocracoke: established as described above (page 13, revised map 2/13/09); N. Ocracoke: pre-nesting closure to include all suitable nesting habitat (dune to ocean) and nesting sites active in the past 10 years; S. Deliberate attempts to harass or disturb birds, or vandalize fencing, will result in immediate closure of the corridor.		
	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.	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.	 SM1/SM2: Pre-nesting closures will be established for CWB by April 1 in areas that had a colony (or colonies) in the past 10 years, if habitat is still suitable. Closures will be removed if no breeding activity is seen in the area by July 31, or two weeks after the site has been abandoned by CWB, whichever comes later. NPS natural resource staff will conduct an annual assessment of colonial waterbird breeding habitat to plan pre-nesting closures that are adapted to current habitat and physiographic conditions.
Courtship/Mating Surveys:	nesting closure. <u>SM1</u> : If PIPL, AMOY, WIPL, or CWB are observ	ed exhibiting territorial or courtship bel	yed daily from establishment to removal of the pre- havior in suitable habitat, or if scrapes are observed habitat 2 times per week; increase to 3 times week
		urtship behavior, observe daily. Survey	territorial or courtship behavior in suitable habitat, potential new habitat 2 times per week; increase to

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Courtship/Mating Buffers:	SM1, SM2: If courtship or copulation is observed outside of existing prenesting closure, or inside the closure but within 50 m of the closure boundary, establish or expand buffer to ensure 50 m buffer for the observed birds. Buffer will be increased in 50 m increments if disturbance occurs. If nest buffer is less than 75 m observe nesting activity daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is observed. Observations; observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.	 <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. <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 increased in 50 m increments if disturbance occurs. If, in the judgment of NPS Resources Management staff, a pair has abandoned a territory and established a new territory at another location, the buffer may be removed at the abandoned territory after two weeks with no activity. 	SM1: Outside of existing pre-nesting closure, or inside the closure but within 300 m of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, a 300 meter buffer will be established around the scrape locations. SM2: Outside of existing pre-nesting closure, or inside the closure but within the buffer distance prescribed below of the closure boundary, if one observation of scraping or territorial behavior has been documented or if scrapes are being maintained, establish a 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.
	for nests) conducted every 3 days.	looks for nests) conducted when	"peak" nesting period which is during the last

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		observations suggest a nest is present.	week of May and the first week of June.
Nest Observation:	SM1, SM2: Observe nests daily from a distance that does not disturb the birds, based on professional judgment. Approach nests once per week to observe and record data. If nest buffer is less than 75 m observe nest daily to determine if disturbance is occurring. Observations will continue until 50 passages of pedestrians or vehicles within 10m of the closure boundary are recorded. If no disturbance is observed, observations can be terminated. At the first disturbance, buffer will be expanded by 50 m if human disturbance is observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance occurs again.	<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). <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.	<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. <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.
Nesting Buffers:	<u>All species</u> : The park retains the discretion to unprotected areas, a closure will be establish immediate vicinity of paved roads, parking lov resource protection to the maximum extent p for 2 weeks after a nest is lost to determine if	ed immediately when a nest with egg(s ts, campgrounds, buildings and other fa ossible while still allowing those sites to) is found. When nesting occurs in the cilities, NPS retains the discretion to provide remain operational. Buffers will remain in place
	SM1, SM2: NPS shall not reduce buffers to a prenesting closures two weeks after all nesting closures two weeks after all n		
	Deliberate attempts to harass or disturb birds first act, an additional 100m for the second a		mediate expansion of the buffer by 50m for the

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	 <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 buffer falls within the intertidal zone a full-beach closure will result. 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. 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, buffer will be expanded by 50 m if human disturbance is observed. Observations will continue until 50 additional passages are documented and buffer will be expanded by an additional 50 m if human disturbance 	 <u>SM1</u>: Use buffer of 300 m. <u>SM2</u>: Use buffer of 150 m around nests occurring outside of existing closures. <u>All</u>: Establish buffer immediately when nest is located. Increase buffer in 50 meter increments if necessary to prevent human disturbance. If the buffer falls within the intertidal zone a full-beach closure will result. For AMOY nests that occur inside a pre-nesting closure at one of the points or spits <u>and</u> 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. 	 <u>SM1</u>: Use buffer of 300 m for all species. <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. <u>All</u>: 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. Colony will be monitored daily for presence of new nesting activity and buffers will be adjusted as needed. For a colony that occurs inside a 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.
Pass-through Corridors during Courtship/Mating and Incubation	n/a	n/a	n/a
Adult Foraging	Survey suitable piping plover breeding habitat 3 times per week to monitor for	No additional buffers/closures.	No additional buffers/closures.

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Surveys & Buffer:	adults (with an associated scrape or nest territory) foraging outside of an existing closure. If observe foraging outside of existing closure, survey site <u>daily</u> . If observe foraging outside of buffer on two consecutive surveys, establish or expand the buffer using flexible increments based on observed bird behavior to include foraging site if the foraging area is associated with a prenesting closure. These closures 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:	 <u>SM1</u>.: Observe brood once daily. <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. Observations end once chicks have fledged. Chicks are considered fledged at 35 days or are observed in sustained flight of >15 m. 	<u>SM1.</u> : Observe brood at a minimum every other day. <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.	Colonies will be surveyed by foot during the "peak" hatching period which should fall 21 days after initial nest counts.A follow-up survey by foot should be conducted during the "peak" fledge which should fall 20 days after hatch counts.SM1: Observe colony every other day.Tern and skimmer chicks will often move 100m or more from their colony site, often toward the nearest shoreline.SM2: Observe colony daily.Observations end after no unfledged chicks have been observed on 3 consecutive survey days. Closure can be removed after August 31 or two weeks after all chicks have fledged, whichever is

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			later.
	SM1. Establish a minimum 1000 motor		
Unfledged Chick Buffers:	 <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. <u>SM1</u>: For the first 2 weeks after hatching, establish a 1000 m buffer for ORVs . Based on mobility of the brood, at the discretion of park management, the buffer can be reduced after the first two weeks to 500 m for ORVs and 200 m for pedestrians (at Cape Point and South Point). Points and spits would only be accessible from 7 a.m. to 7 p.m. as long as unfledged PIPL chicks are in the area and only if prescribed buffers can be maintained. The 7 a.m. opening (shall) be delayed until the chicks have been located. If chicks are highly mobile, the 1000 m buffer may need to be maintained. Buffer moves with chicks. Vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to PIPL chicks because of steep topography, dense vegetation, or other naturally occurring obstacles. 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 	<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);. 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. <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. The closure will extend for 200m on each side of a line drawn	<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. <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.

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	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.	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. All: ORV access would not be allowed until 2 weeks after AMOY chicks have fledged (observed flight of 30 meters);	
	closed to ORVs for an additional 2 weeks).	Dogs are prohibited within 100m of all r after July 31 or two weeks after all chicl	except for AMOYs where the area will remain natural resource closures established for breeding ks have fledged, whichever is later, except for site August 31 or two weeks after all chicks have
Non-breeding / Wintering Survey	 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. NPS will document the distribution and abundance of migrating and wintering shorebirds within the Seashore, following the International Shorebird Survey (ISS) protocols. Non-breeding shorebird surveys will begin on July 1 and continue until May 31. Survey sites TBD, but should include Cape Point, South Beach, all inlet spits (ocean and soundside habitats), and selected ocean facing beaches between Buxton and Salvo, Hatteras Village to Hatteras Inlet, and Ocracoke. 		
Non-breeding / Wintering Areas		ntering habitat assessment will be cond established and will be based on foragin other shorebirds in the past 10 years, and	ucted at the points and spits by NPS. ng, resting, and roosting habitats used by migrating d suitable habitat types based on the results of the

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	Corridor passing non-breeding/ wintering ocean beach closure will be pass-through only.				
	Other Areas: To benefit Red Knots, Willets, Sanderlings, Black-bellied Plovers, Piping Plovers, and all other species of migrating and wintering shorebirds, NPS will establish resource protection areas for migrating and wintering shorebirds (open to pedestrians, unless closed for breeding birds or other reasons) that will provide relatively less disturbed foraging, resting, and roosting areas for migrating and wintering birds.				
	Migrating/wintering resource closures will be maintained year round. Dogs will be prohibited within 100m of all migrating/wintering resource closures. The following activities are compatible with the non-breeding/wintering shorebird resource protection areas: fishing, beach walking, birding, kayaking, kite boarding, paddle boarding, photography, picnicking, sailing, shelling, stargazing, sunbathing, surfing, swimming, wildlife viewing and wind surfing.				
	The activities listed above singly or collectively could result in disturbance that is incompatible with protection of habitat for migrating and wintering shorebirds. Human disturbance in these areas will have to be monitored and should any single activity or collective activities become excessive (definition TBD), NPS will implement seasonal or additional restrictions on compatible uses.				
	Within 12 months of the implementation of ORV regulations, NPS will initiate a study of migrating/wintering resource areas in cooperation with USGS or major university. Should this study or future research indicate additional restrictions are needed, NPS will implement such restrictions.				
Data Collected	Collect data as recommended by USGS (<i>Cohen 2005</i>) and use GPS to document nest locations.	Collect data as recommended by USGS (<i>Meyers 2005</i>) and use GPS to document nest locations.	Collect data as recommended by USGS (<i>Erwin 2005</i>) and use GPS to document colony locations.		
	Record locations where territorial/ courtship behavior occurs, including scrape locations.				
	Estimate where adult and chick foraging occurs. Chicks should never be disturbed to obtain this information.				
Future Research			ogists or ornithologists associated with a major of species or improve resource protection within		

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Goals, Objectives, and Desired Conditions	the best available scientific data regarding habitat conditions, historical distribution and abundance of breeding populations, carrying		
Sea Turtles (a minimum monitoring recommend.	n of 7 field personnel is required to meet the daily monitoring requirements on the Park's 67 miles of shoreline). NPS will follow ations in the Atlantic Loggerhead Recovery Plan.		
Survey Time and Frequency	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. Conduct daily morning surveys by ATV/UTVs and possibly ORVs for crawls and nests on all beaches before public ORV use. Daily surveys for nests end September 15, or two weeks after the last sea turtle nest or crawl was found, whichever is later. Periodic monitoring (e.g., every two to three days) for unknown nesting and emerging hatchlings will continue, especially in areas of high visitation from that date until November 15. Monitoring will also occur for post-hatchling washbacks during periods when there are large quantities of seaweed washed ashore or following severe storm events. Nest observations stop when all nests have hatched or excavation indicates that the nest was not viable. Once a light filter fence is installed, monitor nests daily for signs of hatchling emergence.		
Data Collected	Follow the North Carolina Wildlife Resources Commission Handbook and record:		
	 -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 -Necessary protective measures for nest and hatchlings -Information regarding any post hatching nest excavation and analysis 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. 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.		
Nest Closures/	Establish a buffer approximately 10 meters by 10 meters with symbolic fencing and signage around nest. Closure size may be		

DRAFT PURPOSES ONLY

Buffers	modified due to environmental conditions at the nest site.
	Approximately 50– 55 days into incubation, closures expanded to the surf line. The width of the closure based on the type and level of use in the area of the beach where the nest was laid:
	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).
	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.
	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.
	Use light filtering fence behind nests nearing hatch dates to block light pollution from the villages and vehicles operating on the beach after dark.
	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.
Night Driving	Night driving restrictions will begin May 1st and continue until November 15 th .
Restrictions	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.
Nest Relocation	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.
	When a nest is found, staff assesses need for nest relocation and follows relocation guidance identified in the NCWRC handbook.
	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.
	If a nest is threatened by an imminent storm event, NPS will consult with NCWRC to determine appropriate action.
Light Management	Establish turtle friendly lighting standards and/or reduce light for all Seashore (NPS) structures.
	Encourage concessioners to install turtle friendly lighting.
	Develop educational material to inform visitors about their impact on the success of sea turtle nests.

DRAFT PURPOSES ONLY

FOR DISCUSSION

LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Issues Comparison: 2/25/09

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.

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LAST OPTIONS PRESENTED IN THE INTEGRATION GROUP Issues Comparison: 2/25/09

 Table 1. Shorebird / Waterbird Buffer Summary

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	



Groundrules for the Public at CAHA Negotiated Rulemaking Meetings

To ensure a productive meeting and enable the RegNeg Committee to do its work, we request that the public follow these groundrules. There are three public comment periods set aside on the agenda. Please focus your comments on the topics listed on the agenda.

- Please hold your comments for the public comment periods
- Be creative and propose solutions
- ✓ Express your own views
- Encourage civility and respect for all
 - Focus on the problem, not the people
 - Disagree, without being disagreeable
 - Refrain from personal attacks
 - Refrain from expressing approval or disapproval of other comments

Written comment for the Committee may be sent to: Designated Federal Official, 1401 National Park Drive, Manteo, NC 27954; or CAHA_Superintendent@nps.gov

To the National Park Service Negotiated Rulemaking Committee. February 27, 2009

Michael E.C. Gery Manteo, NC

My name is Michael Gery and I live on Roanoke Island. I appreciate the opportunity to speak to the committee today. I speak for myself alone, but I do know there are many others who feel as I do about trying to keep as much of our national seashore as natural as possible so that people can see an ocean beach in its natural state. Experiencing a natural ocean beach is not so easy to do these days. But that's why this national seashore was established: to protect and maintain a beach for people to enjoy far into the future.

I also appreciate the commitment that committee members have made to this process of devising a plan to manage motorized vehicles on these beaches. You all have added important information to the discussion. Regardless of whether you can reach consensus, you have helped the National Park Service come up with a fair plan.

Now it's time for the Park Service to institute a plan that should have been instituted 30 years ago. I congratulate Mike Murray and this Park Service administration for taking on this difficult issue. Because previous administrations could not design a plan – or otherwise were prevented from designing one -- the massive popularity of 4-wheel-drive vehicles during the past 30 years has turned some very important and treasured sections of the National Seashore into parking lots and joy-riding race tracks. These are areas where it is no longer possible for families to appreciate the natural beauty and activities of a seashore beach, which is what the National Seashore was meant to provide.

All we're asking is to return more of this beach to the peace and quiet it's supposed to have, and that means closing more stretches year-round to motorized vehicles, except those that carry law enforcement and rescue personnel, or physically disabled persons.

This National Seashore belongs to the nation. It does not belong to Dare County alone, and protecting it is not a public relations problem for Dare County, as our elected commissioners evidently believe. The Park Service has an obligation to preserve these beaches in their natural state, to preserve the ecology, the wildlife, and the history of this seashore. Allowing motorized vehicles free reign over large sections of the National Seashore is like allowing anyone to blast loud radios anywhere in the National Cathedral, or to open the Gettysburg National Battlefield to volleyball and golf. That's why no administration in 36 years has rescinded the order to regulate motorized vehicles in National Parks. These parks are meant to be preserved as parks for everyone, not allowed to become parking lots for a privileged few.

I am encouraged that the recent shift in American government and policy has revived the real American character, the character that respects our neighbors and our communities, our history, our beliefs, our environment and our system of government. I look forward to a new administration that will restore dignity to the Department of the Interior and will



allow the National Park Service to do what it does best: to once again manage and protect this national treasure we have in our backyard.



2 26 09 Reg Neg comment

Jim Harris longcaster@charter.net PH 252 261 4990

PART 1 of 2

These are the Walker Golder reports used at the Feb3 Reg Neg. I took out (C&P) and my comments are in blue. Cyndy Holda got them posted in NPS PEPC for Reg Neg.

- <u>Reference Material Discussed Barbee 1994</u> (2.2 MB, PDF file)
- <u>Reference Material Discussed Collazo et al. 1995 part 1 of 3</u> (4.9 MB, PDF file)
- Reference Material Discussed Collazo et al. 1995 part 2 of 3 (4.3 MB, PDF file)
- Reference Material Discussed Collazo et al. 1995 part 3 of 3 (4.2 MB, PDF file)

My observations & comment is in Blue

The Red text is from the text and important

From Collazo study, piping plovers 93-94;

Through our observations of incubating adults and adults tending chicks, we found that piping plovers are only rarely disturbed by encounters with vehicles, planes or humans on foot. More consequential disturbances were caused by interactions with natural predators and competitors.

By reading NPS plover '08 reports there is high incidence of plover bothering plover

At this present level of park use, park closures would likely have minimal effect on piping plover reproductive success.

Does this mean they aren't necessary?

Storms in the early part of the breeding season cause breeding losses and delays, and high temperatures, especially late in the breeding season, impose heat stress that may indirectly cause chick mortality. For these reasons, productivity goals set in the recovery plan (1.5 fledged chicks/pair/year), established from studies of more northern populations, are probably unrealistic for North Carolina.

Continue vegetation removal at Cape Point along the south shore of the brackish pond. To. delay the regrowth of vegetation in these treated areas, **it** may be beneficial to use raking machinery after disking to prevent vegetative growth from cuttings. Growth of vegetation in other piping plover foraging and nesting areas of CAHA should be monitored; additional areas may need to be maintained. Preservation of interior wet and mud flats on CAHA is critical; otherwise piping plovers may only find suitable foraging habitat along the ocean intertidal zone where human disturbance is a problem. (6) At present, beach closures are unnecessary and are not likely to favorably impact breeding piping plovers on the islands. (7) Piping plover population numbers and reproductive success must be consistently monitored so that reliable population trends can be tracked as a means to determine how the NC population is maintained.

Seasonal numbers, distribution and population dynamics of shorebirds on the Outer Banks of North Carolina..Chapters I and II Surveys were conducted twice per month by

vehicle.

This is a twice a month drive on the beach

Red Knots; .Most Red Knots were seen at North Core Banks (65% of total) and Ocracoke Island (28% of total). Compared to other ISS sites, the Outer Banks ranked last in regional importance to this species

Sanderlings

The capture of Sanderlings was described in detail earlier (Chapter 1). All birds were fitted with an aluminum U.S. Fish and Wildlife Service leg band and a series of either four (1992) or three (1993) color bands arranged in a unique combination. The color bands were U.V. stable PVC bands Color band seams were melted together to reduce the possibility of band loss. How do you melt plastic on a birds leg??

Breeding colonial waterbird studies qn the Outer Banks of North Carolina.

Barbee from inside Collazo;

Different human activities had different effects on shorebird behavior. Faster, erratic events such as running pets and children, seemed to upset birds more than slower, regular events such as people walking, or slow moving vehicles. This was very similar to Burger's (1986) findings in New York. Along North Carolina's outer Banks, many shorebirds seemingly ignored stationary humans and stationary vehicles on the beach, often foraging within a few feet of sunbathers and parked vehicles.

To assure that important sites where nesting birds are successful and where management is possible, we recommend that ORV traffic be allowed in such key colony sites as Cape Point, Hatteras Inlet, to drive down vegetation.

I note that a common wording, management = predator control/removal. Plover on plover attack/intimidation is rampant in CAHA, should plovers be managed more?

I get the impression, when reading these studies that the authors would like to write something like;

"when plovers were brooding their eggs, and the adults reacted to disturbance, the eggs were cowering deep into the nest and showed no signs of fleeing behavior (running away flying, or broken wing display. The eggs remained defensive refusing to give any ground."

PART 2 of 2 Tarr CALO 2008

http://parkplanning.nps.gov/document.cfm?parkID=358&projectId=10641&document ID=25865

We found that disturbance has a negative effect on site use by shorebirds, all birds, and Black-bellied Plovers.

Why are Black bellied plovers singled out

Wildlife managers seek to understand disturbance so that they can balance the costs of human disturbance to wildlife with the benefits that recreation provides in educating the public, generating support for conservation, and increasing awareness of conservation issues (Cole and Knight 1991, Gill 2007, Sutherland 2007)

Disturbance can have physiological effects such as elevated energy

expenditure, elevated hormone levels, and other responses. Fleeing responses in wildlife are known to increase heart rate, cardiac output, and blood sugar (Gabrielsen and Smith 1995).

This must be very hard to study, since handling the bird alone would put measurements off the charts

We believe that our counts provided good estimates of true bird abundance in segments because most segments were relatively narrow, we were able to see all portions of the beach, and the movement of birds in response to the ATV aided identification and counting.

Flushing birds with an ATV aids counting yeah right

We removed flyovers from this analysis because we suspected that the detectability of birds in the air was less than that of birds on the ground or in the surf and that the removal of flyover detections would, therefore, decrease the heterogeneity associated with our indices

So counting & identifying from airplanes doesn't work, who knew

In general, the numbers of people and vehicles on South Core Banks' ocean beach increased throughout the fall, and after 6 September visitor abundance corresponded closely with vehicle abundance this here is brilliant. It says there were very few to no pedestrians

Plot locations were not randomly selected because placement was restricted by sea turtle nest sites and **it was only practical to establish closures adjacent to vehicle access ramps**. Early in the season we used closures that were established primarily to protect sea turtle nests, but later in the season, as sea turtle nests hatched or failed, we established closures for the exclusive use of our study. This lack of randomization in our selection of experimental units disqualifies our design as a true experiment (Ott and Longnecker 2001), but it did not preclude our ability to conduct an experimental

manipulation and make inferences about the effects of a controlled variable. Our experimental vehicle disturbance treatment involved driving an ATV on a variable, winding route through the impact plot at speeds of 15 to 20 mph every 10min during the sampling period. Drivers made an effort to approach and flush all birds in the plot

We attempted to simulate high levels of beach traffic based on an assessment of traffic levels conducted during a pilot field season Responses to vehicle disturbance varied by species and group. Vehicle disturbance had a significant negative effect on the overall number of birds using experimental plots Our results indicate that vehicle disturbance influences the distribution, abundance, and behavior of shorebirds on ocean beaches habitats at migratory stopover sites. The introduction of vehicle disturbance to ocean beach segments decreased the numbers of all birds and shorebirds in experimental plots, decreased their relative use of the wet sand microhabitat, and increased their use of the swash zone.

No kidding, if you chase all the birds off an area of beach, it is a negative effect. This study shows JOYRIDING for harassment, on the beach, is wrong. I could have rendered that for no cost.

It wouldn't be because ATVs ran all around the turtle nests going 15-20mph.

Here is the experiment, drive an ATV inside turtle enclosures at 15-20mph aiming to scare every bird inside the enclosure. This simulates high levels of beach traffic, my ass. This only shows that flushing every bird with willful intent is wrong. They fail to understand that fishermen use ATVs/ORVs to go to a destination, not run all over the beach in a haphazard manner chasing birds. Some of these turtle nests failed, I wonder why. Did haphazard misuse of ATVs inside turtle enclosures have any cause/effect on the turtle nest failures?

Why didn't they do an experiment of actual beach use, IE: drive next to the dune or along the high tide line in a careful manner going to a destination, not driving all over the place purposely scaring birds.

A common challenge when designing field experiments is to choose a treatment level that can be standardized and is heavy enough to test hypotheses while still being similar to actual levels in the system of interest.

The challenge is doing one that reflects real conditions

We were **unable to simulate vehicle traffic patterns** from unrestricted areas because they are irregular, and it was important that our treatment be standardized among treatment plots. Actual traffic levels on the National Seashore consist of a variety of vehicle types (ATV, recreational vehicle, pickup truck etc.) driven at variable frequencies and speeds, primarily in the dry sand. Our treatment was consistent, frequent, spanned all beach microhabitats, and almost always resulted in birds flushing. Our findings identify a disturbance level at which we know disturbance influences shorebirds' utilization of ocean beach habitat but it is not an assessment of the effects of actual traffic levels.



In other words, they purposely designed an experiment that doesn't reflect real use If you drive an ATV with the intent to flush every bird, every bird will flush, no kidding. Real beach users don't abuse the resource, they don't intend, from the start, to flush every bird, on their route to a destination.



PreserveBeachAccess.org

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PreserveBeachAccess.org

The Grassroots Campaign to Preserve Access to America's Beaches

Comments from the People

People from around the country are concerned about preserving beach access. Following are personal comments shared by people viewing the **PreserveBeachAccess.org** website.

Each person's perspective is different. Some want to preserve a heritage and tradition to share with their children and grand-children. Others, who depend on open and accessible beaches to provide for their families, are worried about their financial future and how to survive. All are pleading to preserve access to America's beaches for recreational activities.

There are candid remarks from disabled veterans, single mothers, concerned conservationists and others pleading to preserve access to America's beaches for recreational activities.

First Name	Comment	City	State
Ben	The ability to drive on the beach has allowed us to bring our step father to his favorite place in the world when he was fighting cancer and could not walk to the ocean.	Auburn Twp	Ohio
Mary	I'm a working single mom who literally rolls my change all year long to be able to take 4 days in August to vacation on Ocracoke Island. I cried when I got to the stopping point off Ramp 72 and could not reach South Point. I hope and pray that I will be able to get there in 2009.	Virginia Beach	Virginia

Tim	My wife and I are both huge supporters and protectors of the environment and I work for the New Jersey Department of Environmental Protection. While we totally support the idea of protecting wildlife, we feel it has just gotten out of hand. I can honestly say that I have never seen any other fisherman disrespect nature or the dune system, and most of us take more trash off the beach than we came with, and are very respectful of closed areas the way the Park Service used to handle them.	Westampton	New Jersey
David	As a disabled Veteran and passionate surf fisherman, my Jeep is the only way I have to access beaches. Please keep the beaches open.	Richmond	Virginia
Dan	I proposed marriage to my wife one bright beautiful morning on the beach at Ocracoke. Now that very spot is off-limits to us much of the year. I think that most who visit the Bank's beaches have a very deep reverence and respect for them. They somehow become part of your very being. To suddenly have access taken away creates a sadness deep down inside your soul that simply cannot be described in words.	Virginia Beach	Virginia
Karen	It cannot be stressed enough that beach access is the key to keeping businesses alive and people employed.	Frisco	North Carolina
James	Due to my age and health I can ly enjoy surf fishing, which I started in 1971, unless I have beach access with my truck.	Benson	North Carolina
Marilyn	It seems to me that there can be a middle ground where people can respect the fragile ecosystem at the beaches, yet still have access to the beach for fishing, horseback riding, sunbathing and swimming.	Fairfax	Virginia

Jenny	I don't know how the people at Hatteras could survive if the beach accesses are closed. This is how they live and survive. If they and others cannot access the beach what recourse do they have? How will they support their families? How will they live?	New Bern	North Carolina
Christie	I have been vacationing on Hatteras Island for the past 21 years! I cannot imagine not being able to drive on the beautiful beach. This summer my daughter will finally be old enough to drive on the beachit has been a lifelong dream.	Lawrenceville	Virginia
Michael	Took my 10 year old grandson out this year for this first week with the boys at the banks and he had a blast. I just hope he gets to take his sons and grandchildren someday.	Winston Salem	North Carolina
Robert	I have been coming to the Outer Banks for the past 36 years. It is an annual fishing trip for myself and other family members and friends. I am a veteran of Vietnam and don't appreciate certain group trying to take away what myself and millions of others have and are still fighting for. I hope all my veteran friends will join in another fight to keep the access of ORV open.	China Grove	North Carolina
Charlayne	I cherish my memories of growing up and spending summers camping at Hatteras. Please keep the public beach access open so others can have the memories I now have.	Acworth	Georgia
Holly	We have co-existed with the wildlife here for a very long time. I have never met anyone visiting or living here that didn't have reverence and awe for the creatures that live here.	Buxton	North Carolina

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	Brad	We enjoy riding on the beach and fishing and other activities also the family bonding that happens while we are there.	Elizabeth City	North Carolina
ì	Carol	My business along with many others will not survive another season of the beaches being closed.	Buxton	North Carolina
	Denise	I am so upset, especially now when family getaways from the stresses of the economy and joblessness are crucial. We have always found our "neighbors on the beaches" to be respectful, civic minded and most importantly, nature loving people. It is time for OUR representatives to protect OUR rights as we were promised when the Park was set aside.	Warsaw	Virginia
	Larris	I am the ninth generation of my family on the Outer Banks. I have family in most of the graveyards on the islands that make up these banks. We were promised free and open access to the beaches and waters around us. Now people who had nothing to do with that promise are trying to break it. This is not right any way that you look at it.	Frisco	North Carolina
	Alan	I live in VA but have always gone to Hatteras for recreation. My children were introduced to the Cape Hatteras National Seashore Recreational Area 28 years ago and taught how to enjoy and respect it.	Chesapeake	Virginia
	Jean	My family has been visiting the Cape Hatteras National Seashore for over 25 years. We enjoy being able to access the beach responsibly, and love Cape Point the most.	Waldorf	Maryland

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,	Charles	In 1972 the Post Office issued stamps commemorating the 100 th anniversary of the National Parks. Check out the four stamp block for Cape Hatteras National Seashore. It shows the lighthouse, a wreck, birds and surfcasters with their JEEP ON THE BEACH. Just like in the movie Miracle on 34 th St. If the Post Office says Santa Claus is real, then the Post Office says beach driving is OK.	Kill Devil Hills	North Carolina
)	Katherine	Beach access is so important to so many people, but speaking for me, I can almost cry to think I will never be able to go back like we used to. We have been coming down there since the 80's. I have such beautifully fond memories of our son, as a baby in a crib on the beach while we fished, then him playing in the sand while fished. Then, when he was old enough, he learned to surf fish and ride the waves. We were always respectful of the marked off areas, whether they were for tern nesting or saving the dunes or beach grass. With so much that is bad happening in the world today, this is something we need to do: keep the beach access open for families to continue to enjoy and build good memories.	Prince George	Virginia

FIRST NAME	COMMENTS	CITY	STATE
Charles	I started a tradition with my family coming to Hatteras in 2000. It will be a sad day when we come to Hatteras and not have acess to the beach. We will have to find somewhere else to go on our family vaction.	Kingsport	Tennessee
Dan	My family has been regular visitors to the Outer Banks for the last 45 years. We feel like we are returning home every time we cross the Oregon Inlet bridge. Over the years we have made many friends while surf fishing on the beaches and also have many local friends that we have meet in the tackle shops that feel like part of our family. I think it's a shame what our government has done to close parts of our national seashore and let an extreme organizations like audobon and the defenders of wildlife dictate how to run it. I don't think there is anyone left in Washington D.C. that has an ounce of common sense anymore. Please keep us informed and let us know what we can do to help get the beaches back open especially for night fishing!!!	Selma	North Carolina
Craig	Should there be a need for volunteers I would be happy to help as much as I can.	Nags Head	North Carolina
robert	A mission worth joining thanks	utica	Michigan
Reid	Always willing to support a good cause.	Richmond	Virginia
David	As a disabled Veteran and passionate surf fisherman, my Jeep is the only way I have to access beaches. Please keep the beaches open.	Richmond	Virginia
Cathy	As a member of OBPA, I am well aware of the fight and struggle that is currently going on. I have written many letters to Senators, Congressmen, the President (both Bush and Obma), and every other peson I can think of. What is happening is truley a tragedy and an injustice to the American Citizenship. I will continue to fight in any way I can for access to my favorite place on earth.	Concord	North Carolina
Атү	As a native of coastal North Carolina it is truly sad that simply walking on the beach is prohibited now. Killing other species so that another may live is beyond sad. What is wrong with this country? Please stop the madness & return free & open access!	Texarkana	Texas
Tim	As a retiree who bought his dreamhome on the Outerbanks, the closings of beach access has turned a dream into a nightmare.	Greatfalls	Virginia
Krissi	Beach access has been an integral part of our life and heritage. I would like it be for my children as well.	Aydlett	North Carolina

Ly	nne	Beach closures on Hatteras and Ocracoke Islands is killing our economy; businesses are closing, people are out of work, the Food Pantry is trying to help people and so are the Churches with meals. Keep our Beaches Free and Open!!!!!	Buxton	North Carolina
Bev	verly	Beaches are and should always be open for the public to enjoy.	Chesapeake	Virginia
La	arry	Beautiful site! We need to do all we can to restore the peoples right for open beach access.	Virginia Beach	Virginia
Br	rian	Been involved for some time now and will continue to be. I have been traveling to Hatteras for the last 30 years and spent 25 years on the point. Want to keep it that way for my children.	Williamsburg	Virginia
Jas	sper	Being realistic it is time that folks unite and encourage their respective legislative representatives to listen to the will of the American People whom they represent. It is unfortunate that special interest groups led by a Federal Judge who is supposed to enforce the LAW as written rather than legislating from the bench.	Midland	Texas
Те	d A.	Both the wife and I are native Tarheels and have owned a house in Salvo since 1971.	Hampton	Virginia
E	Bill	Can not believe how many people can not see through the smoke and mirrors that the Audabon is throwing up. This is a recreational seashore and taking access away from the people is wrong	Manteo	North Carolina
, Jc	ban	Closing miles of beach during the popular tourist season for the sake of a few birds in inhumane to the humans who live, work and play here. We pay the taxes to maintain CHNRS, we can coexhist with the wildlife, so in this bad economy, there is no reason for the magnitude of the forced closures or the amount of tax dollars being spent for the sake of a few birds and turtles.	Frisco	North Carolina
I	im	Congratulations and Thank You for producing such a beautiful and informative website.	Nags Head	North Carolina
Ma	arcie	DESTROY THE ENDANGERED SPECIES ACT NOW !!! It is more powerful than our own constitution, and the environmentalists are using it with no common sense. The economy is already really, really bad. Allowing this kind of restrictive beach access, without any scientific backing regarding the birds and turtles, is insane. The birds and turtles are doing fine. But the people who live on Hatteras and Ocracoke Islands are gonna be the next real endangered species.		
mic	chael	Dow & Audobon should have never been allowed to sue the NPS in federal court in order to force their agenda onto CHNSRA. This park was set up as a recreation area formost; not a wildlife refuge. It was created for the common people as a place to enjoy the beaches that can not afford multi-million dollar beachfront property. The NPS has dedicated personnel to protect the wildlife in this park without federal judge Boyle allowing the eco-whackos to ruin this park.	statesville	North Carolina

James	Due to my age and health I can only enjoy surf fishing, which I started in 1971, unless I have beach access with my truck or a friends truck.	Benson	North Carolina
Wayne	First class presentation	Greensboro	North Carolina
Bill	For 30+ years I have enjoyed fishing with my father and brothers. Beach access is a privelege I know, but with the growth of the Outer Banks it's one of the few places where you can fish without the threat of snagging a swimmer!	Northampton	Pennsylvania
Claudia	Get the invironmentalists fanatics off our backs!! The area has been well taken care of, revered by the users, and provided enjoyment to tens of thousands for decades. The birds have thrived! Keep the outside interlopers who would close it, away!		Washington
darren	Good job people. Thanks for doing this. We, the people, need all the help we can get on this topic.	Richmond	Virginia
Dave	Good looking site! If we keep up this fight, we will prevail! Thank you.	Norfolk	Virginia
mike	got any new bumper stickers?	alexandria	Virginia
roberta	grassroot agencies have made this country great.i will back this one , and do what i can too help.	parma	Ohio
lawrence	Great cause I`ll do what I can to help.	moyock	North Carolina
crystal	Great job. Mow if only Congress would listen and help	frisco	North Carolina
Alan	Great program! Nice to see the NC localities care so deeply. If there is anything I can do to help in any way, all you need to do is ask! As a property owner in Frisco, NC, this issue is very near and dear to me. Thanks for all that you're doing!	Richmond	Virginia
Kris	Great site! Thanks for helping us Hatteras lovers!	Richmond	Virginia
Mark	Great web site!		Virginia
Randy	Great Website good job!!! I would suggest adding an enhancement that would be an easy way to send email to a users congress/senator. I've seen other web sites where a person can fill in their info, including a personalized message then the website sends an email to the appropriate congressional represntitives for their state. THANKS !!!	mercerville	New Jersey

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Chesapeake Virginia

David	have enjoyed hatteras for a long time dont let it change	ocean city	Maryland
WILLIAM	have had a home at hatteras since 1970, am very interested in whats going on.		
Robert	Have owbed property in Buxton ,NC since June of 1979. Have two married daughters and two grandsons who live on Hatteras Island,NC. Beach closures could impsct their livelihood.	Hagerstown	Maryland
Charlie	Hey, We are the HI (Hatteras HI)guys. How can we help with your logo distribution,etc. We do all kinds of stuff here on Hatteras in support of Beach Preservation.	Buxton	North Carolina
Robert	HI ! I am retired but not willing to give up to Bird Lawyers and a single isolate . Don't quit until the ammunition is gone and the bayonet is broken . BOB	Buxton	North Carolina
Juana	Hi we live in Ohio and when we take our vacation we always to the Outer Banks. The one thing that brings us back is the beaches, especially the one from Oregon Inlet down. We enjoy the sur fishing and just to enjoy the beach. We have a two week planned this year. We hope that the beaches remain open. We have heard that the beaches are closed already to even surf fishing and swimming, can you let us know if that is true. Thank YOu, Juana	Warren	Ohio
John	I agree with trying to save the environment. However, such restrictions which impact the very lives of the residents in the Outer Banks shows a lack of respect for those who have lived and visited over the years. In todays economy, you can only help those who have been affected.	Sykesville	Maryland
robert	I also have a non rental home in Salvo, NC. Retirement home, almost there, for my joy of having access to the beach for fishing.	Richmond	Virginia
Harry	I also own a home in AVON NC.	Newport News	Virginia
Ralph	I also own a home in Frisco and will continually fight for free acess to the Cape Hatteras National Recreation area.	Richwood	New Jersey
amy	I am in favor of free and open acces.		
scott	I am in favor of free and open access to the Outer Banks. Specifically Ocracoke Island.	Charlotte	North Carolina
Bryan	I am in full support of ORV beach access and other access issues occuring at CHNSRA. What has happened already is illegal to our rights as tax paying citizens. Please let me know what I can do to help fight this.	Richmond	Virginia

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	Denise	I am so upset, especially now when family getaways from the stresses of the economy and joblessness are crucial. My husband has been enjoying surf fishing in the Park for 30+ years and I have been joining him for the last ten. We have always found our neighbors on the beaches to be respectful, civic minded and most importantly nature loving people. It is time for OUR representatives to protect OUR rights as we were promised when the Park was set aside.	Warsaw	Virginia
	Larris	I am the ninth generation of my family on the outer banks. I have family in most of the graveyards on the islands that make up these banks. We were promised free and open access to the beaches and waters around us. Now people who had nothing to do with that promise are trying to break it. This is not right any way that you look at it.	Frisco	North Carolina
	Betty	I am very pleased to see this website!!! There are so many folks - living locally, in other states, rental home owners and Hatteras visiters who have been impacted by not allowing ORV access to the Cape Hatteras National Seashore Recreational Area. Open beach access is essential to the economic growth of the island. My family and many many friends are in support of open beach access!!!	Martinsburg	West Virginia
	David	I am willing to do whatever it takes to preserve beach access. With meeting in the middle tactics not Consent Decree do as i say or else tactics. The time for common sense is now!	Yorktown	Virginia
ì	Mark	I appreciate your effort. As a resident, homeowner, and employee of the OBX, I know that this is a vital issue to our way of life. Thank you.	Kill Devil Hills	North Carolina
	John	I consider my wife and I responsible people. When driving on beaches we go out of our way to not disturb the environment. I can, almost, guarantee that the vast majority of the beach-loving 4WD people who visit these areas are the same way. It is incumbent upon all of us to report all violations of the 4WD rules and regulations. I suggest that we solicit volunteers to compliment the National Park Service (NPS)in enforcing these rules. The NPS can do only so much.	Kill Devil Hills	North Carolina
	Ray	I didn;t know this site existed until a friend sent it to me today. I will do my best to forward it to all concerned.	Annville	Pennsylvania
	Jenny	I don't know how the people at Hattaras could survive if the beach accesses are closed. This is how they live and survive. If they and others cannot access the beach what recourse do they have? How will they support their families? How will they live?	new bern	North Carolina
	Michael	I enjoy going to the beaches to fish if you are no longer allowed to go to the places I like to fish then there is no reason to go to the beach anymore. I wounder how many people have this same view of things.	Zebulon	North Carolina

Francis	I enjoy the time I spend at the Outer Banks every year when I come to relax & recharge.	Warminster	Pennsylvania
Rob	I feel that as a United States tax payer, I should have the freedom to use the National seashores for recreation without the interference from any organization that wants to inhibit my access or use of those areas.	greer	South Carolina
Pat	I first heard this on CBS news earlier this weekso I looked on the Audubon Society website for more information. I find it quite interesting that the AS has published a study stating they found 305 species of birds have moved their winter range northward by an average of 35 miles because of(no not ORVs!) climate change! Please check out: audubon.org/bird/bacc/index.html Could there be a link between piping plovers and climate change? Is it possible the AS published this not realizing what's going on at OBX? Could this page on the AS website be used against them at Reg-Neg?	Greer	South Carolina
Doug	I frequent OBX and Assateague	Newark	Maryland
Kenneth	I fully support free and open access at Cape Hatteras National Seashore Recreational Area. I firmly believe, as a federal regulator, we will not be successful until we are able to put the concept of Recreation back into the name of the park as it was originally mandated by Congress.	Stafford	Virginia
carl	I GUESS THE CREATURES THAT THESE ENVIROMENTALISTS ARE TRYING TO PROTECT HAVE JUST RECENTLY BEEN DISCOVERED? THESE PEOPLE HAVE NOTHING BETTER TO DO, IF TRUTH BE KNOWN: THEY ARE PROBABLY TRYING TO GET THEIR GREEDY HANDS ON THE SEASHORE PROPERTYS SO THEY CAN COMMERCIALIZE IT. THERE IS AN UNDERLYING REASON FOR THESE ENVIRO. PUKES TO BE INTERESTED IN SAVING ANIMALS THAT HAVE BEEN HERE FOR 1000S OF YEARS.	chesapeake	Virginia
Mona	I have been coming to Ocracoke, NC for over 35 years with my family as they grew upteching them about the outer band and why they are so importantwe love to fish day and nightwe have always come for two weeks and spent between \$2000+ every time we are down therewe love it because we can get out on the beaches and now that I am getting older it even means more to me that I can drive on the beachif the beaches are closed so older people with health problem can not get on the beachit is just not fareKEEP THE BEACHES OPEN!!!!!!	Dryden	Virginia
Leo	I have been coming to the out banks for 30 years now both as a family vacation and during the spring and fall for fishing. It is time for the envo's to realize that they have hurt to local ecomony by shutting off beach access to us mobile fishermen/women. As a long time member of NCBBA #1910 I want to help anyway I can to preserve our right to access to the beaches	Harleysville	Pennsylvania

- ROBERT I have been coming to the Outer Banks for the past 36 years. It is an annual CHINA GROVE North Carolina fishing trip for myself and other family members and friends. I am a vetern of VietNam and dont't appreciate certain group trying to take away what myself and millions of others have and are still fighting for. I hope all my vetern friends will join in another fight to keep the access of ORV open.
 - Jay I have been generally following the issues in Cape Hatteras for the last year Rehoboth Beach Delaware or more. Three fellow fishermen and I had arranged a surf fishing trip to Ocracoke and Cape Hatteras in April 2008. However, upon hearing of the last-minute beach closures, which were ordered the week before we were to make our trip, we chose to cancel the trip, unfortunately. I know we were among many parties of fishermen that chose to cancel trips to the Outer Banks because of the closures. We were very sorry to have to cancel the trip, and we knew that the economy of the Outer Banks would suffer from the decision to close the sections of beach that are the prime fishing spots. I am very hopeful for the success of the legislation proposed by the North Carolina senators to keep the beaches open and to continue the process of having the National Park Service develop their required vehicle management plan. I had sent messages to the senators of my state to support this legislation, and I will do that again now that this is a new legislative term. Many of us were very dismayed and frankly disgusted by the junk science that was offered by the environmental groups in the defense of the beach closures. I am very glad to see your organization arise, as we, the people, need all the help we can get in the face of minority special interests that seek to exert control over public lands. Thank you, and I look forward to your updates on these issues.
- John I have been going to the Outer Banks and Hatteras beaches since I was a Chesapeake Virginia little kid. It would be a shame if people were not allowed to access these beaches. It is the main reason I still go the the Outer Banks. Christie I have been vacationing on Hatteras Island for the past 21 years!! I cannot Lawrenceville Virginia imagine not being able to drive on the beautiful beach..this summer my daughter will finally be old enough to drive on the beach...it has been a lifelong dream...we love it. WE have always, like most users, respected the beach, regarded the signage, the wildlife, I think we can enjoy it and also live harmoniously with the creatures!! Keep driving and enjoying the beach alive!! Carlene I have been visiting the Outer Banks for 35 years, and one of my favorite Carrsville Virginia things to do is drive out on the beach with my family and just spend the day there--fishing, sunning, and playing. I truly hope that this is a tradition that will be allowed to remain for my children, grandchildren, etc.

Jim	I have enthusiastically (not necessarily expertly) fished the surf of the Outer Banks every year for the past 34 years. My entire extended family (3 families) enjoyed summer vacations there for 10 years, until last summer, when closures denied us access to our favorite places - so we went elsewhere. The place on the Gulf we chose did not have all we've grown to love about Cape Hatteras, but it was good enough, and easier to get to. That being said, we would return to Hatteras without hesitation if access is restored.	Birmingham	Alabama
Rusty	I have grown up near the Outer Banks and always make it a point to go there. My wife and I even got married at Bodie Lighthouse this past May. Driving on the beach and spending the day with friends has always been a great way to enjoy the summer weather and the ocean and beaches. Its always been part of the OBX lifestyle, driving on the beach swimming, fishing, and enjoying the ocean with friends and family. I think not allowing people to drive on the beach would be terrible for the economy of the islands. And in this economy stopping this will only hurt the county further. Thanks for all your doing.	Gatesville	North Carolina
Terry	I have trveled to the Outer Banks since the late 1950' to fish. I am concerned that Cape Hatteras National Seashore will end up like Cape Cod National Seashore. I pay \$150 for a sticker (there is a limited number issued each year) and you have to wait until Aug. first to have access to the few miles of beaches we can access and fish. Prior to Aug. first, we have access to just a couple miles of crowded beach.	East Sandwich	Massachusetts
Georgia	I hope that a compromise will be reached that will allow our beautiful beach to remain open to all who enjoy its bounty and beauty. Keep up the good work and God bless!		North Carolina
thomas	I just hope this will do some good. The seashore was created for the people, not the few elitists.		
Alan	I live in VA but have always gone to Hatteras for recreation. My children were introduced to CHNSRA 28 years ago and taught how to enjoy and respect it. We now have a trailer in Buxton and spend 90% of our recreational time and budget on the island. I'm a NCBBA, CHAC, and OBPA member and contributor to RDT raffles supporting beach access. I write to both VA & NC legislators in support of beach access legislation.	Chesapeake	Virginia
natalie	I love Hatteras island, and have been going down there for 30 years. To me the closing of the beaches and the impact that it has on the local people, is a criminal act. How can you tell a comunity that has been making there living on the water for generations that they would no longer beable to that. What and Where are they to do?	portsmouth	Virginia

michele	I love the hattaras island seashore. My family vacations there every year and we love to drive out on the beaches to swim, fish etc. last year we first heard of the problems the island was having. closing down access to the beaches by 4wd's will have an impact on how i look at where we will vacation. we filled out forms last year for a petition to keep the beaches open. i hope you can get enough people to make a difference. It would be a shame to see hattaras island lose what is so special to everyone who lives and visits there. thank you, michele	friedens	Pennsylvania
Robert	I love the out doors and love wild life,but gov't has gone to the extreme to (once again)allow the minority to dictate to large number of people what they can do. R-I-D-I-C-U-L-O-U-S	Basye	Virginia
Stephen	I m new in States I understand you because I live at 10 minutes from an nice small river Coneywago and I have a Canoe , but along 30 miles there is no public access to this river I never saw that in the world Its a very bad picture for the States !	York	Pennsylvania
Barry	I own a home in Salvo, N.C. and am very concerned about restrictive access to the Beaches that my family and I love.	Smithfield	Virginia
Ollie	I own a tackle shop. I was fifty percent down last year mostly due the closing of the beaches. Fishermen stated that there was no sense in coming to Hatteras if they could not get to the point to fish. Please help us.	Buxton	North Carolina
Fred	I am willing to do what I can to help preserve beach access.	Avon	North Carolina
Daniel	I really enjoy it when I drive down to fish. I love everything about it, this would be devastating to our State if we were no longer allowed to drive on our public beaches. The shame of it all realy is that our very tax dollars are being used against us in the persuit of the beach closure endeavor. Keep it available for me and for my childreen.		North Carolina
Scott	I relocated to the OBX 2 years ago. The area is filled with history and a sense of family. The activities for families, the natural beauty of surf and sound and the departure from the real world is indeed the draw to this vacation paradise. For me the draw is the ability to drive my red 1970 VW Dune Buggy on the beach and to see the smiles on the kids when they see it. Where else will a child see this and ask their grandpa what is that? I can almost hear them, as they bend down to that child and say when I was a kid. Our reasons for being here are varried, our love for this place is the same. Please save our beaches and keep them free and open for all to experience and enjoy. Do it for our children and their children.	Kill Devil Hills	North Carolina

mark	I SAW A PIPING PLOVER ON HIGHWAY 12 LAST WEEK I GUESS THIS MEANS THAT WE SHOULD CLOSE HYWAY 12 (HOW STUPID CAN PEOPLE GET OVER A STUPID BIRD). THERE ARE MORE THING THAT NEED SAVING LIKE OUR SOULS!!!!!!!PRAISE GOD	frisco	North Carolina
Kevin	I started coming down in 1990 and I've not missed a year yet. If they take our beech the Island will never be the same.	St, Michaels	Maryland
Todd	I suggest you sell attractive bumber stickers to help support!	Norfolk	Virginia
Herbert	I support free and open access to the beaches of the Outer Banks National Seashore and Recreation Ares.	Morgantown	West Virginia
Charlotte	e I support free and open beaches at the CHNSRA. No special interest group should have the kind of power over the government that, apparently, the Audubon Society and Defenders of Wildlife have. I really think that our freedom is in jeopardy.	Florida	New York
erik	I support the groups fighting for OBX access, but my primary interest is here in Maryland.We are gradually being closed out at AINSthe access/recource management policies at AINS have been a total failure, but Piping Plover closures continue to get more stringent and frequent.381 out of 400 Piping Plover were killed by predation in an area totally closed to OSVs last Summer.This has been documented in the pressand this failure of management/DOI policy could serve us well as proof that OSV access is not a primary threat to nesting shorebirds. Erik	berlin	Maryland
Travis	I think that these videos are a great way to make the point.	Frisco	North Carolina
Carol	I was at the meetings in the fifties when Park Service promised NEVER to stop vehicles on the beach, plus maintain our dunes plus pay market price for land. All lies.	Buxton, N. C. 27920-0428	North Carolina
Betty Jo	I was raised enjoying the beautiful beaches of the Outer Banks. I lived on the Outer Banks for twelve years because of the natural beauty. I plan to raise my daughter enjoying the same beautiful beach accesses that I enjoyed as a child. Please keep our beaches accesses open for all to enjoy! Thank You!	Tar Heel	North Carolina
Jim	I was shocked to learn when I visited the Outer Banks (Hatteras) last year that a number of beaches and beach access points were closed. I understand the concern for the wild life but we can not just close the beaches. This has a negative impact on the entire island economy not to mention putting more human impact pressure on the beaches and access areas still open. We must remeber that humns are more important than wildlife this is not say we should be good stewarts of our planet but we must remember that peopel must come first. Thanks JIM	Elizabeth	Pennsylvania

Susan	I work in the vacation industry, like most everyone here does, and we are all scared. To have this issue, compounded by the economy being in dire straights, I just don't know if this island and it's businesses can handle much more. We love our visitors, who love this island too, so every little bit of noise made will make a difference.	Rodanthe	North Carolina
John J.	I would like to return to Cape Hatteras and be able to drive on the beach. This is one of my favorite places to vacation.	Middle Village	New York
William	I would like to see a reasonable weekly beach driving fee of \$35.00 I believe this would keep alot of beach cruisers and dumb two wheelers who get stuck and tie up the beach access area off the beaches.	Indiana	Pennsylvania
Josh	I would love to help in any way	Moyock	North Carolina
jimmie	IF THE LITTLE BIRDS ARE INDANGERED; WHY ARE THEY NESTING IN OK?? WHY ARE THE POWERS TO BE TRYING TO MAKE THEM ENDANGERED HERE ON HATTERAS WHEN THEY ARE NESTING ON MOST OF THE SOUTHERN BEACHES?? WHY ARE THE EXPERT WITNESS SO FLAUDED IN THEIR EVIDENCE?? WHY WAS THE COMMETIES SKEWED OR WAS THIS DONE ON PURPOSE??	Buxton	North Carolina
Ben	I'm 39 years old & have been coming to the outer banks every since I was born. My grandparents started bringing my Moms family down in the early 60'S. My mom started bringing us down when we were born & I have been bringing my kids down for the last 21 years. We are very respectful of the beaches & enviroment when we drive on the beach. The ability to drive on the beach has allowed us to bring our step father to his favorite place in the world when he was fighting cancer & could not walk to the ocean. If our rights to the beach are taken away, our family will unfortunetly have to go elsewere for vacation.	Auburn Twp	Ohio
Sam	I'm a web designer/developer and frequently travel to banks monthly. my wife and I would be devistated if our dreams of fishing on the beach out of the truck w/ our children is ruined. We live for our trips to banks and have made so many wonderful friends. Let me know how i can help. Sam	winchester	Virginia
Mary	I'm a working single mom who literally rolls my change all year long to be able to take 4 days in August to vacation on Ocracoke Island.I cried when I got to the stopping point off Ramp 72 and could not reach South Point.I hope and pray that I will be able to get there in 2009.Along with reading Island Free Press I look forward to receiving your newsletter.	Virginia Beach	Virginia

Richmond

Martha	I'm happy to see a centralized website where we can all unite our efforts and stay informed in a timely manner.	Buxton	North Carolina
charles	In 1972 the Post Office issued stamps commemorating the 100th anniv of the National Parks. Check out the 4 stamp block for Cape Hatteras National Seashore. It shows the lighthouse, a wreck, birds and surfcasters with their JEEP ON THE BEACH. Just like in the movie Miracle on 34th St. If the Post Office says Santa Claus is real, then the Post Office says beach driving is OK.	kill devil hills	North Carolina
Ken	It is true the government is to be By the People. However, as we have learned recently they are most corrupt in their endeavors (IE) money talks. How do we the people, as a group, bring about a class action law suit against these whackos? Where do they get their funding ? can it be cut off? We must attack now before they have us all living in grass huts. That includes Global warming.	Duncannon	Pennsylvania
Mike	Its a shame that one judges decision can affect so many people. Bird people tried to close logging up here in the mountains a few years ago because of some bats. Found out later that these so called bird people had put these bats here that wasn't even native to the area. We need to fight these people before they make the whole country a zoo. This is what they want. This is not a joke. When they deprive people of their lively hood for a few birds, its getting to be a sick society.	Franklin	North Carolina
Jerry	I've been coming to the Outer Bank seance I was 13 years old I'm 68 now. I vacation there every year for fishing and riding on the beach. Tell those ass wholes to leave our beaches alone. You've got my support.	Deltaville	Virginia
GaeAnn	I've enjoyed driving on the beach to swim, shell, birdwatch and simply relax. I enjoy sharing our beaches with friends who visit. When I owned a motel, I used to take guests out onto the beach and the thrill they experienced seeing Cape Point for the first time was a treat for me as well as for them!!! Last week when a friend and I went to the beach in hopes of finding shells, we spend 3 hours picking up thrash that had come in during the last storm. We treasure or beach and enjoy it, at the same time, we also care about it and try to preserve its beauty and its natural inhabitans. Humans and nature can co-exist in harmony!!! One must realize the only way to get to most of the beaches within the Cape Hatteras Natinal Seashore Recreational Area is to drive on them to get to the water's edge. Our entire economy depends on access to our beaches regardless of the recreational activity. Access can be in harmony with the wildlife and in the 38 years that I've lived here, it has been in harmony without denial to people until recently and that denial has certainly adversely affected business. Keeping people off the beaches at CHNSRA only compounds the national ecomony situation of today.	Buxton	North Carolina

Veronica	I've lived here nearly 30 years and have seen alot of changes. We need to keep our beaches from further change. Before we know it, we won't be any different than Virgina Beach. I'd really hate to see that happen to our shorelines.	Wanchese	North Carolina
Doug	Job Stimulus, If the government representatives want to create and save hundreds if not thousands of jobs they should really think about how trying to save a dozen or so nesting birds every year is affecting thousands of people and there jobs. I am all for environmental protection but this is insane.	kitty hawk	North Carolina
sterling	keep it going!	kdh	North Carolina
Mandy	keep it open		
Brad	KEEP OUR BEACHES OPEN!!!	buxton	North Carolina
Wray	Keep the beaches open as we as tax payers have the right and priviledge to access what is ours not special interest groups only whom have a their own personal interest in mind and not the persons whom have been raised and those whom have visited and recreated there all of their life. Is it fair for our children to be denied access,NO!!! We have always believed in the preservation of nature as can be proven over and over. We can all live in harmony with each other and nature,thank you.		North Carolina
Steve	Keep up the fight. This is one last enjoyments that bleeding heart liberals want to strip from us. Put sufficient limits and regulations in place but allow free access to the beaches.	Stafford	Virginia
Darlene	Keep up the good fight and get this riduculous consent decree overruled!!! We support beach access (for humans, ORV's and pets).	Freeport	Pennsylvania
John	Keep up the good work!		
david	Keep up the good work!	Southern Shores	North Carolina
Cindy	Keep up the good work, as a person that can not walk long distances I resent having the only way to get to a public beach being taken away by the government.	Fairton	New Jersey
Joe	Keep up the good work. Open and freebeaches!!!	Bridgeville	Delaware
Elliott	Keep up the good work. The radical enviormentalest should be made to live and work on the outter banks.	Edenton	North Carolina
john	Legislation or appeal to a higher court would be the only way to resolve this unholy mess.	buxton	North Carolina

Kathy	Let us keep enjoying the beaches we enjoy so much!	Kill Devil Hills	North Carolina
Becky	Let's keep those beaches open for everyone!	Rootstown	Ohio
Tim	Line # 1 is too forgiving. We must take a harder stand and meet in the middle. Line # 1 appears to be a common sense approach and we should start with more proposed access,hold your ground and work toward a compromise at the last minute. The Special interest know you have a lot of heavy hiters behind you.	Kernersville	North Carolina
Robert	Live in NJ have a small place in Buxton, when I can I help with petitions etc keep me advised. Thank you b	Neptune	New Jersey
Jackie	Love this website and how it so beautifully tells the real story of the importance of beach access to everyone.	Kill Devil Hills	North Carolina
carol	my business along with many others will not survive another season of the beaches being closed.	buxton	North Carolina
Charlayne	My family has always had property on the Outer Banks since the 1950's. We own property there now. I cherish my memories of growing up and spending summers camping at Hattaras. Please keep the public beach access open so others can have the memories I now have.	Acworth	Georgia
Jean	My family has been visiting the Cape Hatteras National Seashore for over 25 years. We enjoy being able to access the beach responsibly, and love Cape Point the most. We are planning a trip down in March for my birthday, and again in August for our yearly summer vacation. Please keep us informed as to what we can do to help keep the beaches open to the public. Jean	Waldorf	Maryland

	Donna	My family loves the Outer Banks. We started vacationing there in 1995 with my family, my parents, sister and sister-in-law. Since that time everyone in my immediate family has vacationed with us at some point. The Outers Banks was the first and only beach my son has been to. He was 17 months old on our first trip and as a toddler would cry because he didn't want to leave. It is a special place that belongs to all the people to enjoy. The first year we went, my mom wanted to go since she hadn't seen the ocean, but my Dad was working and said he had seen the ocean in Florida and didn't want to go. We got him to go and everyone had a great time. The rental company left an envelope in our house with a card to reserve it for the same time next year with a \$10 deposit. When we were packing up to return home, my Dad said he had the \$10 for the deposit, who wanted to come back the next year. We came every year in the fall until a couple of years ago when the gas prices started rising out of control, and the beach houses increased their rates a lot and we haven't been able to afford to return. We all miss it terribly. We usually came on fall break the first week of October and when that time of the year rolls around it is so hard to stay here. My sister and I say we are having withdrawal symptoms. We need our annual fix. We love the Outer Banks.	Olive Hill	Kentucky
	Michael	My fiance and I just purchased a bed and breakfast on Ocracoke Island. Naturally, we are very concerned about efforts to restrict beach access and support open access whenever possible.	Ocracoke	Virginia
5	COLLEEN	My husband has been going to NC for over 20 years and I've joined him for the last 12. He as well as I have always enjoyed driving on the beach. Especially after our children were born, we looked so forward to the NC beaches for our 2 week vacation every year. Especially Hattaras and driving to the point. Please, Please, Please save the beaches so my 2 children can have the same great experiences (and maybe take their kids and grandkids) that we had giving to them. We used to love when they were little and loved the sand and dipping their feet in the water. Then after each year they got braver and braver going in the water more and more. But they especially loved the sand and that Daddy and even Mommy could drive on it. There is so much turmoil in the world now, please let people have some relief from the stress of everyday life and enjoy some BEACH ACCESS, BEAUTY AND RELAXATION!	WOOD-RIDGE	New Jersey
	Susan	My husband is an avid surf fisherman. Not lettigthe locals and those who frequent the beaches of Hatteras is ridiculous. Their economy suffers, and all because a handful of people think they know what is best for an area where people have lived for generations. This si destroying the island, and a way of life. Keep the beaches open- they've done if right for at least the last 20 years we've been coming there. Trust the locals.	Raleigh	North Carolina

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Sylvia	My livelihood depends on the beaches being kept open. I am a single mom with two kids to support. My children want to go to college and come back here to live. Neither will be possible if I lose my business and my house.	Frisco	North Carolina
Lynn	My passion in life was to retire early and expand my time to surf fish Hatteras Island which I started 46 years ago. Now, much to my dismay, my favorite placesthe most productivefor the fish I target is now off limits for a good deal of the year. I have no other hobbies, I have a dedicated vehicle packed and ready to go all the time but now sits in the garage waiting for the prime beaches to open. It's a shame	Raleigh	North Carolina
Donald	My wife and I have been to the Outer Banks several times. Being able to go off road on the beach is something we enjoy.We got engaged on Oregon Inlet and drove out on the beach. I live in MD and also off road on Assateague Island National Seashore. I believe if the environmentalists win in NC then they are coming north. I know someone who owns an OBX house and his rentals have gone down because people are unable to access the beach to fish. Please keep me informed.	Bowie	Maryland
John '	My wife and I have loved our time on the island for the last 27 years. Had planned to move there when I retire in 7 and a half years. Now these folks want to save the beach for the birds and not the people. That's for the birds. I've vacation there for 27 years and have 2 trips planned for this year. Was planning on house hunting the next 2-3 years but if the beaches are closed to people (tax payers) and open to birds I guess I'll continue to live up north and vacation on the island. Hard to believe this cr@p with the economy in the dumper. Just my .02	Harrisburg	Pennsylvania
Dan	My wife and I love the Outer Banks and have made more weekend trips to them over the years than I can count. I proposed marriage to my wife one bright beautiful morning on the beach at Ocracoke. Now that very spot is off-limits to us much of the year. I think that most who visit the Bank's beaches have a very deep reverence and respect for them. They somehow become part of your very being. To suddenly have access taken away creates a sadness deep down inside your soul that simply cannot be described in words. Locals and visitors alike need to unite both in mind and resources to pursue whatever legal and political channels it takes to right this very sad wrong. Thanks for this website. I sure hope it helps.	Virginia Beach	Virginia

Katherine	NC beach access is so important to so many people, but speaking for me, I can almost cry to think I would never be able to go back like we used to.	Prince George	Virginia
	We have been coming down there since the 80's when we could only afford		
	the cheapest hotel, moved up to renting a cottage for a week, then two		
	weeks. When that wasn't enough, we bought a home in 1992 in Brigand's		
	Bay. I have such BEAUTIFULLY fond memories of our son as a baby in a crib		
	on the beach while we fished, then him playing in the sand while we fished,		
	then when he was old enough, he learned to surf fish and ride the waves.		
	We loved how we could move up and down the beach to another spot. We		
	hated crowding up at the point. We liked to spread out and not tangle with		
	other people's fishing lines. If fishing wasn't good at this spot, we could		
	move somewhere else. We were alway respectful of the marked off areas,		
	whether they be for tern nesting or saving the dunes or beach grass. With		
	so much that is bad happening in the world today this is something we		
	need to do: keep the beach access open for families to continue to enjoy		
	and build good memories!!!		

jerry	NEVER GIVE UP THE FIGHT FOR OUR BEACHES.	kitty hawk	North Carolina
Rob	Nice Site and Thanks for your EffortsRob	Buxton	North Carolina
Annette	Nice site. Keep up the good work.	Nags Head	North Carolina
Melvin	No one group should have complete control over our BEACHES!! Federal money is used in the parks so tax payers should have FREE and OPEN ACCESS. Just my .02 worth. MT	Southmont	North Carolina
Dennis	Our beach access is for people too!	Buxton	North Carolina
carol	Our businesses along the Outer Banks will not survive if the beaches are closed to beach driving again this year. Last year was a total disaster, please don't allow the beaches to be closed this year.	buxton	North Carolina
Melanie	Our family has enjoyed vacationing on the Outer Banks for at least 3 generations.We have enjoyed having open access along the Outer Banks; to fish, to camp, to walk. We were quite disappointed to hear of that access being limited & concerned about the impact that would have on the locals.	Springfield	Virginia
Carolyn	Our family supports efforts to keep the beaches open!	Dover	Delaware

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Joel	Our home is in Newport News,VA but consider Buxton and Cape Hatteras our second home. We avidly support all access issues our time on the beach has provided us with many wonderful friends and memories. We strongly believe the people of the Outer Banks and all users of the National Park have been betrayed by the government. Since the establishment of the CHNSRA the government has slowly but meticulously taken away access to the park.	Newport News	Virginia
David	Outstanding job, glad to see the new attempt at open beaches.	Carlisle	Pennsylvania
greg	people first	camden	North Carolina
Pam	people need access to beaches as well as wildlife. please consider the economic needs of all hatteras residents	Avon	
Joyce	Please connect yourself to Facebook so those of us who use Facebook and attach your information to our Facebook page and show we are a Fan of the Organization or Support the organization. Those of us who use Facebook are in touch with friends across the United States, good way to get your organization seen.	Manteo	North Carolina
Mary Ellen	Please do something. My husband has worked long and hard to achieve his dream and I support him 100%. He's done everything he could to take care of us and my family. I know that I too deserve to live my retirement dream (living near the ocean) but of all the places we've been the Buxton/Frisco area has been OUR favorite. Please do what you can and don't be afraid to ask for our help. I know Jack was down last June and gave out flyers in the Supermarket parking lot. Please send this on to your friends and co- workers. Look's like we need all the help we can get. I appreciate your efforts, we need that beach! Thank You, Mary Ellen	Harrisburg	Pennsylvania
Robert	Please don't let our tradition die.	Durham	North Carolina
Miles	Please don't take the beaches away from the public , I have family their that cannot survive without the money that the tourist put into the economy in the Outer Banks!	Mechanicsville	Virginia
Daniel	Please help us here on Hatteras Island.	Buxton	North Carolina
Kathleen	Please help us keep the beaches open for our recreational park.	Buxton	North Carolina

Nedra R.	Please keep our beaches free and open for ALL to use. This is my home. Narrow minded extremists could care less about saving our way of life. They are bending the truth to the point of absurdity. We are trying to survive in the same way we have for centuries. We honor the wildlife and environment more than those trying to destroy our lives here. Are you aware of those people rounding up massive flocks of Canadian Geese on our Island on a National Refuge and then killing them because there were too many??? How dare they!!!! The piping plover is not an endangered species. They are prolific elsewhere in addition to huge numbers of them can be found on a storm made sand formation in our sound not far from our Islands. All they want is to destroy us!!! Their motives and methods are unacceptable. Shame on them and shame on anyone who supports them.	Frisco	North Carolina
Bonnie	PLEASE keep the beaches open! This is VITAL to the survival of the beach communities.	Raleigh	North Carolina
Karen	Please keep the beaches open! I know how important this subjuct is as we have similiar issues here in Volusia County in Florida.	New Smyrna Beach	Florida
John P.	Please keep the beaches open. In this economy the people on Hatteras depend on these being open.	Lancaster	Ohio
Diane	Please make sure that Mike Berry's latest letter outlining the abrogation of the reg/neg process by the Audubon Society, Defenders of Wildlife, and others should make them ineligible to sit at the negotiating table.	Buxton	North Carolina
Heather	Please Save our Beaches! Nature gave them to us for enjoymenthow can we enjoy them if our rights are taken away. We all will Save the Beaches, not just environmental groups. Together we all will make a difference. Our economy and job losses will be greatly impacted if the beaches are closed!	Raleigh	North Carolina
mark	send forms	taneytown	Maryland
Louise	Shall send this to others who also love the Outer Banks - we have been loving iit since 1962 (before the Bonner bridge was built!) We'll be praying for the Judge to change his mind and give you back your beloved Outer Banks, ESPECIALLY you residents of this lovely place.		Vìrginia

J	Charlotte	Since hearing about the beach closures, I'm not sure if it was last year or the year before, I sent out my own letters to family and friends who I knew would be interested/ concerned over the closures. Many of which, I know don't keep up with local news or issues, but people I knew this would effect. People who had lived here but had moved away,but come back to visit, friends who surfed, fished, etc. or vacationed here. I felt the more people who knew the better and I told them to tell their friends. I also urged them to visit the past websites offering info. Much of the info floating around was/is misinforming people. Many people were against it until I told them to check the sites. Finding out that they had unfortunately been misinformed. Being a native surfer, artist, and person who loves the Outer banks, I guess it's time to send out a new letter to inform friends who might not otherwise know what is going on. Many of which live out of state and of course know nothing or little of what is going on. I will try to do my part to help out anyway I can.	Kill Devil Hills	North Carolina
	Jim	Since the beach closure I have had a huge decline in business. This closure is rediculous. Man, the beach and it's creatures have got along fine without the help of the eco- wackos. In this economy we don't need nonesense like this just because some SMALL group likes to watch birds with complete disregard to the harm done to everyone else. Judge Boyle showed his complete disregard to the people of HI with his ruling, shame.	Frisco	North Carolina
	Victoria	SO great to see a website up about keeping the beautiful Outer Banks beaches open to all! So many, including myself, were and still are outraged at the beach closures. TRULY hope this website will help!	Smithsburg	Maryland
	Gerry	take the last free thing we can do away from use. whats left move to china and try to get our jobs back?stop tring to govern us and do your job of governing your selves try controlingthe people who make these stupid rules that prevent us as a group from enjoing the beaches	wahoo	Nebraska
	Max	Thank god your doing this	Beaver	West Virginia
	Todd	Thank you for being pro-active, our family truley enjoys the beaches of Hatteras Island. We camp at frisco woods and support the local economy. Thanks for giving the people a voice.	chesapeake	Washington

Greg	Thank you for caring, and I will as well as my business be devoted in cause of keeping our beaches free and open to the public.Without the beaches being open with free access, I don't know that my business can sustaian itself much longer. As a homeowner and avid outdoorsman my wife and I are as environmentally conscious as any body on the outer banks and would hate to have to leave because of some extreamist that don't think that humans and nature can coexist.If some resolution does not come soon we will be forced to sell our property and leave so that we can keep some quality of life. We love these beaches and will do whatever it takes to spread the word to help keep our wonderful island as it is.Thank you for caring.	Buxtond natur	North Carolina
Kevin	Thank you for doing this. Our family has enjoyed the ORV access in Hatteras for decades. So much so we purchased a house in Waves 5 years ago. Let me know how we can help maintain our access! Thank you for doing all that you do.	Chesapeake	Virginia
Scott	Thank you for fighting to keep our access to these great beaches. This public land-grab must be stopped! It is shameful what is being done, most noteably, to the good people that have inhabited these islands for generations but also to those of us that have enjoyed vising the islands and being free to use the beaches for recreational purposes for decades.	North Huntingdon	Pennsylvania
Shaun	Thank you for letting me help in any small way.	Buxton	North Carolina
Paul	Thank you for what you are doing!!	roanoke	Virginia
Ben	Thank you for your efforts to maintain open access to our beaches.	Pinehurst	North Carolina
Steven	Thank you for your efforts to return management of the CHNSRA to the NPS.	Rockville	Maryland
Mary	Thank you for your help Preserving Access to our island beach.	Buxton	North Carolina
Hilary	Thank you!!!	Richmond	Virginia
Hilary Jeff	Thank you!!! Thank you, thank you, thank you!	Richmond Elizabeth City	Virginia North Carolina
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Barto	Thanks so much for this effort. I have been keeping up with this situation through Island Free Press and the Fish Militia and Red Drum Tackle sites, as well as the Island Free Press. I have been surfing and fishing on the Cape Hatteras beaches for nearly all 40 years of my life and spend all the free time I have throughout the year on the Outer Banks.	Portsmouth	Virginia
Shawı	n Thanks!	Sparta	North Carolina
Jim	The beaches belong to the people. There is no valid justifaction for the consent decree. We have to keep fighting. Thanks for the new venue. Great pictures-which anyone with a history on the Islands could add to. There is no place like it. Jim	Baltimore	Maryland
Dee	The Beaches need to be open for all to enjoy. They are what makes this area so special.	Nags Head	North Carolina
bert	the economy is bad enough , lets not make it worst because of a bird , peoples livelyhood are at stake.	avon	North Carolina
Davic	The effects of the consent decree & the results of the reg-neg have & will be extremely detrimental to the economy & lifestyle of current residents. This has been shown in no better way than your videos of local residents & businessmen/women. We are being steam-rolled into oblivion by environmental groups that are doing so with no science - only an agenda of no humans allowed. We are a test case for the rest of the national parks & seashores. If they are successful here, they will immediately attack other areas to prevent human access to the very areas that have been set aside specifically for human activity. This is nothing short of a land-grab.	Buxton	North Carolina
diana	The equine access to CHNSRA is an unparrelled glory along the the East Coast. Every year I come uniquely to ride the beach with the Equine Aventure trail rides. The horses are well cared for and responsive, the trail meandering thru the back marsh land lovely, and then like the rising sun is the beach breaking open before you to run you horse in its full glory. As a supporter of national parks I consider responsibly lead trail rides to these empty beaches fundamental to why CHNSRA was established. If the ponies of Chincoteague are allowed to run wild why shouldn't responsible trail rides be permitted. It is national heritage for all to experience.	glen echo	Maryland
Debora	The government has taken everything else away from us. Now you want to take the very land away too? We have less and less money to take vacations and we frequent these beautiful places. How is it you can take this away? Let us have our beaches and boat launches and public parks and forest preserves. What on earth is left? Truly, Deborah		

michael	The interim NPS plan was working-the public-taxpayers were accepting it- go with it!	avon	North Carolina
Ginny	The Outer Banks are a beautiful, fragile environment that is found no where else on earth. Those of us who frequent the Banks treasure and respect this. I know from personal experience that the people who drive on the OBX beaches do so to be a part of something special, not to destroy the dunes and wildlife. We need to stop the lies that outsiders are telling about the way fishermen and ATV drivers act out there. We go out there to be a part of nature and get away from civilization. We need to fight to keep the beaches open so that future generations can experience a place that we love. There is nothing better for the soul than to stand on one of the OBX beaches, without another person around, and feel the wind in your face and hear nothing but the sea rolling in.	Raleigh	North Carolina
Chip	The Outer Banks is the only place my family and I go to every year for vacation we love it there it would be very dishearten to us and to alot of other families who can no longer use the beaches for their vacation on the Outer Banks. Remember what the (chnsra) was for we have rights to.	millsboro	Delaware
Amber and David	The outer Banks just would not be the same without public beach access. Our family visits every year and we just love it. We think by closing these it could possibly hurt tourism! Our family makes a day of fishing at the inlets! Thank you for your attention on this matter! Amber and David	Uniontown	Ohio
Beth	The peoples land, our land, land of the free	Hatteras	North Carolina
Kimberly	The reason we love the OBX so much is that we can drive on the beach, walk on the beach, run on the beach.	Pasadena	Maryland
Doug	The videos on the home page are a great idea. Maybe this spring, when the fishermen and tourists return, many more videos could be recorded. Record the videos on the beach or using stores as backdrops. These could be 60 seconds or less with the subject saying what they love about Hatteras and how sad they are that misguided environmentalists want to restrict access.		
Steven	There is a petition that has over 12,000 signatures supporting free and open access to CHNSRA. Please contact me if it would be of any use for your site or if a link is needed. Thanks again for your efforts!	Rockville	Maryland
Jim	This Consent Decree is going to be the death of this Island and it's economy before it's all over, taking into consideration that we're in a recession, the likes of which we haven't seen in scores of years.	Avon	North Carolina
Donald	This is a Federal Recreation park, Please keep it open for all to enjoy. ORV's are not hurting the beach. But Defenders Of Wildlife are killing the villages.	Greensboro	North Carolina

Robert	This is a great cause We do need to keep the beaches open. Open access for all to enjoy.	Troy	Virginia
sandy	this is a great way to keep us informed and get us involved! Thanks!	manteo	North Carolina
Eric	this is a very special placewe don't want to run over birds or turtles we just want to go out to the point and surrounding environs to fish	Charlottesville	Virginia
maria elena	This is an incredible article with such valuable information. How sad that those that don't live here are trying to undermine a gracious and tranquil way of life.	nags head	North Carolina
Ed	This section of coast was set aside for the public to enjoy. Closing the beaches is just plain wrong. I drive 8 hours fom West Virginia, pay for saltwater fishing license and then am told I can't fish half of the beaches because of some birds.	Cross Lanes	West Virginia
Allison	This site is wonderful and offers lots of information to it's visitors that maybe they where not aware of to begin with.	Grandy	North Carolina
Michael	This would be an absolute tragedy.	Jacksonville	Florida
Martha	Today as I was accessing Facebook , my attention was caught by an ad on the right column of the pageProtect NC's Coast I clicked on it, it took me to http://ncconservationnetwork1.org/campaign/beachdriving_fb which is a website that misleads people about the beach access issue. At the head of that page, when you click on Issues, there is a place to join their FACEBOOK page. I think we should also have a Facebook page to counter this. I clicked a thumbsdown on their facebook ad for being misleading.	Buxton	North Carolina
Jerry	Too bad people don't get this excited about America. Bring back America, and we wouldn't have this crap in the first place. It's not only Hatteras, it's the entire country that suffers form such Political Ignorance, and incompetence.	Kill Devil Hills	North Carolina
Sam	Unfortunately, with the change in the US Congress and in the White House, your task is going to get even more difficult, but there are thousands of us that support your cause and will work to help in ways we can. Bravo to you for your efforts!	Virginia Beach	Virginia
jim	very good website; one that will pay dividends for Cape Hatteras access Thanks	greensboro	North Carolina
steve	very nice site, great presentation of the issue i hope that we can defeat the 'green machine'. i'm with you all the way. steve	severna park	Maryland
Robert	Very Well Done- Thank You	Warrenton	Virginia

	WE all have the right to be able to enjoy beach access, just as long as we're responsible, and go by any and all restrictions, our environmentals aren't the only ones that should be heard!! We too have a voice!	Elizabeth City	North Carolina
Robert&Jacqu eline	We both strongly feel the beaches should be recreational.We vacationed here for 30+years and were fortunate enough to move to Manteo in 2006 when we retired.People on the Outer Banks have always been conservationalists and don't need outside organizations dictating how things should and should not be. What is happening with the wild life being killed is criminal. We support your efforts.	Manteo	North Carolina
Brad	We enjoy ridding on the beach and fishing and other activites. also the family bonding that happens while we are there. we have many memories there and want to continue to make them. so please keep the beaches open.	elizabeth city	North Carolina
Mike	We have been enloing the Island since 1963 and hate whats happening. Let me know what I can do to help as we are still going to continue come down 10-12 times a year.	Chester	Virginia
Holly	We have co-existed with the wildlife here for a very long time. One of the things that makes this such a special place is that we get the chance to see the wildlife in their natural habitat. I have never met anyone visiting or living here that didnt have reverence and awe for the creatures that live here. The creatures came despite the fact that we have been driving on the beach for decades and I dont believe they will dissappear if we continue to do so. The only thing that will dissappear is the revenue that comes from all the visitors.	Buxton	North Carolina
Larry	We have donated money and time, but whateever else we can do we will Damn the torpedos full speed ahead	avon	North Carolina
Danny	We love visiting Hatteras Island and it's natural beauty. However one of the reason for our 10 hr trek is to be able to drive the beach. If that is restricted, then we would probably find another vacation destiny. Please do not allow this to happen.	Bluefield	West Virginia
jimmie	WE NOW KNOW HOW THE INDIANS WERE TREATEDI	buxton	North Carolina
Elizabeth Ann	We retired here hoping to be fishing on the beach instead of worrying about where on earth are we going to find a place to fish with all of these darned closures. Shame on you all.	Buxton	North Carolina
susan	We vacation in the Waves/Salvo area each year. We are from PA and enjoy your quiet, clean beaches. If beach access were to be restricted, we would have to go elsewhere. What is the point of a beach vacation when you can't go to the beach because of some stupid birds. This is especially rediculous in our present economy, unless the birds will be paying higher rent for their beachfront nesting sights than the current vacationers bring in. Thanks	New Cumberland	Pennsylvania

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Deane & Nancy	We're pulling for you!!!	Puyallup	Washington
Kevin	When do we sue?	Buxton	North Carolina
David	You have my continue supportDave OPBA, NCBBA	Newton	North Carolina
Dewey	Your web-site is great. I will do my best to let others know about it. I thank you along with The Tourist Bureau, and County Commissioners for engaging in this activity. Will list you immediately on my website. If you are ver down this way give me a call so I can meet you.	Buxton	North Carolina
Michael	ZIP CODE 27107 I been enjoying the Banks for 25+ years. Fishing isn't as good as it used to be but the adventure and beauty are still the best. Free access is our deeded right. If I can help I will be happy to. I have sent in letters to my Congresswoman and Senator as well as the State Rep's. Took my 10 year old grandson out this year for his first week with the Boys at the banks and he had a blast. I just hope he gets to take his sons and grandchildren someday.	Winston Salem	North Carolina

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Hello,

I would love to have been given the chance to speak in person at the meeting on Feb 26, but due to misinformation about the allotted times the public would be given to speak, I was unable to do so.

My family & I usually make at least 2 week long trips to the Outer Banks each year & a weekend trip here & there. One of our trips is in the spring & the other is late fall/early winter. We have rented houses in Waves, Nags Head & S. Nags Head. We rent a house large enough to accommodate 3 families since my wife's parents & her brother's family travel with us. Last spring our trip was ruined by the beach closures. We probably contribute \$3000 to \$6000 dollars to this areas economy on each trip. (House rental, Shopping, Fishing supplies, Gas, Restaurants, Groceries, Etc). I'm sure there are people who spend less & probably just as many or more that spend MUCH more.

Here's my dilemma.

I FISH. I also have a 7 year old daughter that likes to fish with her daddy. I have a wife that likes to shop & sight see & occasionally likes to fish.

My wife can probably find a lot more places to spend her money, like Myrtle Beach or her favorite shopping place, New York City.

I had rather stay at home & fish the area lakes (Lake Norman) than deal with the crowds at Myrtle Beach since fishing is very limited to non existent & I would not have a clue where to catch fish in the New York City area except for the local fish markets. The Outer Banks area has been my family's favorite vacation destination for many years now, but that changed dramatically last spring. Until then I was happy fishing & was able to take my daughter places where she could catch fish. I usually try to pre-fish an area before taking her, so that she will not become discouraged. The best thing she likes about fishing here is that when she gets tired of fishing, she really enjoys playing in the sand. With so many areas closed, it was nearly impossible to find areas that held fish. Just because there is water to throw your bait in, is no sign that the fish are there. As I mentioned earlier, we generally stay in Nags Head, & I am fully prepared to drive clear to Ocrakoke & have done so in years past in order to find fish, but with the beach closures being so strict most of the areas where the fish are located are off limits.

OUR DEFINITION OF A VACATION IS NO LONGER BEING MET HERE.

Unless the beaches are returned to the people, as were intended & PROMISED, we will be forced to find another vacation area that will meet our needs. I know that we are not the only families that feel this way. Unfortunately we will be losing a vacation place that feels like home & the area merchants will be losing our money as well as the money of others.

I hate to think that the economy of the towns in the Outer Banks area & the vacation dreams of many people are being destroyed by a few people that think a few birds are more important than HUMAN BEINGS! Sincerely,

Tommy, Chrystal & Tara Sloan

571 Zeb Rd Union Grove, N.C. 28689

704-592-2263

March 16, 2009

Attention: Michael Murray, National Park Service From: Matt Walker, Senior Editor, Surfing Magazine RE: Maintaining access on Cape Hatteras

Dear Mr. Murray:

Although I already spoke publicly on the access issue currently involving Cape Hatteras, I feel it is important to offer a written account of my views in hopes they can help in your decision-making.

As a lifelong East Coast surfer, Outer Banks resident — and as Senior Editor of *Surfing* magazine — I cannot overemphasize the value of Cape Hatteras to surfers, as well as waveriders of every kind. Not only is this area responsible for grooming some of the sport's greatest athletes (please see the letters below), it serves as a "Mecca" for whole families of surfers who enjoy the power and quality of the waves and the pristine coastline. There are literally millions of surfers to whom just the name 'Hatteras' is a word of magical reverence; both their first 'surf trip' and most beloved returning point. And for the small band of lifelong residents like myself — teachers and principals, business owners and church leaders — these waves are the sole reason we moved here, and the sole reason we will continue to stay. Furthermore, of any piece of the Atlantic Seaboard, Hatteras alone can claim an international reputation for being a surfing epicenter. It is not just important; it is irreplaceable. Or as Kelly Slater says below, it is "sacred." Please, when you make your decisions, do not underestimate the area's impact on surfing culture at large.

Likewise, do not underestimate surfers' impact on Hatteras. While I regret I can't offer more specific information about surfers' use of the park itself, national studies show surfers spend more time in the ocean than any other recreational user; as a result, we care more about the health of the ocean and its beaches. It's surfers who pick up litter and fishing lures. It's surfers who speak out against polluters. And though surfers spend hard dollars to surf their favorite waves, we also put the value of a robust coastal ecology above any monetary revenue. (Again, I believe the letters I've pasted below are evidence of that, as both professionals replied within a matter of hours, despite being in Australia for the opening day of their competitive season.)

That being said, we are not alone. Fishermen, shell hunters, surfers, kayakers, sunbathers – we are all beach lovers by nature. And, when it comes to protecting Cape Hatteras Seashore, we are its greatest defenders and stewards. We will not change our tune because it's "better for business." We will not reverse stances because of a corporate donation. For this reason alone, I beg you to remember the role of humans as the most important line of defense in keeping developers and polluters from having their way with Cape Hatteras. As a diehard environmentalist, I'm ashamed of this lawsuit, which has done little more than make an enemy of the environmental movement, turning away valuable allies for fights that will one day affect us all. If we want to make sure that

there's coastline to enjoy 30 years from now, we need to be sure humans can fully enjoy the activities that make the ocean and beaches dear to them right now. Otherwise, when a issue comes along that threatens our coastal environments, there will be nobody around remembers or cares enough to try to defend them.

Please consider these important elements when making your decision; please think longterm and consider what will serve the greatest good of the park for centuries to come. Humans and ecology can thrive together when they try.

Thank you,

Matt Walker Senior Editor, *SURFING* Resident, Kill Devil Hills

LETTTER FROM CJ HOBGOOD

The 2001 ASP World Champion, CJ Hobgood and his brother, Damien, are considered two of greatest surfers in the world. They developed their skills, in part, by surfing the beaches of Cape Hatteras:

The first thing my brother and I did when we signed our first pro contract ten years ago was buy a house in Avon. And we did it for one reason: the waves. Their power. Their quality. Their variety. And the freedom to enjoy them all. That freedom and access is the whole reason people come to the Outer Banks. Please consider all of those elements when you're making your decisions. And keep the Outer Banks special.

Sincerely, CJ Hobgood 2001 World Champion

LETTER FROM KELLY SLATER

What I just said about CJ, you can multiply by nine for Kelly Slater – literally. A holder of nine world titles — five more than any other surfer — and every Association of Surfing Professional record, Mr. Slater is the sport's most accomplished competitor and the greatest modern surfer since Duke Kahanamoku introduced the sport around the globe in 1914. I don't expect you to understand the nuances of surfing, but if Tiger Woods said one of his all-time favorite and most influential golf courses was in Cape Hatteras, you would take him at his word. I'm asking you now to do the same. (On a more personal note, Kelly is so busy I sometimes email him regarding an article requiring his immediate input and don't hear back for two weeks; yet, when he heard surfers might lose access to one of his favorite breaks on the planet, he replied within hours. And he will do it again whenever Hatteras is threatened):

I'd have to say it'd be absurd not to think of beaches and waves as natural resources right alongside oil, minerals, fish, and birds. The resource is used as a pleasure, necessity or business for everyone on earth. Surfing is used as all three things. Not only that, we

surfers bring to light many of the issues that arise with regards to pollution and erosion concerns. There are no better people for the job as it is inherently connected to our everyday lifestyle.

The good fortune we've all had of being able to have access to surfing all the beaches along the shores of the Outer Banks has created many life long memories for tens of thousands of surfers and families who enjoy the area for all of its different resources. Many of the surfers I've been there with over the years are avid birdwatchers (which I find funny) and almost all of them are fishermen. Any day without surf is quickly filled with fishing and a freshly caught dinner.

I truly hope that surfing and waves and their beach access is equally considered in the decisions regarding the Outer Banks future. The Lighthouse has stood as a symbol of East Coast, and US, surfing since I can remember and is Mecca for easterners and all US surfers alike. Please consider this fact when determining the future of our sacred destination.

Sincerest Thanks. Kelly Slater 9X World Surfing Champion, FL Native and long-time Hatteras visitor

Waterbird and Shorebird Literature

(partial listing)

This is not meant to be and should not be considered a complete literature review

- Anders, F. J. and S. Leatherman. 1987. Effects of off-road vehicles on coastal foredunes at Fire Island, New York, USA. Environmental Management 11: 45-52.
- Anders, F. J. and S. P. Leatherman. 1987. Disturbance of beach sediment by off-road vehicles. Environmental Management 11: 183-189.
- Anderson, D. W. and J. O. Keith. 1980. The human influences of seabird nesting success: conservation implications. Biological Conservation 18:65–80.
- Anderson, S. H. 1995. Recreational disturbance and wildlife populations. p. 157-168, *in* R. L. Knight and K. J. Gutzwiller eds. Wildlife and Recreationists. Island Press, Washington, D. C.
- Atkinson, P. W., A. J. Baker, K. A. Bennett, N. A. Clark, J. A. Clark, K. B. Cole, A. Dekinga, A. Dey, S. Gillings, P. M. Gonzalez, K. Kalasz, C. D. T. Minton, J. Newton, L. J. Niles, T.Piersma, R. A. Robinson and H. P. Sitters. 2007. Rates of mass gain and energy deposition in red knot on their final spring staging site is both time- and condition-dependent. Journal of Applied Ecology 44: 885-895.
- Avery, A. L., T. Penn, E. Savage, and H. Hollis. 2004. Piping Plover monitoring and management summer 2004 report and 2005 plans for beach nesting shorebirds. USFWS, Chincoteague National Wildlife Refuge, VA.
- Bart, J., S. Brown, B. Harrington & R.I.G. Morrison. 2007. Survey trends of North American shorebirds: population declines or shifting distributions? J. Avian Biol. 38: 73–82.
- Baudains, T. P. and P. Llyod. 2007. Habituation and habitat changes can moderate the impacts of human disturbance on shorebird breeding performance. Animal Conservation 10: 400-407.
- Beale, C. M. and P. Monaghan. 2004. Human disturbance: people as predation-free predators? Journal of Applied Ecology 41: 335-343.
- Blumstein, D.T. 2003. Flight-initiation distance in birds is dependent on intruder starting distance. Journal of Wildlife Management 67: 852–857.
- Blumstein, D. T., L. L. Anthony, R. Harcourt, and G. Ross. 2003. Testing a key assumption of wildlife buffer zones: is flight initiation distance a species-specific trait? Biological Conservation 110:97–100.
- Blumstein, D. T., E. Fernandez-Juricic, P. A. Zollner, and S. C. Garity. 2005. Interspecific variation in avian responses to human disturbance. Journal of Applied Ecology 42: 943–953.
- Boellstorff, D. E. D. W. Anderson, H. M. Ohlendorf and E. J. O'Neill. 1988. Reproductive effects of nest-marking studies in an American White Pelican colony. Colonial Waterbirds 11:215-219.
- Boersma, P.D., Parrish, J.K. 1998. Threats to seabirds: research, education, and societal approaches to conservation. In: Marzluff, J.M., Sallabanks, R. (Eds.), Avian Conservation: Research and Management. Island Press, Washington, DC, pp. 237–259.
- Boettcher, R., T. Penn, R.R. Cross, K. T. Terwilliger, and R. A. Beck. 2007. An Overview of the Status and Distribution of Piping Plovers in Virginia. Waterbirds 30: 138-151.
- Botton, M. L., R. E. Loveland, and T. R. Jacobsen. 1994. Site selection by migratory shorebirds in Delaware Bay, and its relationship to beach characteristics and abundance of horseshoe crab (*Limulus polyphemus*) eggs. The Auk 111(3): 605- 616.

- Bowles, A. E. 1995. Responses of wildlife to noise. pp. 109-156. In: Knight, R. L. and K. J. Gutzwiller. (eds.) Wildlife and Recreationists: Coexistence through Management and Research. Island Press: Washington, D.C.
- Boyle, S. A. and F. B. Samson. 1985. Effects of non-consumptive recreation on wildlife: a review. Wildlife Society Bulletin 13:110-116.
- Brodhead, J. M. and P. J. Godfrey. 1977. Off road vehicle impact in Cape Cod National Seashore: disruption and recovery of dune vegetation. <u>International Journal of Biometeorology</u> 21: 299-306
- Brown, S., C. Hickey, B. Gill, L. Gorman, C. Gratto-Trevor, S. Haig, B. Harrington, C. Hunter, G. Morrison, G. Page, P. Sanzenbacher, S. Skagen, N. Warnock. 2000. National Shorebird Conservation Assessment: Shorebird Conservation Status, Conservation Units, Population Estimates, Population Targets, and Species Prioritization. Manomet Center for Conservation Sciences. http://www.Manomet.org/USSCP/files.htm
- Brown, S., C. Hickey, B. Harrington, and R. Gill, Eds. 2001. The U. S. Shorebird Conservation Plan, 2nd ed. Manomet Center for Conservation Sciences, Manomet, MA.
- Buckley, P. A., and F. G. Buckley. 1976. Guidelines for the protection and management of colonially nesting waterbirds. North Atlantic Regional Office, National Park Service, Boston, Massachusetts.
- Buehler, D. M and A. J. Baker. 2005. Population divergence times and historical demography in red knots and dunlins. Condor 107: 497-513.
- Burger, J. 1981. The effect of human activity on birds at a coastal bay. Biological Conservation 21:231–241.
- Burger, J. 1981. Effects of human disturbance on colonial species, particularly gulls. Colonial Waterbirds 4: 28-36.
- Burger, J. 1982. The role of reproductive success in colony-site selection and abandonment in Black Skimmers (*Rynchops niger*). Auk 99: 109-115.
- Burger, J. 1982. An overview of proximate factors affecting reproductive success in colonial birds: concluding remarks and summary of panel discussion. Colonial Waterbirds 5: 58-65.
- Burger, J. 1984. Colony stability in Least Terns. Condor 86:61-67.
- Burger J. (ed.) 1984. Abiotic Factors Affecting Migrant Shorebirds. Plenum Press, New York, pp. 1–73.
- Burger, J. 1986. The effect of human activity of shorebirds in two coastal bays in Northeastern United States. Environmental Conservation 13: 123-130.
- Burger, J. 1987. Physical and Social determinants of nest-site selection in Piping Plover in New Jersey. Condor. 89: 811-818.
- Burger, J. 1988. Effects of demolition and beach clean-up operations on birds on a coastal mudflat in New Jersey. Estuarine, Coastal and Shelf Science. 27: 95-108.
- Burger, J. 1989. Least tern populations in coastal New Jersey: monitoring and management of a regionallyendangered species. Journal of Coastal Research 5:801-811.
- Burger J. 1991. Foraging behavior and the effect of human disturbance on the Piping Plover *Charadrius melodus*. Journal of Coastal Research 7: 39–51.
- Burger, J. 1994. The effect of human disturbance on foraging behavior and habitat use in piping plover (*Charadrius melodus*). Estuaries. 17(3): 695-701.

- Burger, J. 1994. Nocturnal foraging behavior of breeding piping plovers (*Charadrius melodus*) in New Jersey. Auk 111: 579-587.
- Burger, J. 1995. Beach recreation and nesting birds. Pages 281-295 in Wildlife and recreators: coexistence through management and research (R.L. Knoght and K.J. Gutzwiller, Eds.). Island Press, Washington, D.C.
- Burger J. 1998. Effects of motorboats and personal watercraft on flight behavior over a colony of Common Terns. Condor. 100:528–534.
- Burger, J. and M. Gochfeld. 1991. Reproductive vulnerability: parental attendance around hatching in Roseate (*Sterna dougallii*) and Common (*S. hirundo*) Terns. Condor 93: 125-129.
- Burger, J. and M. Gochfeld. 1991. The Common Tern: Its Breeding Biology and Social Behavior. Columbia University Press, New York. 413 pp.
- Burger, J., and M. Gochfeld. 1991. Human activity influence and diurnal and nocturnal foraging of Sanderlings (*Calidris alba*). Condor 93:259–265.
- Burger, J. and M. Gochfeld. 1994. Predation and effects of humans on island-nesting seabirds. Pp. 39-67 in Seabirds on Islands: threats, case studies and action plans. (D. N. Nettleship, J. Burger and M. Gochfeld, eds.). BirdLife International, BirdLife Conservation Series No. 1. Cambridge, U.K.
- Burger, J. and M. Gochfield. 1998. Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. Environmental Conservation 25:13-21.
- Burger J., and M. Gochfeld. 1998. Effects of ecotourists on bird behavior at Loxahatchee National Wildlife Refuge, Florida. Environmental Conservation. 25:13–21.
- Burger J., and M. Gochfeld. 1990. Nest site selection in Least Terns (*Sterna antillarum*) in New Jersey and New York. Colonial Waterbirds 13: 31-40.
- Burger, J., C. Jeitner, K. Clark, and L. J. Niles. 2004. The effect of human activities on migrant shorebirds: successful adaptive management. Environmental Conservation 31: 283–288.
- Burger, J., M. Gochfeld, and L. J. Niles. 1995. Ecotourism and birds in coastal New Jersey: contrasting responses of birds, tourists, and managers. Environmental Conservation 22:56–65.
- Burger, J., L. Niles and K.E. Clark. 1997. Importance of beach, mudflat and marsh habitats to migrant shorebirds on Delaware Bay. Biological Conservation 79: 283- 292.
- Burger, J., I. C. T. Nisbet, C. Safina and M. Gochfeld. 1996. Temporal patterns of reproductive success in the endangered Roseate Tern (*Sterna dougallii*) nesting on Long Island, New York, and Bird Island, Massachusetts. Auk 113: 131-142.
- Burger, J., M. A. Howe, D. C. Hahn, and J. Chase. 1977. Effects of tide cycle on habitat selection and habitat partitioning by migrating shorebirds. Auk 94: 743-758.
- Burger, J., S. A. Carlucci, C. W. Jeitner, and L Niles.² 2007. Habitat Choice, Disturbance, and Management of Foraging Shorebirds and Gulls at a Migratory Stopover. Journal of Coastal research 23: 1159-1166.
- Burger, J., K. Parsons, D. Wartenberg, C. Safina, J. O'Connor, and M. Gochfeld. 1994. Biomonitoring Using Least Terns and Black Skimmers in the northeastern United States. Journal of Coastal Research, 10: 39-47

Burton, N.H.K. 2007. Landscape approaches to studying the effects of disturbance on waterbirds. Ibis 149: 95–101.
Burton, N. H. K., M. J. S. Armitage, A. J. Musgrove, and M. M. Rehfisch. 2002. Impacts of man-made landscape features on numbers of estuarine waterbirds at low tide. Environmental Management 30: 857-864.

- Burton, N. H. K., M. M. Rehfisch, and N. A. Clark. 2002. Impacts of disturbance from construction work on the densities and feeding behavior of waterbirds using the intertidal mudflats of Cardiff Bay, U.K. Environmental Management 30:865–871.
- Burton, N.H.K., Evans, P.R., Robinson, M.A. 1996. Effects on shorebird numbers of disturbance, the loss of a roost site and its replacement by an artificial island at Hartlepool, Cleveland. Biological Conservation 77, 193–201.
- Cairns, W. E. 1982. Biology and breeding behavior of breeding Piping Plovers. Wilson Bulletin 94: 531-545.
- Calvert, A. M., D. L. Amirault, F. Shaffer, R. Elliot, A. Hanson, J. McKnight, and P. D. Taylor. 2006. Population assessment of an endangered shorebird: the Piping Plover (*Charadrius melodus melodus*) in eastern Canada. Avian Conservation and Ecology Écologie et conservation des oiseaux 1(3): 4. [online] URL: http://www.ace-eco.org/vol1/iss3/art4/
- Cameron, S. and D. Allen. 2004. American Oystercatcher breeding distribution and population estimate in North Carolina. North Carolina Wildlife Resources, Raleigh, North Carolina, USA.
- Cameron, S. E., D. H. Allen, M. M. Lyons, J. R. Cordes, and S. B. Maddock. 2005. Compilation and assessment of Piping Plover wintering and migratory staging area data in North Carolina. Proceedings of the Symposium on the Wintering Ecology and Conservation of Piping Plovers. 5pp.
- Cape Cod National Seashore. 1993. Piping Plover nest found trampled by pedestrian. News release. Cape Cod National Seashore, South Wellfleet, Massachusetts. 2 pp.
- Cardoni, D. A., M. Favero, and J. P. Issach. 2008. Recreational activities affecting the habitat use by birds in Pampa's wetlands, Argentina: Implications for waterbird conservation. Biological Conservation 141: 797-806.
- Carlson, L. H., and P. J. Godfrey. 1989. Human impact management in a coastal recreation and natural area. Biological Conservation **49**:141-156.
- Carney, K. M., and W. J. Sydeman. 1999. A review of human disturbance effects on nesting colonial waterbirds. Waterbirds 22:68–79.
- Clark, K.E. and L. Niles. 2000. U.S. Shorebird Conservation Plan: Northern Atlantic Regional Shorebird Plan, Version 1, U.S. Fish and Wildlife Service. Online at: <u>http://www.fws.gov/shorebirdplan/</u> RegionalShorebird/RegionalPlans.htm (accessed 16 May 2006).
- Clark, K. E., L. Niles, and J. Burger. 1993. Abundance and distribution of migrant shorebirds in Delaware Bay. Condor 95: 694-705.
- Cohen, J. B., E. H. Wunker, and J. D. Fraser. 2008. Substrate and Vegetation Selection by Nesting Piping Plovers. Wilson Journal of Ornithology 120: 404–407.
- Cohen, J. B. 2005. Factors limiting Piping Plover nesting pair density and reproductive output on Long Island, New York. Ph.D. Dissertation, VA Polytechnic Institute and State University. Pp. 251.
- Cohen. 2005. Management and protection protocols for the threatened Piping Plover (*Charadrius melodus*) on Cape Hatteras National Seashore, North Carolina. USGS Patuxent Wildlife Research Center.
- Cohen, J. B., J. D. Fraser and D. H. Catlin. 2006. Survival and site fidelity of Piping Plovers on Long Island, New York. Journal of Field Ornithology 77: 409–417.
- Cole, D. N., and P. B. Landres. 1995. Indirect effects of recreation on wildlife. p. 183-202, IN: R. L. Knight and K. J. Gutzwiller eds. Wildlife and Recreationists. Island Press, Washington, D. C.

- Cole D. N., and R. L. Knight. 1991. Wildlife preservation and recreational use: conflicting goals of wildland management. Transactions of the North American Wildlife and Natural Resources Conference **56**:233-237.
- Coleman, R.A., N.A. Salmon and S. J. Hawkins. 2003. Sub-dispersive human disturbance of foraging oystercatchers *Haematopus ostralegus*. Ardea 53: 263–268.
- Collazo, J. A., J. R. Walters, and J. F. Parnell. Undated. Factors affecting reproduction and migration of waterbirds on the North Carolina barrier islands. Final report to the National Park Service – Cape Hatteras and Cape Lookout Seashores . NC State University, Raleigh, North Carolina.
- Colwell, M.A., Dafunsky, T., Fox-Fernandez, N.W., Roth, J.E. & Conklin, J.R. 2003. Variation in shorebird use of diurnal, high-tide roosts: how consistently are roosts used? *Waterbirds*, 26, 484–493.
- Colwell, M. A. and K. D. Sundeen. 2000. Shorebird distributions on ocean beaches of northern California. Journal of Field Ornithology 71: 1-15.
- Corbat, Carol A. and Peter W. Bergstrom. 2000. Wilson's Plover (*Charadrius wilsonia*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/516</u>
- Corbat, C. A., and P. W. Bergstrom. 2000. Wilson's Plover (*Charadrius wilsonia*). *In* The Birds of North America, No. 516 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Cornelius, C., S. A. Navarrete and P. A. Marquet. 2001. Effects of human activity on the structure of coastal marine bird assemblages in central Chile. Conservation Biology 15: 1396–1404.
- Cox, J. H., H. F. Percival, S. V. Colwell. 1994. Impact of vehicular traffic on beach habitat and wildlife at Cape San Blas, Florida. Technical Report 50, Florida Coop Fish and Wildlife Research Unit.
- Culik, B., D. Adelung and A. J. Woakes. 1990. The effect of disturbance on the heart rate and behaviour of Adelie Penguins (*Pygoscelis adeliae*) during the breeding season. Pages 177-182 in Antarctic ecosystems: Ecological change and conservation (K. R. Kerry and G. Hempel. Eds.). Springer Verlag, Berlin, Germany.
- Cuthbert, F.J., Wires, L.R. and K. Timmerman. 2003. Status Assessment and Conservation Recommendations for the Common Tern (*Sterna hirundo*) in the Great Lakes Region. U.S. Department of the Interior, Fish and Wildlife Service, Ft. Snelling, MN.
- Davidson, N.C., & Rothwell, P.I. 1993. Human disturbance to waterfowl on estuaries: conservation and coastal management implications o f current knowledge. In: Disturbance to waterfowl on estuaries. N. Davidson & P. Rothwell, Eds. Wader Study Group Bull. 68: 97-106.
- Davis, M. B. 1999. Reproductive success, status and viability of the American Oystercatcher (*Haematopus palliatus*). Unpublished M.S. Thesis, North Carolina State University, Raleigh, North Carolina.
- Davis, M. B., T. R. Simons, M. J. Groom, J. L. Weaver and J. R. Cordes. 2001. The breeding status of the American Oystercatcher on the east coast of North America and breeding success in North Carolina. Waterbirds 24: 195-202
- Dias, M. P., J. P. Grandadeiro, M. Lecoq, C. D. Santos, and J. M. Palmeirim. 2006. Distance to high-tide roosts constrains the use of foraging areas by dunlins: Implications for the management of estuarine wetlands. Biological Conservation 131: 446-452.
- Dinsmore, S. J., A. A. Collazo, and J. R. Walters. 1998. Seasonal numbers and distribution of shorebirds on North Carolina's Outer Banks. Wilson Bulletin, 110:171-181.

Dodd, S.L. & Colwell, M.A. 1998. Environmental correlates of diurnal and nocturnal foraging patterns of nonbreeding shorebirds. Wilson Bulletin, 110, 182–189.

Donaldson, G.M., C. Hyslop, R. I. G. Morrison, H. L. Dickson, and I. Davidson., eds. 2000. Canadian Shorebird Conservation Plan. Canadian Wildlife Service, Ottawa, Ontario.

- Dowling, B. & Weston, M. (1999). Managing a breeding population of the hooded plover Thinornis rubricollis in a high use recreational environment. Bird. Conserv. Int. 9, 255–270.
- Drake, K.R., J.E. Thompson, K.L. Drake, and C. Zonick. 2001. Movements, habitat use, and survival of nonbreeding Piping Plovers. Condor 103: 259–267.
- Elias, S.P., J. D. Fraser, P. A. Buckley. 2000. Piping plover brood foraging ecology on New York barrier islands. Journal of Wildlife Management 64: 346-354.
- Elias-Gerken, S.P. 1994. Piping plover habitat suitability on central Long Island, New York barrier islands. M.S. Thesis. Virginia Polytechnic Institute and State University, Blacksburg, Virginia. 48 pp.
- Elliott-Smith, Elise and Susan M. Haig. 2004. Piping Plover (*Charadrius melodus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/002</u>
- Ellison, L. N. and L. Cleary. 1978. Effects of human disturbance on breeding of Double-crested Cormorants. Auk 95: 510-517.
- Elphick, Chris S. and T. Lee Tibbitts. 1998. Greater Yellowlegs (*Tringa melanoleuca*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/355</u>
- Erwin, R.M. 1996. Dependence of waterbirds and shorebirds on shallow-water habitats in the Mid-Atlantic coastal region: An ecological profile and management: Recommendations. Estuaries 19(2A): 213-219.
- Erwin, R. M. 1980. Breeding habitat use by colonially nesting waterbirds in two mid-Atlantic U.S. regions under different regimes of human disturbance. Biological Conservation 18: 39–51.
- Erwin, R. M. 1989. Responses to human intruders by birds nesting colonies: experimental results and management guidelines. Colonial Waterbirds 12:104–108.
- Erwin, R. M., D. H. Allen, and D. Jenkins. 2003. Created verses natural coastal islands: Atlantic waterbird populations, habitat choices, and management implications. Estuaries 26: 949-955.
- Erwin, R. M., G. M. Haramis, D. G. Krementz and S. L. Funderburk. 1993. Resource protection for waterbirds in Chesapeake Bay. Environmental Management 17: 613-619.
- Erwin, R. M., J. D. Nichols, T. B. Eyler, D. B. Stotts, and B. R. Truitt. 1998b. Modeling colony-site dynamics: A case study of gull-billed terns (*Sterna nilotica*) in coastal Virginia. Auk 115: 970-978.
- Erwin, R. M., and D. C. Smith. 1985. Habitat comparisons and productivity in nesting common terns on the mid-Atlantic coast. Colonial Waterbirds 8: 155-165.
- Erwin, R. M. 1996. Dependence of waterbirds and shorebirds on shallow-water habitats in the Mid-Atlantic coastal region: An ecological profile and management recommendations. Estuaries and Coasts 19: 213-219.
- Erwin, R. M. 2005. Monitoring and protection protocols for colonially nesting waterbirds at Cape Hatteras National Seashore, North Carolina. USGS Patuxent Wildlife Research Center.

- Erwin, R. M. 1977. Black skimmer breeding ecology and behavior. Auk 94: 709-717.
- Erwin, R. M., J. Galli, and J. Burger. 1981. Colony site dynamics and habitat use in Atlantic Coast seabirds. Auk 98: 550-561.
- Erwin, R. M., B. R. Truitt, and J. E. Jimenez. 2001. Ground-nesting waterbirds and mammalian carnivores in the Virginia barrier island region: running out of options. Journal of Coastal Research 17: 292-296.
- Eyler, T. B., R. M. Erwin, D. B. Stotts, and J. S. Hatfield. 1999. Aspects of hatching success and chick survival in gull-billed terns in coastal Virginia. Waterbirds 22: 54-59.
- Fernández-Juricic, E., Jimenez, M. D. and E. Lucas. 2001. Alert distance as an alternative measure of bird tolerance to human disturbance: implications for park design. Environmental Conservation 28:263-269.
- Finney, S. K., J. W. Pearce-Higginsand and D. W.Yalden. 2005. The effect of recreational disturbance on an upland breeding bird, the Golden Plover *Pluvialis apricaria*. Biological Conservation 121: 53–63.
- Fitzpatrick S. and Bouchez B. 1998. Effects of recreational disturbance on the foraging behaviour of waders on a rocky beach. Bird Study 45: 157–171.
- Flemming, S. P., R. D. Chiasson, P.C. Smith, P. J. Austin-Smith and R. P. Bancroft. 1988. Piping Plover status in Nova Scotia related to its reproductive and behavioral responses to human disturbance. Journal of Field Ornithology 59: 321-330.
- Fraser, J. D., S. E. Keane, and P. A. Buckley. 2005. Prenesting use of intertidal habitats by Piping Plovers on South Monomoy Island, Massachusetts. Journal of Wildlife Management 69: 1731-1736.
- Frid, A., and L. M. Dill. 2002. Human-caused disturbance stimuli as a form of predation risk. Conservation Ecology 16, http://www.ecologyandsociety.org/vol6/iss1/. Accessed 2003 Oct 10.
- Gabrielson, G. W. and E. N. Smith. 1995. Physiological responses of wildlife to disturbance. Pages 95-107 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Gill, J. A., W., Sutherland and A. R. Watkinson. 1996. A method to quantify the effects of human disturbance on animal populations. Journal of Applied Ecology 33:786-792.
- Gill, J. A., K. Norris and W. J. Sutherland. 2001. Why behavioral responses may not reflect the population consequences of human disturbance. Biological Conservation 97: 265–268.
- Gochfeld, M. 1983. Colony site selection by Least Terns: Physical attributes of sites. Colonial Waterbirds 6: 205-213.
- Gochfeld, M. and J. Burger. 1994. Black Skimmer (*Rynchops niger*). In The Birds of North America, No. 108 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Godfrey, P., S. Leatherman, and P. Buckley. 1978. Impact of offroad vehicles on coastal ecosystems. Pages 581-600 in Proceedings of the Symposium on Technical, Environmental, Socio-economic and Regulatory Aspects of Coastal Zone Planning and Management 1978. San Francisco, CA.
- Goldin, M. R. 1993. Effects of human disturbance and off-road vehicles on piping Plover reproductive success and behavior at Breezy Point, Gateway National Recreation Area, New York. MS Thesis. University of Massachusetts, Amherst, Massachusetts. 128 pp.

- Goldin, M. R. and J. V. Regosin. 1998. Chick behavior, habitat use, and reproductive success of piping plovers at Goosewing Beach, Rhode Island. Journal of Field Ornithology 69: 228-234.
- Goss-Custard, J.D., 2003. Fitness, demographic rates and managing the coast for shorebird populations. Wader Study Group Bulletin 100, 183–191. Goss-Custard, J.D., Durell, S.E.A. le
- Goss-Custard, J.D., P. Triplet, F. Sueur, A.D. West. 2006. Critical thresholds of disturbance by people and raptors in foraging wading birds. Biological Conservation 127: 88-97.
- Goss-Custard, J.D., and N. Verboven. 1993. Disturbance and feeding shorebirds on the Exe estuary. Wader Study Group Bull. 68: 59-66.
- Gratto-Trevor, Cheri L. 2000. Marbled Godwit (*Limosa fedoa*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/492</u>
- Gratto-Trevor, Cheri L. 1992. Semipalmated Sandpiper (*Calidris pusilla*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/006
- Gutzwiller, K. J. 1995. Recreational disturbance and wildlife communities. p. 169-181, *in* R. L. Knight and K. J. Gutzwiller eds. Wildlife and Recreationists. Island Press, Washington, D. C.
- Haig, S. M., C. L. Ferland, F. J. Cuthbert, J. Dingledine, J. P. Goossen, A. Hecht, and N. McPhillips. 2005. A complete species census and evidence for regional declines in Piping Plovers. Journal of Wildlife Management 69: 160-173.
- Haig, S. M., and E. Elliott-Smith. 2004. Piping Plover. The Birds of North America Online. (A. Poole, Ed.) Ithaca: Cornell Laboratory of Ornithology; Retrieved from The Birds of North American Online database: <u>http://bna.birds.cornell.edu/BNA/account/Piping_Plover/</u>.
- Haig, S. M. and L. W. Oring. 1985. The distribution and status of the piping plover throughout the annual cycle. Journal of Field Ornithology 56: 334-345.
- Haig, S.M. and L.W. Oring. 1988a. Distribution and dispersal in the Piping Plover. Auk 105: 630–638.
- Haig, S. M. and L. W. Oring. 1988. Mate, site, and territory fidelity in Piping Plovers. Auk 105: 268-277.
- Haig, S. M. and J.H. Plissner. 1993. Distribution and abundance of piping plovers: Results and implications of the 1991 International census. Condor 95: 145-156.
- Hand. J.L. 1980. Human disturbance in Western Gull *Larus accidentalis livens* colonies and possible amplification by intraspecific predation. Biological Conservation 18: 59-63.
- Harrington, Brian A. 2001. Red Knot (*Calidris canutus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/563</u>
- Harrington, B. A., J. M. Hagan, and L. E. Leddy. 1988. Site fidelity and survival differences between two groups of New World red knots *Calidris canutus*. Auk 105: 439-445.
- Harrington, B.A., & Drilling, N. 1996. Investigations of effects of disturbance to migratory shorebirds at migration stopover sites on the U.S. Atlantic Coast. Contract report to U.S. Fish & Wildlife Service, Region V, Nongame Program. 87pp.

- Harrington, B. A. 2003. Shorebird management during the non-breeding season an overview of needs, opportunities, and management concepts. Wader Study Group Bull. 100: 59-66.
- Haysmith, L. and J. D. Hunt. 1995. Nature tourism: impacts and management. Pages 203-219 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Hecker, S. 2008. The Piping Plover as an Umbrella Species for the Barrier Beach Ecosystem. Pages 59-74 in Saving Biological Diversity Balancing Protection of Endangered Species and Ecosystems, Robert A. Askins, Glenn D. Dreyer, Gerald R. Visgilio and Diana M. Whitelaw (eds.). Springer Science.
- Helmers, D. L. 1992. Shorebird Management Manual. Western Hemisphere Shorebird Reserve Network, Manomet, Massachusetts.
- Hernández, D. 2005. Conservation and Foraging Dynamics of Migratory Shorebirds. Unpublished Ph.D Dissertation. Rutgers University, New Brunswick, New Jersey. 176 pp.
- Holmes, Richard T. and Frank A. Pitelka. 1998. Pectoral Sandpiper (*Calidris melanotos*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/348</u>
- Hoopes E.M. 1993. Relationships between human recreation and piping plover foraging ecology and chick survival. MS Thesis, University of Massachusetts, Amherst, Massachusetts, 106 pp.
- Hoopes, E.M. 1994. Breeding ecology of piping plovers nesting at Cape Cod National Seashore 1994. National Park Service, South Wellfleet, Massachusetts. 34 pp.
- Hoopes, E.M. 1995. Piping plover nest distribution with respect to concrete walkways at the Breezy Point Cooperative, New York, 199 1-1994. Report for the U.S. Fish and Wildlife Service, Sudbury, Massachusetts. 6 pp.
- Hoopes, E.M., C.R. Griffin, and SM. Melvin. 1989. Atlantic Coast Piping Plover winter distribution survey. Unpublished report to the U.S. Fish and Wildlife Service, Newton Corner, Massachusetts. 6pp.
- Hoopes, E.M., C.R. Griffin, and SM. Melvin. 1991. Relationships between human recreation and piping plover foraging ecology and chick survival. Unpublished report. University of Massachusetts, Amherst, Massachusetts. 77 pp.
- Hosier, P. E., M. Kochhar, and V. Thayer. 1981. Off-Road vehicle and pedestrian track effects on the Sea-approach of hatchling Loggerhead Turtles. Environmental Conservation. 8: 158-161.
- Hosier, P. E. and T. E. Eaton. 1980. The impact of vehicles on dune and grassland vegetation on a southeastern North Carolina barrier beach. Journal of Applied Ecology 17:173-182.
- Houghton, L. M. 2005. Piping Plover population dynamics and effects of beach management practices on piping plovers at West Hampton Dunes and Westhampton Beach, New York. PhD. Dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA. 162pp.
- Howe, M., J. Bart, S. Brown, C. Elphick, R. Gill, B. Harrington, C. Hickey, G. Morrison, S. Skagen, and N. Warnock, eds. 2000. A Comprehensive Monitoring Program for North American Shorebirds. Manomet Center for Conservation Sciences. http://www.Manomet.org/USSCP/files.htm
- Howe, M. A., P H. Geissler, and B. A. Harrington. 1989. Population trends of North American shorebirds based on the International Shorebird Survey. Biological Conservation. 49: 185-199.

- Hunter, W. C., L. Peoples, and J. Collazo. 2000. South Atlantic coastal plain partners in flight bird conservation plan. Retrieved from http://www.blm.gov/wildlife/plan/pl_03_10.pdf
- Hunter, W. C., J. Collazo, B. Noffsinger, B. Winn, D. Allen, B. Harrington, M. Epstein, and J. Saliva. 2005. Southeastern Coastal Plains-Caribbean Region Shorebird Plan: Version 1.0 (Revised October 3, 2005). <u>http://www.acjv.org/documents/shorebird plan se car.pdf</u>
- Hunter, W. C., W. Golder, S. Melvin, and J. Wheeler. 2006. Southeast United States regional waterbird conservation plan. Retrieved from <u>http://www.fws.gov/birds/waterbirds/SoutheastUS/</u>.
- Isaksson, D., J. Wallander and M. Larsson. 2007. Managing predation on ground-nesting birds: The effectiveness of nest exclosures. <u>Biological Conservation</u> 136: 136-142.
- Ikuta, L. A. and D. T. Blumstein. 2003. Do fences protect birds from human disturbances? Biological Conservation 112: 447-452.
- Ingle, C., Y. Leung, C. Monz, and H, Bauman. 2003. Monitoring visitor impacts in coastal Nationkal Parks: A review of techniques. In Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites. (Proceedings of the George Wright Society/National Park Service Joint Conference, April 14–18, 2003, San Diego, California.) D. Harmon, B.M. Kilgore, and G.E. Vietzke, eds. Hancock, Mich.: The George Wright Society, 228–233.
- Jehl, Jr., Joseph R., Joanna Klima and Ross E. Harris. 2001. Short-billed Dowitcher (Limnodromus griseus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/564</u>
- Johnson, C. M. and G. A. Baldassarre. 1988. Aspects of the wintering ecology of Piping Plovers in coastal Alabama. Wilson Bulletin 100: 214-223.
- Jones, L. K. 1997. Piping plover habitat selection, home range, and reproductive success at Cape Cod National Seashore, Massachusetts. MSc. Thesis, University of Massachusetts Amherst. 96 pp.
- Kirby, J. S., C. Clee and V. Seager. 1993. Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. Wader Study Group Bulletin 68: 53–58.
- Klein, M. L, S. R. Humphrey and F. Percival. 1995. Effects of ecotourism on distribution of waterbirds in a wildlife refuge. Conservation Biology 9: 1454-1465.
- Knight, R. L., and D. N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. Transactions North American Wildlife and Natural Resource Conference **56**:238-247.
- Knight, R. L., and D. N. Cole. 1995. Factors that influence wildlife responses to recreationists. p. 71-79, IN: R. L. Knight and K. J. Gutzwiller eds. Wildlife and Recreationists. Island Press, Washington, D. C.
- Knight, R. L. and D. N. Cole. 1995. Wildlife responses to recreationists. Pages 71-79 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Knight, R. L. and K.J. Gutzwiller (Eds.). 1995. Wildlife and recreationists: coexistence through management and research. Island Press. Washington DC and Covelo CA.
- Knight, R.L., D.P. Anderson, and N.V. Marr. 1991. Responses of an Avian Scavenging Guild to Anglers. Biological Conservation 56:195-205.

- Knight, R. L. and S. A. Temple. 1995. Origin of wildlife responses to recreationists. Pages 81-91 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Knight, R. L., and S. A. Temple. 1995. Wildlife and recreationists: Coexistence through management. p. 327-333, IN: R. L. Knight and K. J. Gutzwiller eds.. Wildlife and Recreationists. Island Press, Washington, D. C.
- Kotliar, N.B. and J. Burger. 1984. The use of decoys to attract Least Terns to abandoned colony sites in New Jersey. Colonial Waterbirds 7: 134-138.
- Kress, S. W. and C. S. Hall. 2002. Tern Management Handbook: Coastal Northeastern United States and Atlantic Canada. U.S. Fish and Wildlife Service, Hadley, MA
- Kress, S.W. 1983. The use of decoys, sound recordings, and gull control for re-establishing a tern colony in Maine. Colonial Waterbirds 6: 185-196.
- Krogh, M. G. and S. H. Schweitzer. 1999. Least Terns nesting on natural and artificial habitats in Georgia, USA. Waterbirds 22: 290-296.
- Kushlan, J. A. 1983. Special species and ecosystem preserves: colonial waterbirds in U. S. National Parks. Environmental Management 7: 201-207.
- Kushlan, J. A., M. J. Steinkamp, K. C. Parsons, J. Capp, M. A. Cruz, M. Coulter, I. Davidson, L. Dickson, N. Edelson, R. Elliot, R. M. Erwin, S. Hatch, S. Kress, R. Milko, Miller S., K. Mills, R. Paul, R. Phillips, J. e. Saliva, B. Sydeman, J. Trapp, J. Wheeler, and K. Wohl. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, D. C. 78 pp.
- Kuss, F. R., A. R. Graefe, and J. J. Vaske. 1990. Visitor impact management: A review of research. National Parks and Conservation Association, Washington, D. C.
- Lafferty, K. D. 2001. Birds at a southern California beach: seasonality, habitat use and disturbance by human activity. Biodiversity and Conservation 10:1949–1962.
- Lafferty, K. D., 2001. Disturbance to wintering western snowy plovers. Biological Conservation 101:315-325
- Lafferty, K. D., D. Goodman, and C. P. Sandoval. 2006. Restoration of breeding by Snowy Plovers following protection from disturbance. Biodiversity and Conservation 15: 2217-2230.
- Larson, R. A. 1995. Balancing wildlife viewing with wildlife impacts: A case study. Pages 257-270 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Larson, MA | Ryan, MR | Murphy, RK. 2003. Assessing recovery feasibility for piping plovers using optimization and simulation. Wildlife Society Bulletin Vol. 31: 1105-1116. 2003.
- Larson, M. A., M. R. Ryan, and B. G. Root 2000. Piping Plover survival in the Great Plains: An Updated Analysis. Journal of Field Ornithology 71: 721-729.
- Le Fer, D., J. D. Fraser, and C. D. Kruse. 2007. Piping Plover chick foraging, growth, and survival in the Great Plains. Journal of Wildlife Management 72: 682-687.
- Leseberg, A. P. A. R. Hockey, and D. Loewenthal. 2000. Human disturbance and the chick-rearing ability of African Black Oystercatchers (Haematopus moquini): a geographical perspective. Biological Conservation 96: 379-385.

- Loegering, J. P. and J. D. Fraser. 1995. Factors affecting piping plover chick survival in different brood-rearing habitats. Journal of Wildlife Management 59: 646-655.
- Lord, A., J. R. Waas, J. Innes, and M. J. Whittingham. 2001. Effects of human approaches to nests of northern New Zealand dotterels. Biological Conservation 98: 233-240.
- Lord, A., Waas, J.R., Innes, J., 1997. Effects of human activity on the behaviour of Northern New Zealand dotterel *Charadrius obscurus aquilonius* chicks. Biological Conservation 82, 15–20.
- Lowther, Peter E., Hector D. Douglas, Iii and Cheri L. Gratto-Trevor. 2001. Willet (*Catoptrophorus semipalmatus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/579</u>
- Luckenbach, R. A. and R. B. Bury. 1983. Effects of off-road vehicles on the biota of the Algodones dunes, Imperial County, California. Journal of Applied Ecology 20: 265-286.
- Macwhirter, Bruce, Peter Austin-Smith, Jr. and Donald Kroodsma. 2002. Sanderling (*Calidris alba*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/653</u>
- Manfredo, M. J. 1989. Human dimensions of wildlife management. Wildlife Society Bulletin 17:447-449.
- Manuwal, D. A. 1978. Effects of man on marine birds: a review. Pages 140-160 *in* Wildlife and people: the proceedings of the John S. Wright Forestry Conference. Department of Forestry and Natural Resources and the Cooperative Extension Service, Purdue University, IN.
- Macwhirter, Bruce, Peter Austin-Smith, Jr. and Donald Kroodsma. 2002. Sanderling (*Calidris alba*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/653</u>
- Mathews, G. V. T. 1982. The control of recreational disturbance. Pages 325-330 in D. A. Scott, editor. Managing wetlands and their birds, a manual of wetland and waterfowl management. Proceedings 3rd Tech. Meeting on Western Palearctic Migratory Bird Management, Bioogische Station Rieselfelder Münster, Federal Republic of Germany, 12-15 Oct. 1982.
- Maxson, SJ. 2000. Interspecific Interactions of Breeding Piping Plovers: Conservation Implications. Waterbirds 23: 270-276.
- McCollough, M. A. 2000. Piping Plover Assessment. Maine Department of inland fisheries and wildlife. 42pp.
- McGowan C. P. 2004. Factors affecting nesting success of American Oystercatchers (*Haematopus palliatus*) in North Carolina. M.S. Thesis, North Carolina State University, Raleigh, NC.
- McGowan, C. P. and T. R. Simons. 2006. Effects of human recreation on the incubation behavior of American Oystercatchers. Wilson Journal of Ornithology, 118:485-493.
- McGowan, C. P. 2004. Factors affecting nesting success of American Oystercatchers (*Haemaptopus palliatus*) in North Carolina. MS Thesis. North Carolina State University, Raleigh, North Carolina, USA.
- McGowan, C. P., T. R. Simon, W. Golder, and J. Cordes. 2005. A comparison of American Oystercatcher reproductive success on barrier beach and river island habitats in coastal North Carolina. Waterbirds 28:150-155.
- McCrary M.D. and Pierson M.O. 2000. Influence of human activity on shorebird beach use in Ventura County, California. In: Brown D.R., Mitchell K.L. and Chang H.W. (ed.), Fifth California Islands Symposium, OCS Study, MMS 99–0038. Santa Barbara, CA, pp. 424–427.

- McLean, E. F. 1993. Human impacts on beach use by wintering and migrating birds in lower Chesapeake Bay. Unpublished M. A. Thesis. College of William and Mary, Williamsburg, VA. 48 pp.
- Medeiros, R., J. A. Ramos, V. H. Paiva, A. Almeida, P. Pedro, and S. Antunes. 2007. Signage reduces the impact of human disturbance on little tern nesting success in Portugal . Biological Conservation 135: 99-106.
- Melvin, S. M., A. Hecht, and C. R. Griffin. 1994. Piping Plover mortalities caused by off-road vehicles on Atlantic Coast beaches. Wildlife Society Bulletin 22: 409-414.
- Melvin, S. M., C. R. Griffin, and L. H. MacIvor. 1991. Recovery strategies for piping plovers in managed coastal landscapes. Coastal Management 19: 21-34.
- Meyers, J. M. 2005. Management, monitoring, and protection protocols for American Oystercatchers at Cape Hatteras National Seashore, North Carolina. USGS Patuxent Wildlife Research Center.
- Mizrahi, D.S. 2002. Shorebird Distribution along New Jersey's Southern Atlantic Coast: Temporal Patterns and Effects of Human Disturbance. Final report, U.S. Fish and Wildlife Service.
- Molina, K. C. and R. M. Erwin. 2006. Distribution and conservation status of the Gull-billed Tern (*Gelochelidon nilotica*) in North America. Waterbirds 29: 271-295.
- Monz, C. A., E. A. Young and Y. Leung. 2004. Monitoring the impacts of visitors to shorebird populations in the NPS coastal and barrier island network areas. Proceedings of the 2004 Northeastern Recreation Research Symposium. P. 373-377.
- Morris, R. D., H. Blokpoel and G. D. Tessier. 1992. Management efforts for the conservation of common tern *Sterna hirundo* colonies in the Great Lakes: Two case histories. Biological Conservation 60: 7-14.
- Morrison, R.I.G, B.J. McCaffery, R.E. Gill, S.K. Skagen, S.L. Jones, G.W. Page, C.L. Gratto-Trevor, and B.A. Andres. 2006. Population estimates of North American shorebirds. Wader Study Group Bull. 111: 67-85.
- Morrison, R. I. G., R. Gill, B. Harrington, S. Skagen, G. W. Page, C. L. Gratto-Trevor and S. M. Haig. 2001. Estimates of Shorebird Populations in North America. Occasional paper No. 104, Canadian Wildlife Service, Ottawa, Ontario. 64 pp.
- Morrison, R.I.G., R.E. Gill, B.A. Harrington, S. Skagen, G.W. Page, C.L. Gratto-Trevor & S.M. Haig. 2000. Population estimates of Nearctic shorebirds. Waterbirds 23: 337–354.
- Morrison, R.I.G., Y. Aubry, R.W. Butler, G.W. Beyersbergen, C. Downes, G.M. Donaldson, C.L. Gratto-Trevor, P.W. Hicklin, V.H. Johnston & R.K. Ross. 2001a. Declines in North American shorebird populations. Wader Study Group Bull. 94: 34–38.
- Morse, J. A., A. N. Powell, and M. D. Tetreau. 2006. Productivity of Black Oystercatchers: Effects of recreational disturbance in a National Park. Condor 108: 623-633.
- Morton, J. M. 1996. Effects of human disturbance on the behavior and energetics of nonbreeding sanderlings. Dissertation. Virginia Polytechnic and State University, Blacksburg, VA.
- Myers, J.P. et al. 1987. Conservation strategy for migratory species. American Scientist 75: 19-26.
- Nebel, Silke and John M. Cooper. 2008. Least Sandpiper (*Calidris minutilla*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/115</u>

- Nester, L. R. 2006. Effects of off-road vehicles on the nesting activity of loggerhead sea turtles in North Carolina. MSc. Thesis, University of Florida. 81pp.
- Nettleship, David N. 2000. Ruddy Turnstone (Arenaria interpres), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/537</u>
- Nicholls, J.L. 1989. Distribution and other ecological aspects of piping plovers wintering along the Atlantic and Gulf Coasts. M.S. thesis, Auburn University; Auburn, Alabama.
- Nicholls, J.L., and G.A. Baldassarre. 1990a. Winter distribution of piping plovers along the Atlantic and Gulf Coasts of the United States. Wilson Bulletin 102(3):400-412.
- Nicholls, J.L., and G.A. Baldassarre. 1990b. Habitat associations of piping plovers wintering in the United States. Wilson Bulletin 102(4):581-590.
- Niles, L. J., H. P. Sitters, A. D. Dey, P. W. Atkinson, A. J. Barker, K. A. Bennett, K. E. Clark, N. A. Clark, C. Espoz, P. M. Gonzalez, B. A. Harrington, D. E. Hernandez, K. S. Kalasz, R. Matus, C. D. T. Minton, R. I. G. Morrison, M. K. Peck, and I. L. Serrano. 2007. Status of the Red Knot (Calaidris canutus rufa) in the western hemisphere. Report to USFWS, Ecological Services, Region 5, Pleasantville, NJ, USA. 287 pp.
- Nisbet, I. C. T. 1977. Noise and disturbance. Pages 671-673 in Coastal ecosystem management (J. R. Clark, Ed.). John Wiley & Sons, New York.
- Nisbet, I.C.T. 1979. Conservation of marine birds of northern North America A summary. Pages 305- 315 *in* Conservation of Marine Birds of Northern North America. U.S. Fish and Wildl. Serv. Wildl. Res. Rep. 11. Seattle, WA.
- Nisbet, I. C. T. 1995. Marine birds of the eastern United States: Status and Conservation. Prepared for Stichting Greenpeace Council, Amsterdam, The Netherlands. 84 pp.
- Nisbet, I, C. T. 2000. Disturbance, habituation, and management of waterbird colonies. Waterbirds 23: 312–322.
- Nisbet, I. C. T. 2002. Common Tern (*Sterna hirundo*). *In* The Birds of North America, No. 618 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Nisbet, Ian C. 2002. Common Tern (*Sterna hirundo*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/618</u>
- Noel, B. L., C. R. Chandler, and B. Winn. 2007. Seasonal abundance of nonbreeding Piping Plovers on a Georgia barrier island. Journal of Field Ornithology 78: 420-427.
- Noel, B. L. and C. R. Chandler. 2008. Spatial Distribution and Site Fidelity of Non-breeding Piping Plovers on the Georgia Coast. Waterbirds 31: 241-251.
- Nol, E. 1989. Food supply and reproductive performance of the American Oystercatcher in Virginia. Condor 91: 429-435.
- Nol, E., A. J. Baker and M. D. Cadman. 1984. Clutch initiation dates, clutch size, and egg size of the American Oystercatcher in Virginia. Auk 101: 855-867.
- Nol, Erica and Michele S. Blanken. 1999. Semipalmated Plover (*Charadrius semipalmatus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/444</u>

- Nol, E. and R. C. Humphrey. 1994. American Oystercatcher (*Haematopus palliatus*). In The Birds of North America, No. 82 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Nol, Erica and R. C. Humphrey. 1994. American Oystercatcher (*Haematopus palliatus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/082</u>
- Nol, E., Truitt, B, Allen, D., Winn, B., & Murphy, T. 2000. A survey of wintering American Oystercatchers from Georgia to Virginia, U.S.A., 1999. Wader Study Group Bull. 93: 46-50.
- Nordstrom, K. F., R. Lampe, and L. M. Vandemark. Reestablishing Naturally Functioning Dunes on Developed Coasts. Environmental Management 25: 37-51.
- Novick J. S. 1996. An analysis of human recreation impacts on the reproductive success of American Oystercatchers (<u>Haematopus palliatus</u>): Cape Lookout National Seashore, North Carolina. Unpublished M.S. Thesis, Duke University, Durham, North Carolina.
- Nudds, R.L., Bryant, D.M., 2000. The energetic cost of short flight in birds. Journal of Experimental Biology 203, 1561–1572.
- Olson, C.R., Vleck, C.M. & Vleck, D. 2006. Periodic cooling of bird eggs reduces embryonic growth efficiency. Physiological and Biochemical Zoology 79, 927–936.
- Parnell, J.F. et al. 1997. Changes in nesting populations of colonial waterbirds in coastal North Carolina 1900-1995. Colonial Waterbirds 20: 458-469.
- Parnell, J. F., W. W. Golder, and T. Henson. 1995. 1993 Atlas of colonial waterbirds of North Carolina estuaries. NC Sea Grant Publication, UNC-SG-95-02, Raleigh, North Carolina.
- Parnell, J. F. and M. A. Shields. 1990. Management of North Carolina's colonial waterbirds. UNC Sea Grant Publication UNC-SG-90-03, Raleigh, North Carolina.
- Parnell, J. F. and D. A. McCrimmon. 1984. 1983 supplement to Atlas of colonial waterbirds of North Carolina estuaries. UNC Sea Grant Publication, UNC-SG-84-07, Raleigh, North Carolina
- Parnell, J. F., and R. F. Soots, Jr. 1979. Atlas of colonial waterbirds of North Carolina estuaries. UNC Sea Grant Publication, UNC-SG-78-10, Raleigh, North Carolina
- Parnell, J. F., D. G. Ainley, H. Blokpoel, B. Cain, T. W. Custer, J. L. Dusi, S. Kress, J. A. Kushlan, W. E. Southern, L. E. Stenzel, and B. C. Thompson. 1988. Colonial waterbird management in North America. Colonial Waterbirds 11(2): 129-169.
- Parnell, J. F., R. M. Erwin, and K. C. Molina. 1995. Gull-billed Tern (*Sterna nilotica*). In The Birds of North America, No. 140 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, D.C.
- Parnell, J. F., R. M. Erwin and K. C. Molina. 1995. Gull-billed Tern (*Sterna nilotica*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/140</u>
- Patterson, M. E., J. D. Fraser, and J. W. Roggenbuck. 1991. Factors affecting piping plover productivity on Assateague Island. Journal of Wildlife Management 55: 525-531.
- Patterson, M.E., J.D. Fraser, and J.W. Roggenbuck. 1990. Piping plover ecology, management, and research needs. Virginia Journal of Science 41(4A):419-426.

- Paulson, Dennis R. 1995. Black-bellied Plover (*Pluvialis squatarola*). The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/186</u>
- Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1942. Birds of North Carolina. Bynum Printing Co., New York.
- Pearson, T. G., C. S. Brimley, and H. H. Brimley. 1919. Birds of North Carolina. Edwards and Broughton Printing Co., Raleigh, NC.
- Peters, K. A., and D. L. Otis. 2005. Using the risk-disturbance hypothesis to assess the relative effects of human disturbance and predation risk on foraging American oystercatchers. Condor 107: 715–724.
- Peters, K. A. and D. Otis. 2006. Wading Bird Response to Recreational Boat Traffic: Does Flushing Translate into Avoidance? Wildlife Society Bulletin 34(5):1383 -1391.
- Peters, K. A., and D. L. Otis. 2005. Shorebird roost-site selection at two temporal scales: is human disturbance a factor? Journal of Applied Ecology 44: 196-209.
- Pfister, C., B. A. Harrington, and M. Lavine. 1992. The impact of human disturbance on shorebirds at a migration staging area. Biological Conservation 60: 115-126.
- Pienkowski, M. W. 1992. The impact of tourism on coastal breeding waders in western and southern Europe: an overview. Wader Study Group Bull. 68: 92-96.
- Piersma, T. and A. J. Baker. 2000. Life history characteristics and the conservation of migratory shorebirds. p. 105-124. In Gosling, L. M. and W. J. Sutherland [eds.], Behaviour and Conservation. Cambridge University Press. Cambridge.
- Pfister, C., B. A. Harrington, and M. Lavine. 1992. The impact of human disturbance on shorebirds at a migration staging area. Biological Conservation 60:115–126.
- Placyk, J. S., Jr., and B. A. Harrington. 2004. Prey abundance and habitat use by migratory shorebirds at coastal stopover sites in Connecticut. Journal of Field Ornithology 75: 223-231.
- Plissner, J. H. and S. M. Haig. 2000. Status of a broadly distributed endangered species: results and implications of the second International Piping Plover Census. Canadian Journal of Zoology 78: 128-139.
- Plissner, J. H. and S. M. Haig. 2000. Viability of piping plover *Charadrius melodus* metapopulations. Biological Conservation 92: 163-173.
- Prange, S., S. D. Gehrt and E. P. Wiggers. 2003. Demographic factors contributing to high raccoon densities in urban landscapes. Journal of Wildlife Management 67: 324-333.
- Preissler, H. K., A. A. Ager and M. J. Wisdom. 2006. Statistical methods for analyzing responses of wildlife to human disturbance. Journal of Applied Ecology 43: 164–172.
- Quan, R. C., X. Wen, and X. Yang. 2002. Effects of human activities on migratory waterbirds at Lashihai Lake, China. Biological Conservation 108:273–279.
- Rappole J. H. 1981. Management possibilities for beach-nesting shorebirds in Georgia. Pages 114-126 in Proceedings of Nongame and Endangered Wildlife Symposium. Technical Bulletin WL15 (R. R. Odom and J. W. Guthrie, Eds.), Georgia Department of Natural Resources, Athens.
- Recher, H. F. 1966. Some aspects of the ecology of migrant shorebirds. Ecology 47: 393-407.

- Reese, J. G. 1977. Reproductive success of Ospreys in central Chesapeake Bay. Auk 94: 202-221.
- Roberts G., P. R. Evans. 1993. Responses of foraging Sanderlings to human approaches. Behaviour. 126:29-43.
- Rodgers, J. A., Jr., and H. T. Smith. 1995. Set-back distances to protect nesting bird colonies from human disturbance in Florida. Conservation Biology 9:89-99.
- Rodgers, J. A. Jr., and H. T. Smith. 1997. Buffer zone distances to protect foraging and loafing waterbirds from human disturbance in Florida. Wildlife Society Bulletin 25(1):139-145.
- Rodgers, J. A., and S. T. Schwikert. 2002. Buffer-zone distances to protect foraging and loafing waterbirds from disturbance by personal watercraft and outboard-powered boats. Conservation Biology 16: 216–224.
- Rodgers, J. A. and S. T. Schwikert. 2003. Buffer zone distances to protect foraging and loafing waterbirds from disturbance by airboats in Florida. Waterbirds 26: 437-443.
- Rogers, D. I., P. F. Bailey, T. Piersma, J. A. Van Gils, and K. G. Rogers. 2006. High-tide habitat choice: insights from modelling roost selection by shorebirds around a tropical bay. Animal Behaviour 72: 563-575.
- Rogers, D., C. Hassell, and J. Lewis. 2006. Shorebird disturbance on the beaches of Roebuck Bay, 2005-2006: Conservation implications and recommendations. A report by Broome Bird Observatory for the WA Department of Conservation and Land Management, NHT and the Shorebird Conservation Project/WWF Australia. 40pp.
- Rogers, D.I., T. Piersma and C.J. Hassell. 2006b. Roost Availability May Constrain Shorebird Distribution: Exploring the Energetic Costs of Roosting and Disturbance Around a Tropical Bay. Biological Conservation. 133: 225-235.
- Rogers, D. I. 2003. High-tide roost choice by coastal waders. Wader Study Group Bulletin 100: 73-79
- Ruhlen, T. D., S. Abbott, L. E. Stenzel, and G. W. Page. 2003. Evidence that human disturbance reduces Snowy Plover chick survival. Journal of Field Ornithology. 74:300-304.
- Sabine, J. B., III. 2005. Effects of human activity and predation on breeding American Oystercatchers. MS Thesis, The University of Georgia, Athens, Georgia, USA.
- Sabine, J. B., III., J. M. Meyers, C. T. Moore, and S. H. Schweitzer. 2008. Effects of human activity on behavior of breeding American Oystercatchers, Cumberland Island National Seashore, Georgia, USA. Waterbirds 31: 70-82.
- Sabine, J.B., S.H. Schweitzer & J.M. Meyers. 2006. Nest fate and productivity of American oystercatchers, Cumberland Island national seashore, Georgia. Waterbirds 29(3): 308–314.
- Safina, C. and J. Burger. 1983. Effects of human disturbance on reproductive success in the Black Skimmer. Condor 85:164–171.
- Saino, N., M. Romano, R. P. Ferrari, R. Martinelli, A. P. Møller. 2005. Stressed mothers lay eggs with high corticosterone levels which produce low-quality offspring. Journal of Experimental Zoology Part A Comparative Experimental Biology 303A: 998-1006.

- Schlacher, T. A. and L. M.C. Thompson. 2008. Physical Impacts Caused by Off-Road Vehicles to Sandy Beaches: Spatial Quantification of Car Tracks on an Australian Barrier Island Journal of Coastal Research 24: 234– 242
- Schlacher, T. A., L. M. C. Thompson and Simon J. Walker² 2008. Mortalities caused by off-road vehicles (ORVs) to a key member of sandy beach assemblages, the surf clam Donax deltoids. <u>Hydrobiologia</u> 610: 345-350
- Schneider, D. C., and B. A. Harrington. 1981. Timing of shorebird migration in relation to prey depletion. Auk 98:801-811. Senner, S., and M. A. Howe. 1984. Conservation of Nearctic shorebirds. Pages 379421 in Shorebirds: Breeding behavior and populations (J. Burger and B. L. Olla, Eds.). Plenum Press, New York.
- Schulte, S., S. Brown, and the American Oystercatcher Working Group. 2006. Version 1.0. American Oystercatcher Conservation plan for the United States Atlantic and Gulf Coasts. Retrieved from http://www.ncsu.edu/project/grsmgis/AMOY/Research.htm.
- Schulz, R. and M. Stock. 1993. Kentish Plovers and tourists: competitors on sandy coasts. Wader Study Group Bull. 68: 83-91.
- Shepherd, P. C. F. and J. S. Boates. 1999. Effects of a commercial baitworm harvest on Semipalmated Sandpipers and their prey in the Bay of Fundy Hemispheric Shorebird Reserve. Conservation Biology 13: 347–356.
- Sidle, J.G., K. Mayne, and E.N. McPhillips. 1991. Protecting the piping plover under section 7 of the Endangered Species Act. Environmental Management 15(3):349- 356.
- Simons, T. R., S. Schulte, J. Cordes, M. Lyons, and W. Golder. 2004. American Oystercatcher (*Haematopus paliatus*) research and monitoring in North Carolina. Annual report, North Carolina Cooperative Fish and Wildlife Research Unit, Department of Zoology, North Carolina State University, Raleigh, North Carolina, USA.
- Simons, T. R., S. Schulte, J. Cordes, M. Lyons, and W. Golder. 2006. American Oystercatcher (*Haematopus palliatus*) research and monitoring in North Carolina : 2006 Annual report. North Carolina Cooperative Fish and Wildlife Research Unit, Department of Zoology, North Carolina State University, Raleigh, North Carolina, USA.
- Skagen, S.K. 2006. Migration stopovers and the conservation of Arctic-breeding Calidridine sandpipers. Auk 123(2): 313–322.
- Skagen, S., J. Bart, B. Andres, S. Brown, G. Donaldson, B. Harrington, V. Johnston, S.L. Jones & R.I.G. Morrison. 2003. Monitoring the shorebirds of North America: towards a unified approach. Wader Study Group Bull. 100: 102–104.
- Skagen, S. K., S. Brown, and R. Johnson. 2005. Implications of different shorebird migration strategies for habitat conservation. Pages 680–683 in Bird Conservation Implementation and Integration in the Americas: Proceedings of the Third International Partners in Flight Conference, vol. 2 (C. J. Ralph and T. D. Rich, Eds.). U.S. Department of Agriculture, Forest Service, General Technical Report PSW-GTR-191.
- Skagen, S.K., D.A. Granfors & C.P. Melcher. 2008. On determining the significance of ephemeral continental wetlands to North American migratory shorebirds. Auk 125.
- Skagen, S. K., C. P. Melcher, and E. Muths. 2001. The interplay of habitat change, human disturbance and species interactions in a waterbird colony. American Midland Naturalist 145:18–28.
- Skagen, S.K., P.B. Sharpe & R.G. Waltermire. 1999. Biogeographical profiles of shorebird migration in midcontinental North America. U.S. Geological Survey Biological Science Report 2000–0003, Fort Collins, Colorado. http://www.fort.usgs.gov/shorebirds (accessed 10 May 2006).

- Skeel, Margaret A. and Elizabeth P. Mallory. 1996. Whimbrel (Numenius phaeopus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/219</u>
- Soulliere, G. J., B. A. Potter, D. J. Holm, D. A. Granfors, M. J. Monfils, S. J. Lewis, and W. E. Thogmartin. 2007. Upper Mississippi River and Great Lakes Region Joint Venture Waterbird Habitat Conservation Strategy. U.S. Fish and Wildlife Service, Fort Snelling, MN. 68pp.
- Smit, C., and G. J. M Visser. 1993. Effects of disturbance on shorebirds: a summary of existing knowledge from the Dutch Wadden Sea and Delta area. Wader Study Group Bulletin 68, 6–19.
- Staine, K. J. and J. Burger. 1994. Nocturnal foraging behavior of breeding piping plovers (*Charadrius melodus*) in New Jersey. Auk 111: 579-587.
- Stillman, R. A., and J. D. Goss-Custard. 2002. Seasonal changes in the response of oystercatchers *Haematopus* ostralegus to human disturbance. Journal of Avian Biology 33:358–365.
- Stillman, R. A., A. D. West, R. W. G. Caldow and S. E. A. Le V. Dit Durell. 2007. Predicting the effect of disturbance on coastal birds. Ibis 149: 73–81.
- Stolen, E. D. 2003. The effects of vehicle passage on foraging behavior of wading birds. Waterbirds 26:429–436.
- Strauss E. 1990. Reproductive success, life history patterns, and behavioral variation in a population of piping plovers subjected to human disturbance (1982–1989). PhD, Tufts University, Medford, Massachusetts, 143 pp.
- Taylor, E. C., R. E. Green, and J. Perrins. 2007. Stone-curlews *Burhinus oedicnemus* and recreational disturbance: developing a management tool for access. Ibis 149: 37-44.
- Thomas, G. H., R. B. Lanctot, and T. Szekely. 2006. Can intrinsic factors explain population declines in North American breeding shorebirds? A comparative analysis. Animal Conservation 9: 252-258.
- Thomas, K., R. G. Kvitek, and C. Bretz. 2003. Effects of human activity on the foraging behavior of Sanderlings *Calidris alba*. Biological Conservation 109:67–71.
- Thompson, Bruce C., Jerome A. Jackson, Joannna Burger, Laura A. Hill, Eileen M. Kirsch and Jonathan L. Atwood. 1997. Least Tern (*Sterna antillarum*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/290</u>
- Thomsen, S. K. 2006. A GIS-based analysis of human disturbance on piping plover abundance, distribution and productivity on the barrier islands of Long Island, New York. Division III Project, Hampshire College, NY 29pp.
- Thompson, B. C., J. A. Jackson, J. Burger, L. A. Hill, E. M. Kirsch, and J. L. Atwood. 1997. Least Tern (*Sterna antillarum*). *In* The Birds of North America, No. 290 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.
- Thompson, Bruce C., Jerome A. Jackson, Joannna Burger, Laura A. Hill, Eileen M. Kirsch and Jonathan L. Atwood. 1997. Least Tern (*Sterna antillarum*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/290</u>

- Tibbitts, T. Lee and William Moskoff. 1999. Lesser Yellowlegs (*Tringa flavipes*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/427</u>
- Traut, A. H., J. M. McCann, and D. F. Brinker. 2006. Breeding Status and Distribution of American Oystercatchers in Maryland. Waterbirds 29: 302-307.
- Tremblay, J. and L. N. Ellison. 1979. Effects of human disturbance on breeding of Black-crowned Night Herons. Auk 96: 364-369.
- Truitt, B.R. and B. Brown. 2000. Stopover Biology of Red Knots Virginia Barrier Islands. Report to the U.S. Fish and Wildlife Service, 5 Pp.
- Trulio, L. 2005. Understanding the Effects of Public Access and Recreation on Wildlife and their Habitats in the Restoration Project Area. San Jose State University.
- U.S. Fish and Wildlife Service. 2003. Recovery Plan for the Great Lakes Piping Plover (*Charadrius melodus*). Ft. Snelling, Minnesota. viii + 141 pp.
- U.S. Fish and Wildlife Service [FWS]. 1998. 1997 status update: U.S. Atlantic Coast piping plover population. Sudbury, Massachusetts.
- U.S. Fish and Wildlife Service. 1996. Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan. Hadley, Massachusetts. 258 pp.
- U.S. Fish and Wildlife Service [FWS]. 1988. Great Lakes and Northern Great Plains Piping Plover Recovery Plan. U.S. Fish and Wildlife Service; Twin Cities, Minnesota.
- U.S. Shorebird Conservation Plan April 10, 2000: revised September 30, 2002. Retrieved from http://www.fws.gov/shorebirdplan/RegionalShorebird/RegionalPlans.htm.
- Van Der Merwe, D. 1991. Effects of off-road vehicles on the macrofauna of a sandy beach. South African Journal of Science 87: 210-213.
- Vaske, J.J., D. J. Decker, and M.J. Manfredo. 1995. Human Dimensions for Wildlife Management: An integrated framework for coexistence. Pages 71-79 in R. L. Knight and K. J. Gutzwiller, ed. Wildlife and Recreationists: coexistence through management and research. Island Press, Washington, D. C. 372pp.
- Verhulst, S., K. Oosterbeek, and B. J. Ens. 2001. Experimental evidence for effects of human disturbance on foraging and parental care in oystercatchers. Biological Conservation 101, 375–380.
- Warnock, N., and M. A. Bishop. 1998. Spring stopover ecology of migrant Western Sandpipers. Condor 100:456–467.
- Warnock, Nils D. and Robert E. Gill. 1996. Dunlin (*Calidris alpina*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/203</u>
- Watson, J. J., G. I. H. Kerley, and A. McLachhlan. 1996. Human activity and potential impacts on dune breeding birds in the Alexandria coastal Dunefield. Landscape and Urban Planning 34: 315-322.
- Wearing, S., Neil, J., 1999. Ecotourism: Impacts, Potentials and Possibilities. Reed Educational and Professional Publishing Ltd, Oxford.
- Weber, T.P. and A. I. Houston. 1997. Flight costs, flight range and the stopover ecology of migrating birds. Journal of Animal Ecology 66: 297-306.

- Wemmer, L. C., U. Ozesmi, and F. J. Cuthbert. 2001. A habitat-based population model for the Great Lakes population of the piping plover (*Charadrius melodus*). Biological Conservation 99: 169-181.
- West, A. D., Goss-Custard, J. D., Stillman, R. A., Caldow, R. W. G., Durell, S. E. A le V. dit, McGrorty, S., 2002. Predicting the impacts of disturbance on wintering waders using a behaviour based individuals model. Biological Conservation 106, 319–328.
- West, A. D. and R. W. G. Caldow. 2006. The development and use of individuals-based models to predict the effects of habitat loss and disturbance on waders and waterfowl. Ibis 148: 158-168.
- Weston, M. A. and M. A. Elgar. 2007. Responses of Incubating Hooded Plovers (<u>*Thinornis rubricollis*</u>) to Disturbance. Journal of Coastal Research 23: 569-576.
- Wilke, A. L., D. F. Brinker, B. D. Watts, A. H. Traut, R. Boettcher, J. M. McCann, B. R. Truitt, and P. P. Denmon. American Oystercatchers in Maryland and Virginia, USA: Status and Distribution. Waterbirds 30: 152-162.
- Williams, A. J., V. L. Ward, and L. G. Underhill. 2004. Waders respond quickly and positively to the banning of off-road vehicles from beaches in South Africa. Wader Study Group Bull. 104: 79-81.
- Wilson, W. Herbert. 1994. Western Sandpiper (*Calidris mauri*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <u>http://bna.birds.cornell.edu/bna/species/090</u>
- Wolcott, T. G., and D. Wolcott. 1984. Impact of off-road vehicles on macroinvertebrates of a mid-Atlantic beach. Biological Conservation 29: 217-240.
- Yasue, M. 2005. The effects of human presence, flock size and prey density on shorebird foraging rates. Journal of Ethology 23: 199–204.
- Yasue, M. 2006. Environmental factors and spatial scale influence shorebirds' responses to human disturbance. Biological Conservation 128: 47-54.
- Zonick, C. A. 2000. The winter ecology of Piping Plovers (Charadrius melodus) along the Texas guf coast. PhD Dissertation, University of Missouri, Columbia. 168pp.
- Zonick, C. A. 1997. The use of Texas barrier island washover pass habitat by Piping Plovers and other coastal waterbirds. Report to Texas Parks and Wildlife Dept. and U. S. Fish and Wildlife Service.