

Proposal for Cape Point

Measures to protect natural resources at Cape Hatteras National Seashore should be based on the best scientific information available. By law, actions to protect federally threatened and endangered species must be based on the best scientific information available. In addition, Executive Order 11644 states: “[ORV] areas and trails shall be located in areas of the National Park system ... *only if* the respective agency head determines that off-road vehicle use in such locations *will not adversely affect* their natural, aesthetic, or scenic values.” (emphasis added). The legal presumption is proposed ORV areas and trails that may adversely affect natural resources may only be allowed if the best scientific information available demonstrates the ORV trail will have no adverse effects on the natural resource values. Thus, the Executive Order places the burden on those advocating ORV areas and trails to provide scientific justification for measures that will prevent adverse impacts to natural resource values, or to demonstrate that suggested measures based on scientific studies or recommendations are not required.

Relevant Statutes and Regulations: Based on the Natural Resources Subcommittee Conference Call on July 23, 2008 and the Draft meeting notes that followed, the following relevant statutes and regulations were outlined as applicable to the Seashore, including Cape Point, by Mike Murray, Jason Waanders and Mike Stevens.

- Endangered Species Act for Piping Plover, Sea Turtles and Sea Amaranth. The DOI solicitor noted that the ESA prohibits take of listed endangered and threatened species. “Take” is expansively defined and includes “to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect,” or to attempt any of these actions. Habitat destruction and disruption of normal life activities (such as breeding and feeding) may constitute “take.” ESA allows take of listed species incident to lawful activities if authorized through permit or incidental take statement, but prohibits take that will jeopardize continued existence of the listed species or destroy or adversely modify their critical habitat.
- Migratory Bird Treaty Act for other shorebird species. The DOI solicitor noted that the MBTA also prohibits “take” but the definition of take is narrower than under the ESA. Although there is no bright-line test, the killing, wounding, collection, destruction of birds, their eggs, and occupied nests is clearly prohibited. Habitat destruction and disruptive activities that do not directly result in death or harm of birds, eggs, and occupied nests probably are not prohibited. FWS policy provides that destruction of unoccupied nests is not per se a violation of the MBTA, but if it can be shown to lead to the death of a bird (for instance, destruction of a nest while a chick is foraging) it could also be considered a violation. Also, unlike the ESA “take” is illegal regardless of its effect on species or population as a whole. Finally, an action does not have to intend to take a bird, nest, or egg to be a violation of the MBTA.
- Organic Act: A strong driver of NPS resource management planning due to the requirement to conserve scenery, natural and historic objects, and wildlife, and to provide for the enjoyment of those resources in a manner that will leave them

unimpaired for the enjoyment of future generations. The Act contains both non-impairment and conservation mandates. If proposed Park uses conflict with protection of resources and values, the protection of resources and values must take priority. There is a lot of case law supporting deference to resource protection over uses. NPS has more discretion in carrying out the conservation mandate. Organic Act is focused on what happens within park boundaries and species are considered a park resource. Losing a species within the Park would constitute an impairment of Park resources. This is different than ESA and wildlife statutes that enable the Park to look at the species population as a whole. There also are regulations under the Organic Act, 36 C.F.R. 1.4, 36 C.F.R. 2.1, about non-impairment, conservation, and management.

- NPS Management Policies on Protected and Threatened Species and Executive Orders on ORVs on Public Land: NPS must maintain natural distribution and abundance of rare and declining species and consider federal and state listings. ORVs may be allowed only in locations where there are not impacts to natural, aesthetic and cultural values. NPS needs to manage ORVs in a way that allows the native species to prosper similar to the natural abundance and distribution of those species.

I believe these proposed measures are based on the best available scientific information and they are generally consistent with recommendations in relevant conservation and recovery plans. I am certainly open to scientific information that demonstrates these proposed measures are not warranted. Should future objective, peer-reviewed scientific research indicate that protective measures could be adjusted then the Seashore should consider all relevant research in planning and revising natural resource protection plans and actions.

This proposal outlines necessary, science-based resource protection measures while allowing reasonable and responsible access for pedestrians and/or ORVs to Cape Point. The guidelines presented in this proposal may allow for year round access to Cape Point for pedestrians and/or ORVs. While it is impossible to direct birds, sea turtles, seabeach amaranth, or other natural resources to use a specific area of Cape Point, NPS is encouraged to work with state and federal agencies, and other biologists, to explore methods for habitat enhancement that may reduce resource conflicts between natural resources and recreation activity.

1. Guidelines for resource protection at Cape Point
 - a. Define Cape Point area
 - i. Ramp 43 to Ramp 45.
 - b. ORV routes and areas
 - i. Designate an ORV route from ramp 43 to ramp 45, including Cape Point.
 - ii. All ORV routes shall be subject to closure to protect breeding and non-breeding birds, sea turtles, seabeach amaranth and other

sensitive resources or to protect safety of ORV users and other seashore visitors.

c. Pre-nesting closures

- i. Define area (see 2008 map): The pre-nesting closure shall include the area of Cape Point from ramp 43 to ramp 45 as established in 2008. The pre-nesting closure as established in 2008 allows an ORV and pedestrian corridor along the north beach. This ORV corridor remains open until such a time that ORV traffic places at risk (defined as buffer distances or other provisions are not met) natural resources such as nesting birds, sea turtles, or seabeach amaranth (a federally-listed plant species).
- ii. Start date: pre-nesting closures shall be established with symbolic fencing consisting of wooden posts, bird usage signs, strings, and flagging tape by 15 March. The pre-nesting areas shall remain in place until the later of July 15 or two weeks after the last tern, black skimmer, American oystercatcher, piping plover, or Wilson's plover chick within the area has fledged and no other nesting activities by any species are observed, as determined by two consecutive monitoring events conducted over at least two days.
- iii. Changes in habitat: If substantial changes occur at Cape Point, NPS shall establish pre-nesting closure areas consistent with the 2008 breeding season pre-nesting areas. These pre-nesting areas shall include the areas of moist soil habitat, permanent and ephemeral ponds or pools, ocean backshore, dunes, dry sand flats, overwashes, and blowouts. The pre-nesting areas shall also include areas of the ocean tidal zone consistent with the 2008 breeding season pre-nesting closures.
- iv. Monitoring: at least once every two days from March 15 to April 15, and daily from April 16 to July 15, to determine if any birds are exhibiting pre-nesting and/or breeding behavior.
- v. Breeding behavior outside of pre-nesting closures: NPS also shall establish closures with appropriate buffer distances (see table) for breeding behavior, including but not limited to territorial behavior, courtship, mating, scrapes, or other nest-building activities within 2 hours of discovery. NPS shall establish closures with appropriate buffer distances for nests and chicks immediately upon discovery.

d. Seasons for selected natural resources

- i. Sea turtles: 1 May to 15 November
- ii. Birds, breeding: 15 March to 31 August
- iii. Birds, non-breeding: 1 July to 31 May
- iv. Seabeach amaranth: 1 July to 15 November

e. Buffer Distances for breeding behavior, incubation, and unfledged chicks:

- i. Buffer distances for bird breeding behavior: NPS shall establish buffers for observed breeding behavior, including but not limited to territorial behavior, courtship, mating, confirmed scrapes, or other nest-building activities, and for all nests and chicks. The buffers shall apply to ORVs and pedestrians as explained below:

Species	Breeding Behavior/ Nest Buffer	Unfledged Chick Buffer
Piping Plover	100 m	1000 m (ORV) with exception for chicks >14d. 300 m (ped)
Least Tern	100 m	200 m
Other colonial waterbirds	200 m	200 m
American Oystercatcher	150 m	200 m
Wilson's Plover	150 m	200m

- i. Piping Plover: 100 m minimum from nests, territorial behavior, courtship, mating, confirmed scrapes, or other nest-building activities based on studies in the southern recovery unit; 1000 m from chicks (first 2 weeks). The ORV closure area for chicks shall extend for 1000 m on each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure area shall extend from the ocean side low water line to the dune line. Vehicles may be allowed to pass through portions of the protected area, maintaining a 300 m buffer distance at all times, where the protected area is considered by NPS natural resource management staff to be inaccessible to chicks because of steep topography, dense vegetation, or other naturally occurring obstacles. However, all of the ocean beach at Cape Point shall be considered accessible to Piping Plover chicks. During daylight hours only, NPS may at its discretion allow ORV access within the 1000 m unfledged piping plover chick buffer two weeks after the chicks have hatched if, when ORV access is permitted, a buffer distance of 300 m between piping plover chicks and ORVs is maintained at all times and the following conditions are met:

1. The chicks must be monitored from dawn to dusk by NPS staff. The modified access area will not be open to ORVs each morning until the location of the brood has been determined by an NPS monitor and an adequate buffer has been assured. If a piping plover adult or chick moves within 200 m of ORVs or an ORV access corridor, NPS staff on site shall immediately take protective measures to close and re-establish the 1000 m buffer, including

contacting law enforcement to begin evacuation of the area; no additional nonessential ORVs shall be allowed within the 1000 m unfledged piping plover chick buffer. Monitors shall not disturb chicks.

- ii. Colonial waterbirds: The buffer distance is measured as a radius from the site of nest, chicks, or observed breeding behavior, including but not limited to nests, territorial behavior, courtship, mating, confirmed scrapes, or other nest-building activities, or chicks. Buffer may require expansion, maintaining appropriate buffer distance (see table), due to mobility of chicks. Tern and skimmer chicks often move to a shoreline adjacent to the colony site one to two weeks prior to fledging. Movements of chicks should be carefully and regularly monitored during this period.
- iii. American Oystercatcher and Wilson's Plover: Immediately upon observation of paired adults, nests, territorial behavior, courtship, mating, confirmed scrapes, or nest-building activities, the area within 150 m of the activity shall be immediately closed to ORVs and pedestrians. At time of hatching, the closure area shall extend for 200 m each side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting closure area shall extend from the ocean side low water line to the dune line. American Oystercatcher and Wilson's Plover chicks are highly mobile, therefore the locations of chicks should be monitored carefully and the closures should be adjusted if needed to ensure a 200 m buffer around chicks at all times. Vehicles may be allowed to pass through portions of the protected area where the protected area is considered by NPS natural resource management staff to be inaccessible to chicks because of steep topography, dense vegetation, or other naturally occurring obstacles. However, all of the ocean beach at Cape Point shall be considered accessible to American Oystercatcher and Wilson's Plover chicks in these areas. Note: Breeding Wilson's Plovers have not been documented at Cape Point, but they have been documented at other sites on the Seashore. Very little information exists on movements of Wilson's Plover broods. Preliminary results from studies currently underway indicate that brood movements may be similar to those of Piping Plovers. If future research indicates that additional buffer distances are needed, then protection measures for this species should be adjusted accordingly.
- iv. Birds-breeding behavior outside of existing closures: Breeding behavior, including but not limited to territorial behavior, courtship, mating, scrapes, nests, other nest-building activities, or chicks triggers immediate closure with appropriate buffers (see table).

- v. Mixed species nesting areas: When multiple species are present, the greatest applicable buffer distance shall be used. The buffer areas shall be marked with symbolic fencing consisting of wooden posts, bird usage signs, string and flagging tape, to the extent possible in light of physical characteristics of the closure and the high tide line.

- f. Non-breeding shorebirds and waterbirds: Non-breeding shorebird habitats at Cape Point include sand and/ or mud flats with no or very sparse emergent vegetation. In some cases, these flats may be covered or partially covered by a mat of blue-green algae. Adjacent unvegetated or sparsely vegetated sand, mud, or algal flats above high tide are also essential, especially for roosting piping plovers and other shorebirds. Such sites may have debris, detritus (decaying organic matter), or micro-topographic relief (less than 50 cm above substrate surface) offering refuge from high winds and cold weather. Essential components of the beach/dune ecosystem include wrack and bare or sparsely vegetated backbeach (beach area above mean high tide seaward of the dune line, or in cases where no dunes exist, seaward of a delineating feature such as a vegetation line, structure, or road) for roosting and refuge during storms for feeding and roosting. Washover areas are broad, unvegetated zones with little or no topographic relief that are formed and maintained by the action of hurricanes, storm surge, or other extreme wave action and provide good habitat for non-breeding shorebirds. The margins of ephemeral ponds and pools, along with other moist soil habitats not previously mentioned are also essential for non-breeding shorebirds.
 - i. Suitable interior habitats, including all habitats mentioned above, should be closed year-round with a 100 m buffer to ORV and pedestrian use to protect essential resting and foraging habitats for all shorebird species.
 - ii. Protection of habitats mentioned above will also benefit breeding and non-breeding waterbirds.
 - iii. This proposed protection for non-breeding shorebirds at Cape Point is being made with the presumption that the area of South Beach from ~Ramp 45 to ~Ramp 49 will be accessible by pedestrians only.

- g. Actions requiring expansion of buffer distances
 - i. Violations of closures: At all established pre-nesting and nesting areas for birds, sea turtle nests, other natural resource closures, and buffers, if, a deliberate act that disturbs or harasses wildlife or vandalizes fencing, nests, or plants, is documented by NPS personnel, the pre-nesting area or buffer shall be expanded automatically by 50 m. If a second such act occurs at the same area, the buffer shall be expanded automatically by an additional

100 m. If a third such act occurs, the buffer shall be expanded automatically by an additional 500 m or more, if NPS determines it is necessary to minimize the extent of further disturbance.

- ii. Disturbances: If disturbance from ORVs and/or pedestrians, as observed by NPS natural resource management staff, occurs within the given buffer distance, the buffer zone shall be expanded in 50 m increments until no disturbance occurs. Behaviors indicating disturbance include defensive displays, alarm calls, flushing or leaving a nest or feeding area, and diving or mobbing pedestrians, dogs, or vehicles.

- h. Sea Turtles: Loggerhead Sea Turtle (*Caretta caretta*) 5-year review: Summary and Evaluation and US National Recovery Plan for Loggerhead Sea Turtles in the Northwest Atlantic (Draft) state: “Operating public vehicles on nesting beaches for recreational purposes or beach access also degrades nesting habitat. The ruts left by vehicles in the sand prevent or impede hatchlings from reaching the ocean following emergence from the nest (Mann 1977, Hosier et al. 1981, Cox et al. 1994, Hughes and Caine 1994). Hatchlings impeded by vehicle ruts are at greater risk of death from predation, fatigue, desiccation, and being crushed by additional vehicle traffic. Light pollution from vehicle lights on the beach after dark may deter females from nesting and disorient hatchlings. Driving directly above incubating egg clutches can cause sand compaction, which may decrease hatching and emergence success and directly kill pre-emergent hatchlings (Mann 1977). Additionally, vehicle traffic on nesting beaches may contribute to erosion, especially during high tides or on narrow beaches where driving is concentrated on the high beach and foredune...” Action items in the draft recovery plan include the following:

- “612. Minimize and control vehicular traffic on nesting beaches.
 - 6121. Prohibit nighttime driving on beaches during the loggerhead nesting season.
 - 6122. Ensure that the linear kilometers of nesting beach where vehicular traffic is permitted does not increase above 2006 levels.
 - 6123. Manage daytime driving to minimize impacts to loggerheads.”

- i. All Sea turtle nests shall be located each morning, assessed according to NCWRC guidelines, and immediately posted with symbolic fencing. Closure should be a minimum of 30’ x 30’ around the nest. At the hatch window of 55 days to 100 days, a full beach closure shall be implemented that includes a 50 m buffer from the nest if light restrictions are implemented. If no light restrictions are implemented, the buffer shall be 175 m. The closure can be removed after the nest has hatched and after nest excavation of the nest has found no remaining viable eggs or hatchlings.

- ii. Sea turtle protection measures as well as dates and times in this proposal relate primarily to loggerhead and green sea turtles. Leatherback sea turtles also nest within the Seashore. This species nests earlier than other species, in April. Nest numbers are presently low, but increasing and sea turtle experts feel the trend will continue. Seashore staff should train field staff and law enforcement staff to recognize leatherback sea turtles and their crawls, and establish closures for nests as specified above.
- i. Light restrictions:
 - i. 1 May to 15 November; no lanterns or auxiliary lights and no fixed lights of any kind burning for more than 5 minutes, no campfires, 50 m buffer from all sea turtle nests during hatch window (55-100 days) if light restrictions are implemented. If no light restrictions are implemented, buffer shall be 175 m.
 - j. Night driving restrictions
 - i. Start night restrictions: begin on 1 May, beach closed to nonessential ORV traffic beginning at 10:00 pm. Beach is opened daily only after being cleared by sea turtle patrol staff.
 - ii. End night restrictions: end on November 15 except as follows: Between September 16 and November 15, NPS may issue night driving permits (see above) for authorized nonessential driving between the hours of 10 p.m. and sunrise.
 - iii. Education/permit for night driving: The permit application process shall have an educational component, and the permit shall contain restrictions on light use (see below). During the September 16 to November 15 time period, NPS retains the discretion to limit night driving to certain areas or routes, based on resource protection considerations.
 - k. Habitat and vegetation management
 - i. NPS should explore opportunities to enhance interior bird nesting habitat at a sufficient distance away from the north beach ORV corridor.
 - ii. Selected interior areas of Cape Point could be opened to vehicle traffic from 16 November to 14 March, excluding areas that are suitable as foraging, resting, and roosting habitat for non-breeding shorebirds, such as ephemeral pools/ponds, all moist soil habitats, and a 100 m buffer around such habitats. Such action should reduce vegetation density and possibly make the interior areas of Cape Point more attractive to nesting birds. This may result in nesting areas being established at a sufficient distance away from the “north beach” to allow ORV use during most of the year.

- iii. NPS should consult with USFWS, NCWRC, and other qualified biologists to determine the best areas for vegetation, pond, and other habitat management.
- l. Dogs or other pets:
 - i. Birds frequently flush from nests at greater distances if dogs are present. Dogs must be leashed at all times according to NPS regulations and shall not be permitted within 100 m of any resource closure at Cape Point.
- m. Monitoring:
 - i. Breeding Birds: NPS should implement a monitoring program to gather basic data on location, population size, foraging areas, and success of the following species: Piping Plovers, American Oystercatchers, all colonial waterbirds. See Adaptive Management.
 - ii. Non-breeding birds: NPS should implement a weekly monitoring program to gather basic data on location, population size, and habitat use by non-breeding shorebirds; non-breeding shorebird season extends from 1 July to 31 May.
- n. Barrier island dynamics: Barrier islands are dynamic coastal features. Changes in the landscape and habitats can be significant following a single storm or change gradually over time. For this reason, a resource management plan and/or ORV management plan must have significant flexibility to respond to these changes and provide necessary protection for natural resources.
 - i. NPS should develop guidelines to identify habitat characteristics that are suitable for birds (nesting, migrating, winter) and other natural resources, pro-actively protect these habitats in a timely manner, and adjust the implementation of protection actions to include changes in habitat over time.
- o. Adaptive Management (Information to follow)