



## PIPING PLOVER CRITICAL HABITAT QUESTIONS AND ANSWERS

The U.S. Fish and Wildlife Service has designated amended critical habitat for the piping plover on its wintering grounds in four areas of North Carolina totaling approximately 2,043 acres. A proposal to designate amended critical habitat was first published in the *Federal Register* on June 12, 2006. A notice of availability announcing a draft environmental assessment and addendum to the economic analysis was published in the *Federal Register* on May 31, 2007. On May 15, 2008, the Service published in the *Federal Register* a proposal to include additional critical habitat areas to two previously proposed units. The final critical habitat areas include portions of Cape Hatteras Seashore, Pea Island National Wildlife Refuge, and three state-owned islands.

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### 1. What is critical habitat?

Critical habitat is a term used in the Endangered Species Act (ESA) that refers to specific geographic areas that contain habitat features essential for the conservation of a threatened or endangered species. These areas may require special management considerations or protection for the species.

### 2. How does the Service determine which areas to designate as critical habitat?

Biologists identify physical or biological habitat features needed for life and successful reproduction of the species. These features include, but are not limited to:

- ◆ space for individual and population growth and for normal behavior;
- ◆ food, water, air, light, minerals, or other nutritional or physiological requirements;
- ◆ cover or shelter;
- ◆ sites for breeding and rearing of offspring; and,
- ◆ habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Areas containing these features of the habitat are identified in the landscape. By law, the Service is required to identify sufficient areas containing these characteristics to ensure conservation of the listed species.

### 3. How much habitat is being designated as critical habitat for the piping plover?

The Service has amended and designated four units (NC-1 Oregon Inlet, NC-2 Cape Hatteras Point, NC-4 Hatteras Inlet, and NC-5 Ocracoke Island) as critical habitat for the wintering population of the piping plover. The four amended units total approximately 2,043 acres of habitat. All areas designated as critical habitat are federally or state -owned and managed by the National Park Service (NPS), the Service, or the State of North Carolina.

**4. Why was Pea Island National Wildlife Refuge and the three state-owned islands not included in the original critical habitat proposal? Why are these areas included in the designation now?**

As part of the June 12, 2006 proposed rule, we determined that the features essential to the conservation of the piping plover found on the three state-owned islands and Pea Island National Wildlife Refuge did not require special management or protection, and therefore, did not meet the definition of critical habitat. This determination was based on the existence of management plans for these areas. Based on these plans we determined that 1) the physical and biological features essential to the conservation of the piping plover are covered under the provisions, conservation programs, and the draft Comprehensive Conservation Plan, 2) that sufficient assurances were in place such that conservation and protection measures would be implemented, and 3) that sufficient assurances were in place that conservation and protection measures would be effective and provide conservation benefits to the physical and biological features and the species. At that time we interpreted this as indicating that additional special management or protection was not needed.

We reevaluated our preliminary analysis based on Center for Biological Diversity v. Norton, 240 F. Supp 2d 1090, 1099 (D. Ariz. 2003), which held that if a habitat is already under some sort of management for its conservation, that particular habitat required special management considerations or protection and, therefore, met the definition of critical habitat. In our May 15, 2008 revised proposed rule, we proposed for designation the three state-owned islands and Pea Island National Wildlife Refuge finding that these areas did indeed meet the definition of critical habitat.

**5. Did the public have opportunities to comment on the proposed critical habitat designation of the piping plover?**

Yes. The Service solicited comments from the general public, federal and state agencies, natural resources conservation organizations, wildlife conservation agencies, tribal organizations, congressional representatives, counties, and municipalities before making a final decision to designate critical habitat. The Service also issued news releases, placed public notices in newspapers, and sent letters to interested parties to announce the opening of the public comment periods on the revised proposal and the associated revised draft economic analysis and environmental assessment. In total, three separate public comment periods and one public hearing was held during the proposed critical habitat process.

**6. Are all areas within the designated piping plover critical habitat boundaries considered critical habitat?**

When determining critical habitat boundaries, the Service made every effort to avoid proposing the designation of developed areas such as buildings, paved areas, boat ramps, and other structures that lack the features needed for the wintering population of

the piping plover. Any such structures inadvertently left inside critical habitat boundaries are not considered part of the unit. This also applies to the land on which such structures sit directly. Therefore, federal actions limited to these areas would not trigger Section 7 consultations, unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Designating specific locations for critical habitat for the piping plovers is difficult because the coastal areas they use are constantly changing due to storm surges, flood events, and other natural geo-physical alterations of beaches and shoreline. Thus, to best ensure that areas considered essential to the piping plover were included in this designation, the Service's textual unit descriptions constitute the definitive determination as to whether an area is within the critical habitat boundary.

The Service's textual unit descriptions describe the geography of the area using reference points, including the areas from the landward boundaries to the mean lower low water (MLLW; which encompasses intertidal areas that are essential foraging areas for piping plovers) and describes areas within the unit that are utilized by the piping plover and contain the habitat features the species needs to survive.(e.g., upland areas used for roosting and wind tidal flats used for foraging). The Service's textual descriptions also exclude features and structures (e.g., buildings, roads, etc.) that are not or do not contain the necessary features.

#### **7. Does the ESA require an economic analysis as part of designating critical habitat?**

Yes. The Service must take into account the economic and other relevant impacts of specifying any particular areas as critical habitat. The Service may exclude any area from critical habitat if it determines that the benefits of such exclusion outweigh the benefits of specifying the area as part of critical habitat unless it determines, based on the best scientific and commercial data available, that the failure to designate the area as critical habitat will result in the extinction of the species.

#### **8. What does the economic analysis (EA) say?**

The purpose of the EA is to identify and analyze potential economic impacts associated with the critical habitat designation for the wintering populations of the piping plover. Specifically, this analysis focuses on the effect of possible beach closures on off-road vehicle use, potential administrative costs to the NPS resulting from section 7 consultations, and the incremental impacts that could result from additional beach closures undertaken to protect piping plover critical habitat.

The EA considers the potential economic impacts on ORV use in Cape Hatteras National Seashore that could result from the designation of critical habitat. The analysis does not estimate any impacts on ORV use in Pea Island National Wildlife Refuge and state-owned lands because these areas do not currently allow ORV access.

Breeding closures and year-round foraging and roosting closures expected under the NPS' Interim Protected Species Management Strategy (Interim Strategy) overlap critical habitat to an extent; however, in general, closures are smaller than designated critical habitat areas. NPS currently does not anticipate changing its management due to the designation of critical habitat. That is, it does not anticipate either significantly enlarging these breeding closures or maintaining the breeding closures during the wintering season because of the designation of critical habitat, nor does it anticipate enlarging the year-round foraging and roosting habitat closures because of the designation of critical habitat.

Local user groups, however, are concerned that the designation of critical habitat will lead to an outright ban on ORV use within Cape Hatteras National Seashore, thereby curtailing their participation in activities such as shelling and fishing. They report that previous restrictions on ORV use caused by overgrown vegetation, storm events, or closures to protect resources have already limited the amount of beach available for recreation. Local groups also fear that more closures will impact the local economy by reducing visitation to the area. As a result, the EA considers the economic impacts that would result from closures in addition to those that would take place under the current Interim Strategy.

The EA presents two possible scenarios of future impacts resulting from wintering piping plover conservation activities:

(1) A high-end estimate that describes the incremental impacts that could result from additional beach closures undertaken to protect piping plover critical habitat. This analysis assumes that incremental impacts would result from NPS closing additional areas of the beach beyond those that would be closed under current NPS management (i.e., in the absence of designation). It assumes that a percentage of all trips to these additional designated areas within Cape Hatteras National Seashore could be lost. Specifically, these lost trips result in two types of economic impacts:

- Based on an estimated range of annual ORV visits, lost consumer surplus is estimated at \$11.2 million to \$16.8 million (2006 dollars, discounted at three percent); and
- Based on an estimated range of annual ORV visits, lost trip expenditures are estimated at \$19.4 to \$29.1 million (2006 dollars, discounted at three percent).

(2) A low-end estimate that assumes no trips will be lost be under a scenario in which: (a) NPS does not implement additional closures in response to the designation, (b) the additional closures that are implemented do not result in decreased level of visitation, or (c) NPS offsetting management efforts effectively mitigate the impact of additional closures on the quality of ORV activities on the beach (i.e., ORV users do not perceive a significant loss in recreational opportunity). It is important to note that NPS currently

anticipates ORV access to the beach will not be affected by the designation of critical habitat. Under this scenario, no economic impacts to ORV users are forecast.

Administrative costs for Service consultation with the NPS are estimated at \$141,000 to \$354,000 (2006 dollars, discounted at three percent), under either scenario.

## **9. Why is critical habitat being designated for the piping plover?**

In December 1996, Defenders of Wildlife (DoW) filed a lawsuit against the Department of the Interior and the Service for failing to designate critical habitat for the piping plover. A second, similar lawsuit for the Northern Great Plains population of the piping plover was filed in 1997. These lawsuits were subsequently combined, and in February, 2000, the court issued an order directing the Service to publish a proposed critical habitat designation for the Great Lakes and Northern Great Plains populations. Since the Service cannot distinguish the Great Lakes and Great Plains birds on their wintering grounds (unless banded), it designated critical habitat for all U.S. wintering piping plovers collectively. On July 10, 2001, the Service published a final rule designating 142 areas along the coasts of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas as critical habitat for the wintering population of the piping plover (66 FR 36037; Note: the final rule incorrectly states 137 areas). This designation included approximately 2,891.7 kilometers (km) (1,798.3 miles (mi)) of mapped shoreline and approximately 66,881 hectares (ha) (165,211 ac) of mapped area along the Gulf and Atlantic Coasts and along margins of interior bays, inlets, and lagoons.

In 2003, two North Carolina counties (Dare and Hyde) and a beach access group (Cape Hatteras Access Preservation Alliance) filed a lawsuit challenging the Service's designation of four units of critical habitat on the Cape Hatteras National Seashore, North Carolina (Units NC-1, NC-2, NC-4, and NC-5). In a November 1, 2004, opinion, the court set aside and remanded the designation of these units to the Service for reconsideration.

The court held that the descriptions of critical habitat for the four units did not sufficiently exclude certain hard structures and other areas that did not contain the physical and biological features essential to piping plover conservation, and ordered the Service to show that these features are found on areas that are designated. Although the court did not invalidate the features themselves, it ordered the Service to clarify that these elements may require special management or protection. It also found that the Service's designation of critical habitat must include compliance with the National Environmental Policy Act.

## **10. Do listed species in critical habitat areas receive more protection?**

A critical habitat designation does not set up a preserve or refuge; it only affects activities with federal involvement, such as federal funding or a federal permit. Listed

species and their habitats are protected by the ESA whether or not they are in areas designated as critical habitat.

Designation of critical habitat can help focus conservation activities for a listed species by identifying areas that contain the physical and biological features that are essential for the conservation of that species. Critical habitat also alerts the public, as well as land managing agencies, to the importance of these areas, but the ESA only imposes additional restrictions on the actions or programs that are authorized, funded, permitted, or carried out by a federal agency. For example, a landowner undertaking a project on private land that involves no federal funding or permit has no additional responsibilities if his property falls within critical habitat boundaries.

Following the original designation of these four units in 2001, the Service consulted with the Army Corps of Engineers and determined the (then) proposed Oregon Inlet Jetties would not result in adverse modification of critical habitat. As discussed further below, the agency also conferred with the NPS and determined that implementation of the Interim Strategy at Cape Hatteras National Seashore would not adversely modify critical habitat. The Service anticipates no change in its determination in response to the Court approved consent decree (see Question 13). Furthermore, the Service consulted with Cape Lookout National Seashore regarding implementation of their Interim Protected Species Management Plan and determined that it would not adversely modify designated critical habitat. In addition, the Service conferred with the Federal Highway Administration (FHWA) and determined that the proposed replacement of the Herbert C. Bonner Bridge would not adversely modify critical habitat. In fact, since 2001 when 18 units were designated as critical habitat for wintering piping plover in North Carolina, no additional restrictions or requirements have been placed on any project authorized, funded, or carried out by federal agencies.

#### **11. Do federal agencies have to consult with the Service outside critical habitat areas?**

Yes. It is the responsibility of a federal agency to determine if a proposed project may affect threatened or endangered species. If a “may affect” determination is made, then that requires the federal agency to initiate the section 7 consultation process. Even when there is no critical habitat designation, federal agencies must consult with the Service if an action that they fund, or authorize, or permit may affect listed species.

#### **12. What activities could adversely affect critical habitat?**

Some activities could have an adverse effect on piping plover critical habitat throughout the Atlantic and Gulf coast regions. Such activities might include:

- ◆ dredging and dredge spoil placement
- ◆ seismic exploration
- ◆ construction and installation of facilities, pipelines, and roads associated with oil and gas development

- ◆ oil spills and oil spill clean-up
- ◆ construction of dwellings, roads, marinas, and other structures and associated impacts such as staging of equipment and materials
- ◆ beach nourishment, stabilizations and cleaning
- ◆ certain types and levels of recreational activities such as all-terrain vehicular activity
- ◆ stormwater and wastewater discharge from communities
- ◆ sale, exchange, or lease of federal land that contains suitable habitat that is likely to result in the habitat being degraded
- ◆ marsh restoration
- ◆ military maneuvers

Specific threats are likely unique to each area and are best addressed in recovery plans, management plans, and section 7 consultations.

### **13. What impact will critical habitat designation have on beach use?**

Non-federal activities are not affected by critical habitat designation. Designation of critical habitat requires federal agencies to review activities they fund, authorize, or carry out, to assess the likely effects of the activities on critical habitat. Thus, with this designation, critical habitat only affects beach use if the NPS (or some other federal agency) funds, authorizes, or carries out an action that will likely result in the destruction or adverse modification of critical habitat to an extent that piping plover conservation and survival is precluded. In such cases, the Service will work with the federal agency to protect those sites while having as minimal an effect as possible on public enjoyment of the areas.

The NPS has indicated that it does not anticipate significant changes in its management of the Seashore as a result of the designation of critical habitat. As a result, the Service believes the designation of critical habitat has little impact on beach use beyond the restrictions currently in place.

### **14. How does the consent decree (settlement) relate to the wintering piping plover critical habitat designation?**

In October of 2007, the Southern Environmental Law Center (SELC) filed suit, on behalf of Defenders of Wildlife (DoW) and the National Audubon Society (NAS), challenging the failure of the NPS to have an adequate off-road vehicle management plan to protect the resources of the Cape Hatteras National Seashore. On April 16, 2008, a proposed consent decree was filed by all of the parties in that action (SELC, DoW, NAS, NPS, Department of the Interior, the Service, and non-federal Interveners). This consent decree, approved April 30, 2008, by the courts, continues management described in the NPS Interim Strategy, but also requires establishment of pre-nesting areas (for piping plover as well as other shorebirds) to be closed to vehicles and pedestrians at historic nesting areas at Bodie Island spit, Cape Point, Hatteras spit, and the north and south

ends of Ocracoke Island. It also included expanded buffers around breeding sites (nests and chicks) that vary depending on the sensitivity or vulnerability of the particular species.

While wintering piping plovers may benefit from any closures during the spring or fall migrations, the breeding bird closures associated with the Interim Strategy or the consent decree will not be in effect during the majority of the wintering bird period. The NPS currently does not anticipate changing its management of wintering areas due to the designation of critical habitat. Furthermore, the Service and NPS conducted a consultation under section 7 of the ESA on the NPS's implementation of the Interim Strategy and the critical habitat designation. The Service determined that the Interim Strategy would not adversely modify critical habitat for the wintering population of the piping plover.

In short, the consent decree does not directly affect the actual areas delineated as critical habitat, nor does the designation have any effect on beach closures as described and implemented under the Interim Strategy and consent decree; although the locations of the beach closures and critical habitat areas do overlap. The breeding and wintering closures implemented under the Interim Strategy and consent decree are based on the location of nesting sites and location of chicks (breeding closures) and foraging areas (wintering closures). Critical habitat is based on areas which the Service determined to contain physical or biological habitat features needed for the conservation of the piping plover. Closures associated with implementation of the Interim Strategy or the consent decree would occur regardless of our critical habitat designation.

#### **15. Where can I get more information on the piping plover and critical habitat?**

For more information, visit the Service's web sites at: [www.southeast.fws.gov](http://www.southeast.fws.gov). You may also telephone the Service's Division of Endangered Species at 361-994-9005.

#### **16. What is a piping plover?**

The piping plover named for its melodic mating call, is a small, pale-colored North American shorebird. The bird's light sand-colored plumage blends in with the sandy beaches and shorelines which are its primary habitat. It weighs 1-2 ounces and is 6-6½ inches long. During the breeding season, the legs are bright orange and the short, stout bill is orange with a black tip. There are two single dark bands, one around the neck and one across the forehead between the eyes. Plumage and leg color help distinguish this bird from other plovers. The female's neck band is often incomplete and is usually thinner than the male's neck band. In winter, the birds lose their breeding plumage; their bill turns black, the legs remain orange but pale, and the black plumage bands on the head and neck are lost. Chicks have speckled gray, buff, and brown down, black beaks, orange legs, and a white collar around the neck. Juveniles resemble wintering adults and obtain their adult plumage the spring after they fledge.



## **17. Where do piping plovers live?**

Historically, piping plovers bred across three geographic regions. These regions include: the United States and Canadian Northern Great Plains from Alberta to Manitoba and south to Nebraska; the Great Lakes beaches; and the Atlantic coastal beaches from Newfoundland to North Carolina. Currently, piping plovers live in an area similar to their historical range, although the numbers of those breeding in the Great Lakes region have decreased significantly since the 1930s. The Great Lakes breeding population is now found mainly in Michigan, with two pairs nesting in Wisconsin. Generally, piping plovers favor open sand, gravel, or cobble beaches for breeding. Breeding sites are generally found on islands, lake shores, coastal shorelines, and river margins.

Piping plovers winter in coastal areas of the United States from North Carolina to Texas. They also winter along the coast of eastern Mexico and on Caribbean islands from Barbados to Cuba and the Bahamas. Information from observation of color-banded piping plovers indicates that the winter ranges of the three breeding populations overlap, to a significant degree. Therefore, the source breeding population of a given wintering individual cannot be accurately determined in the field, without having marked the individual. North Carolina is uniquely positioned in the species' range, being the only state where the piping plover's breeding and wintering ranges overlap and the birds are present year-round.

Piping plovers begin arriving on the wintering grounds in early July, with some late nesting birds arriving in September through October. A few individuals can be found on the wintering grounds throughout the year, but sightings are rare in May, June and July. Migration is poorly understood, but a recent study suggests that plovers use inland and coastal stopover sites when migrating from breeding areas to wintering grounds.

## **18. What do piping plovers eat?**

Piping plovers feed along beaches and intertidal mud and sand flats. Primary prey for piping plovers includes worms, various crustaceans, insects, and occasionally bivalve mollusks.

## **19. Is the piping plover an endangered species?**

The piping plover first received protection under the ESA in 1986. Piping plovers nesting in the Great Lakes are listed as endangered; piping plovers nesting along the Atlantic Coasts and in the northern Great Plains of the United States and Canada are listed as threatened. All piping plovers on the wintering grounds are considered threatened.

## **20. What do the terms “endangered” and “threatened” mean under the ESA?**

An endangered species, by definition, is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Except for special circumstances outlined at the time of listing, regulations applicable to endangered species are also applicable to threatened species.

## **21. How many piping plovers are there? What are the threats to the piping plover?**

According to a 2001 census numbers, approximately 29 breeding pairs live on the Great Lakes (all but two of these pairs are in Michigan); approximately 1,291 breeding pairs are found on the Northern Great Plains (including the Canadian Prairie region); and approximately 1,427 breeding pairs are found on the Atlantic Coast.

Piping plovers often nest on beaches. Their nests accidentally get stepped on or crushed by people and vehicles. The presence of people also may cause the birds to desert the nest, exposing eggs or chicks to the hot sun and predators. Interruption of feeding may stress adult and juvenile birds during critical periods in their life cycle. Pets, especially dogs, may harass or kill the birds. Many of the coastal beaches traditionally used by piping plovers for nesting, feeding, and roosting have been lost to commercial, residential, and recreational developments. Also, developments near beaches provide food that attracts increased numbers of predators such as raccoons and foxes. In order to recover the piping plover and remove it from the list of federally-listed endangered and threatened species, threats to reproductive success at breeding grounds must be addressed. Availability of quality foraging and roosting habitat in the regions where this species winters is necessary in order to ensure that an adequate number of adults survive to migrate back to breeding sites and successfully nest.

## **22. What is being done to protect the piping plover?**

A variety of protection measures are implemented as prescribed in recovery plans, and include:

*Listing:* In 1986, the Great Lakes breeding population of the piping plover was listed as endangered, while populations in all other portions of the species' range were listed as threatened.

*Recovery Plans:* The Service developed recovery plans that describe actions that need to be taken to help the bird survive and recover. Recovery plans currently exist for all three breeding populations.

*Research:* Several cooperative research groups have been set up among federal and state agencies, university and private research centers, and the Canadian Wildlife Service. Studies are being conducted to estimate the number of plovers, evaluate

reproductive success, monitor long-term changes in populations, and verify where plovers breed and winter. Other studies have addressed the effectiveness of captive breeding efforts. The effectiveness of predator exclosures and habitat manipulations also has been evaluated.

*Management and Habitat Protection:* Measures to ensure successful nesting are conducted each year, including controlling human access to nesting areas, monitoring nesting activity, and protecting nests, eggs and young birds from predators. This requires intensive management efforts and significant participation by dedicated volunteers. Protection of winter habitat also requires constant vigilance and includes managing activities and controlling human access to limit impacts to habitat.

*Public Education:* Many states and private agencies are running successful public information campaigns to raise awareness of the plover's plight.

### **23. What are the recovery goals for the piping plover?**

The recovery goals for the piping plover vary depending on the breeding population. For example, the Atlantic Coast population recovery goals are to maintain 2,000 breeding pairs and an average of 1.5 fledged chicks per pair for at least five years and ensure long-term maintenance of wintering habitat. Goals for wintering areas have been recommended in existing recovery plans and include protection of specific sites that provide the essential requirements for the wintering populations of the piping plover. These recovery sites include areas currently used by wintering piping plovers and areas that would be suitable for use. As populations in all three breeding areas begin to recover, densities on the wintering grounds will increase. In order to achieve recovery, it is necessary to maintain sufficient habitat to ensure the survival of these wintering birds.

### **24. What protection does the piping plover currently receive as a listed species?**

The ESA prohibits the import, export, or interstate or foreign sale of protected animals and plants without a special permit. It also makes "take" illegal – forbidding the killing, harming, harassing, possessing, or removing of protected animals from the wild. Federal agencies must consult with the Service to conserve listed species and ensure that any activity they fund, authorize, or carry out will not jeopardize the continued survival and recovery of a listed species. This is referred to as a section 7 consultation process.

Under section 10 of the ESA, permits may be issued to take listed wildlife species for scientific purposes, to enhance the propagation, survival or recovery of the species, and for incidental take in the course of certain otherwise lawful activities. In addition, the ESA requires that federal agencies not only take action to prevent further loss of a species, but also pursue actions to recover species to the point where they no longer

require protection and can be delisted.