



United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 Westgate Center Drive
Hadley, MA 01035-9589



In Reply Refer To:
FWS/Region 5/ES-TE

Memorandum

To: Assistant Regional Director, Ecological Services, Region 5

From: Chief, Division of Endangered Species, Ecological Services, Region 5

Subject: Findings and Recommendations Regarding the Incidental Take Permit to the Town of Orleans, Massachusetts to Allow Incidental Take of Piping Plovers at Nauset Beach South in Orleans, Massachusetts

Pursuant to 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended: 16 U.S.C. 1531, *et seq.*), the U.S. Fish and Wildlife Service (Service) proposes to issue an incidental take permit (ITP) to the Town of Orleans (Town) to authorize the incidental take of the federally listed threatened piping plover (*Charadrius melodus*) resulting from over-sand vehicle (OSV) use on Nauset Beach in the Town of Orleans.

In support of its ITP application, and as required by section 10(a)(2)(A) of the ESA, the Town has developed the "Town of Orleans Over-Sand Vehicle Access Habitat Conservation Plan" (HCP). The HCP addresses the effects of OSV use on the piping plover on Nauset Beach in the Town of Orleans. The Service finds that the Town's application for an ITP meets permit issuance criteria outlined in section 10(a)(2)(B) of the ESA and in 50 CFR 17.22(b)(2) as explained by the following analysis and rationale. The resulting permit will authorize the take of up to 12 piping plovers over a 3-year permit term.

Documents used in the preparation of these findings and recommendations include but are not limited to (1) the Town's final HCP (Town of Orleans 2015), (2) the Service's biological opinion (BO) under section 7 of the ESA, and (3) the Service's low effect screening form/Environmental Action Statement (EAS). These documents are hereby incorporated by reference. This document provides the rationale for issuing the permit and in doing so summarizes key aspects of the proposed project and its impacts. The final HCP provides the applicant's final plan, including full project description and conservation measures. The EAS and BO provide the

Service's analyses of the environmental impacts, and the impacts from the project on the listed species, respectively.

I. Project Description

The Town submitted an ITP application to the Service to request authorization for incidental take of piping plovers associated with OSV access on Nauset Beach in the Town of Orleans. The purposes of the HCP are to avoid, minimize, and mitigate for potential adverse effects from the covered activities on the covered species and to provide the basis for take authorization via a Service-issued ITP, pursuant to the ESA. The project is summarized below, though a complete project description is included in the HCP.

Project Location; Covered Lands; Covered Activities; Permit Term

Nauset beach is currently managed according to the Orleans Conservation Commission's 2014 Order of Conditions (Massachusetts Department of Environmental Protection File Number SE 54-2246) (2014 OOC), the Service's *Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act* (USFWS 1994), and the Massachusetts Division of Fisheries and Wildlife's (MADFW's) *Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts* (MADFW 1993) (State and Federal Guidelines) to avoid take of piping plovers. Under the HCP, direct mortality or injury would occur from vehicles running over chicks attempting to cross the OSV sand trail in the presence of OSV traffic during the 3-year permit term.

The Town manages Nauset Beach South for pedestrian and vehicular use in compliance with the 2014 OOC and State and Federal Guidelines. In complying with the 2014 OOC and State and Federal Guidelines, vehicular access for recreational activities on portions of Nauset Beach South is precluded when unfledged piping plover chicks (chicks that are unable to fly) of late-nesting piping plovers are present in the Pochet washover area (Pochet), the portion of the beach located north of the first crossover between the oceanside and bayside OSV trails. The Pochet provides suitable nesting habitat for piping plovers, affording them unrestricted access between oceanside and bayside foraging habitat (e.g., there are no physical barriers to prevent plovers moving back and forth). The Town proposes to implement a self-escort program at the Pochet for up to 180 vehicles that may pass by no more than 2 broods of piping plover chicks beginning on or after July 15 to gain vehicular access to up to 5 miles of otherwise open OSV trails and beach south of the Pochet. Vehicles will be required to have an escort aged 16 years or older walking in front of the vehicle in the delineated OSV travel corridor during the self-escort program. Vehicular and pedestrian management elsewhere on Nauset Beach South will continue to follow the 2014 OOC and State and Federal Guidelines.

The self-escort program will be limited to 2 hours in the morning for vehicles accessing Nauset Beach South and 2 hours in the afternoon for vehicle egress (a total of 4 hours per day). Qualified piping plover monitors will be assigned to the broods to locate and observe chicks during the self-escort program. Additional monitors will observe the self-escorted vehicles to ensure that the self-escort protocols are being correctly implemented. Vehicle ruts will be raked

at the end of the afternoon OSV travel period to facilitate chick movement to and from bayside and oceanside foraging habitat or to seek shelter.

Mitigation

Onsite mitigation focuses on reducing predation on eggs and chicks at Nauset Beach using nonlethal predator management strategies developed in coordination with the MADFW and the Service, and on outreach and education regarding piping plover recovery and threats to breeding piping plovers in Massachusetts. The Town will develop an annual mitigation work plan in consultation with the MADFW and the Service. The mitigation plan will identify measures that will be taken onsite to increase nest hatching success, will identify and implement experimental, nonlethal predator management actions, and will outline an outreach plan to inform the public about the impact of predation on piping plover recovery and measures needed to ameliorate the impact. The Town's plan will focus on education and outreach for the first year, a feasibility study of nonlethal predator management options by the second year, followed by implementation of MADFW- and Service-approved nonlethal predator management during the third year (if applicable).

The Town will also provide \$10,000 annually to MADFW for offsite predator management that will be conducted during permit years 1, 2, and possibly 3 if onsite mitigation measures do not achieve the required onsite productivity thresholds at Nauset Beach. For offsite mitigation to be required in year 3, either onsite productivity is less than one chick fledged per pair (average of years 1 and 2) or, if onsite productivity is greater than one chick per pair, the Service determines that onsite, nonlethal, targeted predator management is not reasonably likely to succeed in increasing productivity. No offsite predator management is required if onsite productivity exceeds 1.5 fledged chicks per pair averaged over years 1 and 2.

A memorandum from the MADFW to the Service (appendix 26 of the HCP) outlines the offsite mitigation strategy and implementation. An escrow agreement between the Town and the MADFW (appendix 27 of the HCP) describes the manner in which the funds will be transferred and obligated to carry out the offsite mitigation.

Biological Goals and Objectives

The primary goal of the HCP is to reduce the potential for take of piping plover chicks while exercising flexibility for OSV access on Nauset Beach South during a limited time period in late July and/or August. Additional goals are to increase the public awareness of the effects of predation on piping plover recovery in the town of Orleans and to increase piping plover productivity at locations where offsite mitigation is implemented. To meet the biological goals, the HCP described objectives to reduce the exposure risk of piping plover chicks to being run over by vehicles. These actions include (1) constraining the time of year for implementing the HCP so that only late season broods are exposed; (2) allowing vehicle passage only during daylight hours; (3) limiting the number of hours of exposure; (4) limiting the number of vehicle passes; (5) limiting the length of beach affected; (6) allowing temporary closures to protect chicks in the vicinity of the active self-escort corridor; (7) providing educational material to Orleans residents and vehicle permit holders on the effects of predation on plover productivity

and the tools needed to address the threats; and (8) contributing to increasing productivity by a minimum of 20 percent over existing productivity at one or more piping plover breeding sites in Massachusetts through offsite mitigation.

Monitoring and Reporting

The Town will monitor piping plovers according to the State and Federal Guidelines and as required by the MADFW. Data will be collected on the number of nests, egg hatching success, fledging success, and possible reasons for egg and/or chick loss. The data will be compiled into an annual report and submitted to the MADFW. Upon issuance of the ITP and implementation of the HCP, the Town will submit annual reports to the Service regarding the implementation of the OSV self-escort program and mitigation, in addition to the annual reports of plover productivity for Nauset Beach. Monitoring that occurs during implementation of the self-escort program includes compliance monitoring to ensure the self-escorted vehicles comply with the program protocols (additional details can be found in the HCP and the Project Description above).

The Town report will include the following information for onsite mitigation: (1) identification of target predators; (2) implementation of nonlethal management (location, dates, days implemented); (3) evaluation of success (number of nest(s) hatched, number of chicks fledged in area where nonlethal predator management was implemented); and (4) recommendations for improving methodology, addressing different predators or new methodology. For offsite mitigation, the Town will incorporate the annual report provided by MADFW regarding implementation of selective predator management, per the memorandum from MADFW to the Service and the escrow agreement between the Town and the MADFW.

Changed and Unforeseen Circumstances

The Town has provided measures to address changed and unforeseen circumstances within the HCP. Identified changed circumstances include the listing of new species and potential environmental changes associated with extreme weather events. For example, if extreme weather events significantly change the Pochet beach morphology such that the self-escort program (covered activity) is not able to be implemented, the Town will demonstrate that the mitigation has compensated for the take of plovers during previous years or will continue to provide mitigation until the take has been offset.

Pursuant to the "No Surprises" rule (69 FR 71723) as codified in 50 C.F.R. sections 17.22(b) and 17.32(b), the Service will not require additional land, water, and natural resources without the consent of the Town in the event that unforeseen circumstances occur, provided the HCP is being properly implemented. If the Service determines that an unforeseen circumstance has occurred and that additional financial compensation beyond that required in the HCP is needed to conserve the covered species, then the Town will not be obligated to provide the additional measures without its consent. Pursuant to 50 C.F.R. 17.22(b)(8) and 17.32(b)(8), the Service retains the authority to revoke an ITP, in response to an unforeseen circumstance or otherwise, if we find that continuation of the take authorized under the ITP, would appreciably reduce the likelihood of the survival and recovery of a listed species.

Changes between the draft and final HCPs

The final HCP incorporated revised biological goals and objectives and a revised take estimate after consultation with the Service. The proposed covered activity was not changed. The appendices were updated to include a revised Memorandum (Memorandum) from the MADFW dated February 24, 2015, and a final, signed escrow agreement between the Town and the MADFW.

II. Incidental Take Permit Criteria – Analysis and Findings

A. Permit Issuance Criteria

Section 10(a)(2) of the ESA specifies the requirements for permit issuance. This provision is broken into two component parts, one directed to applicants and the other to the Service. Section 10(a)(2)(A) sets forth the required components of an application from which the Service can judge whether an applicant's submission is complete. Section 10(a)(2)(B) provides the criteria by which the Service must evaluate and approve an application package once it has determined the submission is complete. As described below, the requirements, although necessarily similar, are not identical, and are not interchangeable standards.

Section 10(a)(2)(A) of the ESA specifically mandates that “no permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant submits to the Secretary a conservation plan that specifies: (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures as the Secretary may require as being necessary or appropriate for the purposes of the plan.”

Section 10(a)(2)(B) of the ESA mandates that the Secretary shall issue a permit, “if the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that: (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will assure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented.”

B. Anticipated Take

The issuance criteria of ESA section 10(a)(2)(B) focus largely on the take that is anticipated to occur as a result of the proposed project and the obligations of the Town, as the permittee, to reduce or compensate for the impact of the taking. To provide context for that discussion, we summarize what is known about piping plovers in the project area, and the take we project to occur when accounting for the Town's minimization strategy.

The direct and indirect impacts from this project to piping plovers are described in section X of the HCP and in the Service's BO. These sources of take are also summarized below with the minimization measures proposed by the HCP.

The Service has determined that the activities likely to result in impacts to the piping plover from the proposed action will be minimized and mitigated to the maximum extent practicable by the measures described in the HCP and the associated ITP. With the exception of the proposed covered activities, OSV use on Nauset Beach complies with both State and Federal Guidelines and the 2014 OOC. Therefore, the only anticipated impacts of the proposed action will occur during implementation of the late season OSV self-escort program in accordance with the protocols described in the HCP (section IX).

Mortality or injury during implementation of the OSV self-escort program

Late season OSV use (beginning on or after July 15th) is likely to result in adverse effects leading to take of unfledged piping plover chicks that may be in the vicinity of the self-escorted vehicles. Adverse effects may include direct mortality due to crushing of unfledged chicks. The covered activities allow for self-escorted OSV travel past up to two broods of four chicks each (generally the maximum number of chicks per brood). Adverse effects to adults, including mortality, are not anticipated. Indirect effects to piping plover adults and chicks and impacts to their habitat from the HCP are not likely to adversely affect piping plovers.

Direct chick mortality is anticipated to occur in the event an unfledged piping plover chick or chicks enter the self-escort travel corridor during the 4 hours per day of OSV travel, are not observed by the vehicle escort, and are run over by a vehicle. Minimization measures to reduce mortality include monitors locating chicks prior to and during the self-escorting of vehicles; allowing vehicle traffic to occur only when chicks are 100 feet or more from the travel corridor; reduction in vehicle speed from 15 mph (under the 2014 OOC) to less than 5 mph; escorts watching for chicks in the corridor; and delay of the onset of the self-escort program if monitors and/or the Natural Resource Manager determine that chicks are in the travel corridor and vulnerable to being run over. These minimization measures will substantially reduce, but not eliminate, the risk of vehicle collisions with chicks.

Disturbance will be restricted to the 4 hours per day of self-escorting vehicles and is not anticipated to lead to harm or harassment. Minimization measures will reduce disturbance to the point that effects will be insignificant. Initiating the self-escort program after July 15 is likely to ensure that chicks are older, larger, and more easily observed by vehicle escorts. Older chicks may be less vulnerable to disturbance, more likely to survive on their own for short periods of time if separated from adults, and better able to find foraging habitat away from the sand trail (which does not provide foraging habitat, although it is a temporary barrier to movement between foraging habitats). Prime bayside and oceanside foraging habitats are located approximately 200 feet or more from the OSV trail further reducing the likelihood that foraging plovers will be disturbed by vehicle traffic. An additional hour of escorted raking to smooth the tire ruts may disturb plovers, but this disturbance is likely to be minor because it will affect only a small area at any given time. By themselves, disturbance (outside of prime foraging habitat for

up to 4 hours per day) and transient effects on habitat are unlikely to cause take, but they may be minor contributing factors to elevated chick mortality due to all effects of self-escorted OSV travel in occupied chick habitat.

Impacts to the habitat will be of short duration, spatially limited to the Pochet, and similar in type to impacts that occur before and after brood rearing under the State and Federal Guidelines. During the 4 hours of self-escorted vehicle travel, the functional suitability of the habitat may be briefly affected, as chicks may not be able to cross the sand trail to reach shelter or forage on the other side. Ruts created by morning vehicle traffic may impede or slow chick travel during the 6 hours between vehicle access time periods (i.e., between 10 a.m. and 4 p.m.). However, the ruts will be raked daily following the afternoon vehicle access period to provide unimpeded access for the remainder of the day, night, and early morning (approximately 12 to 13 hours). Furthermore, the OSV travel corridor is located between (not within) the ocean and bayside foraging habitats, so OSV travel should not affect the wrackline or the prey base in moist substrate habitats favored by piping plover adults and chicks.

Mitigation

The HCP proposes to mitigate for the potential mortality of 5.1 fledged chicks resulting from the covered activity by reducing the impacts of egg and chick predation in the plan area and at offsite locations. The mitigation threshold of 5.1 fledged chicks was calculated by using the long-term average productivity of 1.7 chicks fledged per pair (1998 to 2014 data) for piping plovers present on Nauset Beach South on or after July 15. Based on this average productivity, two pairs should produce approximately 3.4 chicks per year (2 pairs x 1.7 chicks/pair) for a total of 10.2 chicks fledged over the life of the permit (3 years). The minimization measures should reduce the likelihood that all chicks will be run over by 50 percent; therefore, the impact of the HCP is on 5.1 chicks that otherwise would have fledged.

The mitigation is anticipated to increase piping plover productivity to a level that fully offsets the impacts of the take by mitigating for 6 fledged chicks over the life of the permit. No adverse effects on piping plovers are anticipated from mitigation measures.

Mitigation includes both onsite and offsite predator management and outreach and education. Onsite activities will focus on reducing predation on eggs and chicks at Nauset Beach using nonlethal predator management strategies that will be developed in coordination with the MADFW and the Service to ensure feasibility of the strategies and avoid adversely affecting piping plovers.

Offsite predator management will not directly affect piping plover productivity at Nauset Beach, but will be applied at other beaches in Massachusetts, thus benefitting the statewide population. Offsite mitigation sites will be selected based on (1) a sufficient number of piping plover pairs utilizing the site for nesting (generally 8 or more pairs total); (2) low plover productivity rates (generally less than 1.0 fledglings per pair); (3) known presence of typical plover nest predator species (e.g., crows, fox, coyotes); and (4) baseline information on pre-predator control productivity levels. According to the Memorandum from the MADFW to the Service, the MADFW will (1) identify landowners willing to carry out targeted predator control; (2) procure

the services of qualified predator control contractors to carry out the predator control; (3) ensure collection and compilation of nest productivity data preproject and postproject; and (4) ensure that predator management activities will not adversely affect piping plovers and their young should there be seasonal overlap between predator management and breeding piping plovers. The Memorandum is hereinafter incorporated into this document by reference.

The Town also proposes to develop an outreach and education campaign regarding piping plover recovery and threats to breeding piping plovers in Massachusetts. The outreach and education efforts will be directed at OSV permit holders and the general public living in Orleans and/or visiting Nauset Beach. Although take is not anticipated to be offset by this mitigation measure, long-term benefits to piping plovers are anticipated through the development of local and regional public support of recovery measures, including future onsite predator management.

It is against these calculations that we evaluate the impacts of the taking, in the context of the permit issuance criteria.

C. Findings

1. The taking will be incidental.

Incidental take is defined in 50 CFR 17.3 as “any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” The first part of the definition addresses whether take of piping plovers is the purpose of the activities in the HCP. As described above, the purpose of the covered activities in the HCP is to provide access to OSV travel on a designated sand trail of Nauset Beach South. In the course of implementing these activities, the Town anticipates the unavoidable take of piping plovers. For this reason, the Town developed the HCP, which describes the avoidance, minimization, and mitigation measures it will implement to address potential impacts from the project. Thus, take of listed species is not the purpose of the OSV access and will occur incidental to the Town’s efforts to conduct the covered activities.

The second part of the definition addresses whether the Town is conducting otherwise lawful activities. Over-sand vehicle use is a lawful activity in Massachusetts and is regulated by the towns in coordination with State and Federal regulations. The Town manages all beaches in compliance with the Service’s guidelines for managing recreational activities in piping plover breeding habitat (USFWS 1994) (Federal Guidelines); the Massachusetts guidelines for managing recreational use of beaches to protect piping plovers, terns, and their habitats (MADFW 1994) (State Guidelines); and the Massachusetts barrier beach management guidelines (Massachusetts Barrier Beach Task Force 1994). The Town is fully implementing the State and Federal Guidelines for all other aspects of its beach management responsibilities; therefore, these activities are considered otherwise lawful.

Because the ITP pertains only to activities that have been otherwise ongoing, no impacts to cultural resources are anticipated as a result of the ITP. There are no activities that will require compliance with the National Historic Preservation Act, and no cultural resources will be impacted by the Service’s permit issuance decision.

In conclusion, the Service finds that the activities proposed in the HCP will not be conducted for the purpose of causing take of piping plovers and are anticipated to be otherwise lawful; therefore, the Service concludes that anticipated take associated with the project will be incidental to otherwise lawful activities.

2. The permittee will, to the maximum extent practicable, minimize and mitigate the impacts of the taking.

To issue an ITP, the Service must find that “the applicant will, to the maximum extent practicable, minimize, and mitigate the impacts of the taking.” 16 U.S.C. 1539(a)(1)(B)(ii); 50 C.F.R. 17.22(b)(2)(B) & 17.32(b)(2)(B).

The Service’s HCP guidance (USFWS 2000) states that:

[t]he applicant decides during the HCP development phase what measures to include in the HCP (though, obviously, the applicant does so in light of discussions with and recommendations from FWS [Service] or NMFS [National Marine Fisheries Service]). However, the Services ultimately decide, at the conclusion of the permit application processing phase, whether the mitigation program proposed by the applicant has satisfied this statutory issuance criterion.

To do so, the Service must examine and predict the adequacy and effectiveness of the applicants’ proposed minimization and mitigation measures. It is important to understand that in doing so, the Service is focused solely on measures to be undertaken to reduce the likelihood and extent of the take resulting from the project as proposed, as well as appropriate compensatory measures. It is the Service’s position that the impacts of the proposed project that were not *eliminated* through the ITP/HCP process, must be minimized to the maximum extent practicable, and then those remaining impacts that cannot be further minimized must be mitigated commensurate with the level of take. These standards are based on a *biological determination* of the impacts of the project as proposed, what would further minimize those impacts, and then what would biologically mitigate, or compensate for, those remaining impacts.

If an applicant commits to implement minimization and mitigation measures that are fully commensurate with the level of impacts, or are consistent with what current science demonstrates to be effective, it has minimized and mitigated to the maximum extent practicable. See, for example, National Wildlife Federation v. Norton, 306 F. Supp. 2d 920 (E.D. Cal. 2004) (finding that the level of mitigation provided must be “rationally related to the level of take under the plan” and that where mitigation “more than compensates” for the impacts of take, it did not need to demonstrate that more mitigation would be infeasible)¹. National Wildlife Fed’n v. Babbitt, 306 F. Supp. 2d 920, (E.D. Cal. 2005). Thus, it is only where certain constraints may

¹ In deferring to the Service’s interpretation of the term, the Court also explained that “[t]he words “maximum extent practicable” signify that the applicant may do something less than fully minimize and mitigate the impacts of the take where to do more would not be practicable. Moreover, the statutory language does not suggest that an applicant must ever do more than mitigate the effect of its take of species.”

preclude attaining these proven measures or thresholds that the “practicability” issue needs to be addressed more thoroughly.

In those circumstances where the applicant cannot fully achieve the minimization and mitigation standards, the Service must evaluate whether the applicant has still minimized and mitigated “to the maximum extent practicable.” The court in National Wildlife Fed’n v. Babbitt (2005) noted that the term “practicable” as used in the ESA does not simply mean “possible” but means “reasonably capable of being accomplished.” It also corroborated that “there are two components to the mitigation finding: (1) the adequacy of the mitigation program in proportion to the level of take that will result, and (2) whether the mitigation is the maximum that can be practically implemented by the applicant.” *Id.* Factors to be considered in the practicability analysis may include constraints based on the site itself, availability of mitigation habitat, timing and nature of the project, financial means of the applicant, cost and time associated with redesign, and local and state permitting and zoning processes. In these instances, the Service must evaluate whether the applicant has provided reasonable explanations concerning its constraints or infeasibility. The Service must also independently review the record evidence supporting the applicant’s assertions. The practicability evaluation is necessarily project specific, and may properly yield different determinations in different situations. The analysis is a limited, although substantial, examination. But the Service need not examine practicability where the applicant has already committed to implement minimization and mitigation measures commensurate with the impacts of the taking. In those circumstances, no more is required of the applicant.

The Town has incorporated a number of measures during initial project planning that either purposefully or incidentally avoided or reduced some of the potential impacts to piping plovers (FHCP section IX). These measures include:

- Restricting OSV travel to one location
- Minimizing the OSV access to 4 hours per day from the potential 17 hours per day
- Employing shorebird monitors to locate and monitor piping plover broods before and during OSV use
- Employing an OSV self-escort protocol to monitor for piping plover chicks in the vehicle trail

Minimization Measures

The Town has managed breeding piping plovers at Nauset Beach under the 1991 Orleans Conservation Commission OOC and Nauset Beach South specifically under the 2014 OOC. The 2014 OOC specifies the level of OSV use allowable at Nauset Beach South and identifies measures to avoid take of piping plovers by requiring OSV management to comply with State and Federal Guidelines. The 2014 OOC also specifies the location of the OSV trail and outlines limited and temporary relocation of the OSV trail for purposes of safety (beach is too narrow) or to be temporarily rerouted around nesting plovers or least terns after consultation with the Conservation Agent, Natural Resources Manager, and the MADFW. The OOC allows for

management plan changes such as waivers of the OSV closure requirements (e.g., the covered activity proposed by the HCP) upon notice to the Conservation Commission. Notice was provided to the Conservation Commission by the MADFW upon issuance of the July 15, 2014, Massachusetts Endangered Species Act (G.L. c131A) Conservation and Management Permit authorizing the take of piping plovers resulting from implementation of the late season OSV self-escort program at Nauset Beach South.

The covered activity reduces the level of anticipated take through the implementation of minimization measures that will limit the risk of exposure to take. The measures minimize the area of impact to habitat by restricting the OSV travel area to one location (Pochet washover), limiting impacts to piping plovers by allowing OSV passage past no more than two broods of piping plovers on or after July 15th, restricting the implementation of the covered activity to the latter end of the plover breeding season, limiting the exposure to take of piping plover chicks to 4 hours per day, reducing vehicle speeds to less than 5 miles per hour (the speed at which a walker can proceed), and requiring the strict enforcement of self-escort protocols. All other portions of Nauset Beach South and Nauset Beach North will be managed according to the 1991 and 2014 OOCs and State and Federal Guidelines, which have been shown to prevent take of piping plovers.

Monitoring to reduce the likelihood of mortality:

One monitor (brood monitor) will be assigned to each brood and will locate all chicks prior to the onset of the self-escort program for every morning and evening escort session. The monitor will also observe the chicks during the self-escort travel and halt traffic should chicks approach within 100 feet or less of the OSV sand trail. Moreover, the OSV self-escorting will not start until the Natural Resources Manager or Beach Director has determined that chicks are not in the OSV trail based on the brood monitors' observations.

Each vehicle will be escorted by a walker preceding the vehicle and watching for potential chicks in the sand trail. Should a chick be observed, the walker will signal the vehicle to stop until such time as a monitor determines it is safe to proceed.

Compliance monitoring:

At least one compliance monitor will observe the self-escorted vehicles to ensure that OSV drivers are complying with the speed limit and the walker is adequately searching for chicks. Vehicle drivers who are not adhering to the self-escort protocols outlined in the HCP will have their vehicle permits immediately revoked for the remainder of the year.

Habitat impact minimization:

The HCP minimizes habitat impacts by restricting the covered activity to one location and limiting the extent of the impacted habitat. Vehicle ruts will be raked at the end of the afternoon self-escort period to provide unimpeded travel for unfledged piping plover chicks to move to and from foraging habitats or shelter. Mechanized raking will be utilized only with a trained observer walking in front of the vehicle searching for chicks to avoid running over.

Mitigation Measures (FHCP section XI)

To mitigate for the incidental take of piping plovers, the Town will offset the loss of 5.1 fledged chicks through efforts to increase the productivity of piping plovers both offsite and onsite. Mitigation measures will focus on reducing predation on eggs and chicks at Nauset Beach using nonlethal predator management strategies that will be developed in coordination with the MADFW and the Service, and on outreach and education regarding piping plover recovery and threats to breeding piping plovers in Massachusetts. The Town has also committed to funding \$10,000 for offsite predator management that will be implemented concurrently with the onsite mitigation. All funds directed to offsite mitigation will be applied to predator management; no administrative costs or overhead will be paid out of mitigation funds. Offsite mitigation may not directly benefit piping plovers at Nauset Beach, but will contribute to statewide piping plover recovery.

Implementation of the HCP's offsite mitigation commitment is facilitated via the escrow agreement between the Town and the MADFW (appendix 27 of the HCP). Offsite predator management will be implemented by the MADFW as described in the Memorandum (appendix 26 of the HCP). Based on a 20-percent increase in piping plover productivity over the long-term statewide average, the MADFW projected a productivity increase of 0.25 chicks per pair. One criterion for site selection outlined in the Memorandum (see Analysis of Effects) is implementation of offsite predator management on a minimum of eight piping plover pairs. If the projected increase in productivity is applied to a minimum of eight pairs of piping plovers, an additional two fledged chicks per year should be produced, and the annual take of two chicks per brood will be offset. The \$10,000 provided by the Town to implement offsite predator management is deemed sufficient based on an analysis of costs associated with previous predator management actions implemented on beaches elsewhere in Massachusetts (see Memorandum) and costs for predator management implemented under the Bouchard Barge 120 oil spill restoration settlement (USFWS 2012).

Onsite, nonlethal predator management may be implemented in years 2 and 3 of the ITP with the concurrence of the Service. Onsite, nonlethal predator management must avoid adversely affecting nesting piping plovers and must be deemed likely to succeed in reducing egg or chick predation to be considered to offset take. Therefore, there is uncertainty as to how much mitigation this measure will provide in addition to the offsite mitigation, and any increase in productivity resulting from this measure will provide an additional offset.

In conclusion, the above minimization and mitigation measures satisfy the maximum extent practicable standard. The minimization measures adequately reduce the likelihood and extent of take of piping plovers, while the mitigation is commensurate with the level of take anticipated by the project.

- 3. The permittee will ensure adequate funding for the HCP, and procedures to deal with unforeseen circumstances will be provided.**

Funding

The Service finds that the Town has ensured adequate funding for implementation of the HCP. The Town outlines the annual proposed HCP budget and describes how it intends to fund the implementation of the HCP in section XV (Funding Assurance). Funding for implementation of the HCP will be included in the Town's annual operating budget that is presented as a warrant article for voting at the annual Orleans Town Meeting (generally the second week of May). Prior to the Town Meeting, the Town will provide a copy of the proposed budget "warrant" to the Service for review, subsequently the Town will provide a letter or memorandum to the Service verifying that the HCP operating budget was approved at Town Meeting. If adequate funding is not secured then the self-escort OSV program will not be implemented, and the State and Federal Guidelines will continue to be implemented throughout Nauset Beach. The first year of offsite mitigation funding has already been approved by the Town at the 2014 annual Town Meeting. The annual operating budget is anticipated to cost between \$41,000 and \$60,000 and includes staff costs, equipment, and mitigation expenses.

Changed Circumstances

Consistent with the issuance criteria, and the Service's five-point policy, the Town's HCP includes procedures to address unforeseen circumstances, as described below. In addition, the HCP (section XIII) includes procedures for determining the occurrence of changed circumstances, which trigger procedures or changes in the conservation plan to adjust to new information or contingencies. Changed circumstances include:

- Listing of a new species
- Extreme weather event resulting in morphological changes to the beach

The Service negotiated these changed circumstances provisions to include certain requirements it felt necessary to issue a permit. The HCP includes a changed circumstance that addresses the addition of covered species to the HCP and ITP. The Service presumes that adding new species to the ITP would require a major amendment due to the need for analysis beyond that which appears in the HCP or any of the Service's documents.

Unforeseen Circumstances

Unforeseen circumstances are defined as changes in circumstances affecting a species or geographic area covered by an HCP that could not reasonably have been anticipated by plan developers and the Service at the time of the development and negotiation of the plan and that result in substantial and adverse changes in the status of the covered species. They are those events that are completely unpredictable, or that exceed historical variability, and that result in a substantial and adverse change to the status of a covered species. The final HCP includes a section detailing the obligations of the Town and the Service in the event of unforeseen circumstances (section XIV). These incorporate the assurances guaranteed by the Service's "No Surprises" regulations (50 CFR 17.22(b)(5) and 17.31(b)(5)), provided the final HCP is being properly implemented, and only for species adequately covered by the final HCP. As previously mentioned, these Findings incorporate by reference the permit assurances set forth in the "No Surprises Rule." Under the No Surprises Rule, if unforeseen circumstances (changes to existing

conditions that are not reasonably anticipated) occur, the Town will not be obliged to commit additional land, water, or financial compensation or be further restricted in the use of these resources beyond the level agreed upon for the piping plover in the HCP, provided the Town is properly implementing the HCP.

In conclusion, the Service finds that the Town, through the final HCP, has ensured adequate funding for the HCP and provided procedures to deal with unforeseen circumstances.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The ESA's legislative history indicates Congress intended this issuance criterion be based on a finding, among others, that the proposed action is not likely to jeopardize a listed species pursuant to section 7(a)(2) of the ESA or adversely modify critical habitat. Implementing regulations for section 7 (50 CFR 402) defines "jeopardize the continued existence of" as "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." As a result, the Service has reviewed the project pursuant to section 7 of the ESA. In the Service's BO, we concluded that issuance of the proposed permit is not likely to jeopardize the continued existence of the piping plover. Below we provide a brief summary of the jeopardy analysis; the complete analysis is provided in the BO (USFWS 2015). This conclusion was based upon the following:

- The covered activities will expose up to 2 broods of unfledged piping plovers to risks from direct mortality. No adult mortality is anticipated. Impacts to habitat are limited to transient presence of tire ruts for approximately 10 hours per day during the time when the covered activities will occur. No impacts to courtship habitat, nesting habitat, or foraging habitat are anticipated. Minimization measures provided in the HCP will reduce disturbance and barriers to chick movements to the point that those effects will be insignificant.
- Measures to minimize loss of chicks are anticipated to reduce take by 50 percent.
- The anticipated impact is the loss of 1.7 chicks that otherwise would have fledged each year and 5.1 chicks over the 3-year life of the HCP.
- The best available information indicates that the offsite mitigation will at least offset the loss of chicks due to the covered activities.
- There are no anticipated impacts to the abundance and distribution of nesting pairs of piping plovers on Nauset Beach.
- At the scale of this proposed action (offsite mitigation for the loss of two chicks per year within Massachusetts) and given that piping plover chicks typically disperse to other sites in the same general region when they recruit into the breeding population, the potential effects on distribution of the breeding population (either negatively or positively) will be insignificant.
- No effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area have been identified.
- The proposed action will take place in the New England recovery unit, where the piping plover population has exceeded (or been within 3 pairs of) its 625-pair abundance goal

since 1998, attaining a post listing high of 865 pairs in 2012. The preliminary 2014 abundance estimate is 862 pairs, 38 percent above the recovery unit goal.

- Although progress towards recovery in the other three Atlantic Coast piping plover recovery units has been uneven, and two recovery units (Eastern Canada and New York-New Jersey) have experienced steep declines in breeding abundance in recent years, Atlantic Coast piping plovers almost always breed within the region where they were fledged. Thus, the potential for effects of the proposed action on abundance of piping plovers outside New England is discountable.
- No critical habitat for piping plovers is designated within the action area. Impacts from the proposed actions are anticipated to be localized and not likely to impact critical habitat at broader geographic scales. The actions as proposed are not likely to destroy or adversely modify piping plover critical habitat.

In summary, the effects of the covered activities are small and are likely to be fully offset by mitigation activities. Furthermore, the duration of the proposed action is limited to 3 years, and no impacts to habitat that will persist for more than a few hours are anticipated. The net effects of the proposed action on New England recovery unit are expected to be neutral, and the potential for effects (either negative or positive) on the numbers or distribution of piping plovers in the other recovery units is discountable.

In conclusion, the Service finds that the level of authorized take will not significantly affect local piping plover populations, will not have range wide population effects, and will not appreciably reduce the likelihood of the survival and recovery of piping plovers in the wild. The Service's biological opinion is that the action as proposed is not likely to jeopardize the continued existence of piping plovers.

5. Other measures, required by the Director of the Service as necessary or appropriate for purposes of the HCP, will be met.

The HCP, minimization and mitigation measures, funding assurances and all other aspects of the HCP, incorporate all elements determined by the Service to be necessary for the approval of the HCP and issuance of the permit. The Memorandum to the Service from the MADFW outlining how offsite mitigation will be implemented and the escrow agreement between the Town and the MADFW ensure that the HCP will be fully implemented. The Town recognizes that, should the annual HCP budget not pass, the HCP will not be implemented, with the exception of offsite mitigation to ensure that previous take has been offset. Therefore, the Service finds that it is not necessary or appropriate to require other measures.

6. The Service has received the necessary assurances that the HCP will be implemented.

Compliance with the HCP is a condition of the permit. The authority of the permit is a primary instrument for ensuring that the HCP will be implemented. The permittee understands that failure to comply with the HCP will result in having the permit suspended and/or revoked, making the permittee vulnerable to an ESA section 9 violation. The agreement to provide \$10,000 annually for offsite mitigation, which is to be implemented through an escrow

agreement with the MADFW, as well as recognition that the HCP will not be implemented if the proposed HCP budget is not passed at the annual Orleans Town Meeting, assures the Service that the effects of the project will be mitigated.

7. Alternatives

Two alternatives to the proposed self-escort program were proposed in the HCP and considered by the Service. The alternatives included No Action and Boat Access Alternatives.

Under the No Action Alternative, the self-escort program could not proceed, and access to the southern portion of Nauset Beach South would not be possible. In this scenario, failure to implement the program would avoid all potential program-related impacts on the piping plover, including the potential for take. However, this alternative was rejected because it did not meet the purpose of securing recreational access to portions of Nauset Beach South that did not have nesting piping plovers and would otherwise be open to access.

The Boat Access Alternative would allow access to areas of Nauset Beach South that could be open to recreational use should breeding plovers prevent OSV access through the Pochet. However, this alternative was rejected due to the high energy beach landings that could be required to access the beach and the inherent danger to the boating public in attempting such landings.

III. Public Comments

On December 19, 2014, the Service published a notice of availability (NOA) and request for comments in the Federal Register for the Town's draft HCP and the Service's draft EAS (79 FR 75832; FR Doc # 2014-29751). The NOA, draft EAS, and draft HCP were made available via the internet (<http://www.regulations.gov/#!docketDetail;D=FWS-R5-ES-2014-0051>) and the Service's New England Field Office. The 30-day public comment period closed on January 20, 2015; the Service received 54 comment letters. Based on some of the comments we received, minor changes were made to the final EAS and the final HCP. Thirty-one comment letters were in support of the HCP, and eight comment letters expressed concern about increased use of the beach by OSVs. A description of these changes and response to all substantive public comments are included as an appendix to the Service's final EAS. Following final action on the permit application, the Service will publish a notice of permit decision in the Federal Register.

IV. National Environmental Policy Act – Analysis and Findings

The Service has determined that, based on the analysis provided in the EAS, this low effect HCP qualifies for a categorical exclusion under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*) This determination is supported by the following summary conclusions:

- The effects of the ITP on federally listed, proposed, or candidate species and their habitat covered under the HCP are minor or negligible prior to implementation of the mitigation plan.

- The effects of the ITP on other environmental values or resources (e.g., air quality, geology and soils, water quality, socio-economic, cultural resources, recreation, visual resources) are minor or negligible prior to implementation of the mitigation plan.
- The impacts of the ITP, considered together with the impacts of other past, present, and reasonably foreseeable similarly situated projects will not result, over time, in cumulative effects to environmental values or resources that would be considered significant.

Pursuant to the Department of the Interior's NEPA implementing regulations and those of the Council on Environmental Quality, the Service also assessed whether any extraordinary circumstances exist that preclude our use of a categorical exclusion. Our examination revealed that none of the enumerated circumstances exist and that categorical exclusion is appropriate (see EAS).

V. General Criteria and Disqualifying Factors – Analysis and Findings

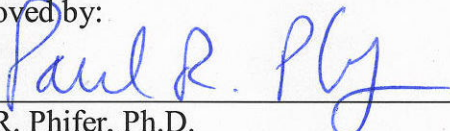
The Service has no evidence that would disqualify or make the applicants ineligible to receive a permit under our general permitting regulations in 50 CFR 13.21 (b through d) at this time.

VI. Recommendations on Permit Issuance

Based on our findings with respect to the ITP application and supporting Service documents (including the EAS, BO, and ITP conditions), I have determined that the application meets the issuance criteria found in section 10(a)(2)(B) of the ESA.

I therefore recommend issuance of the section 10(a)(1)B incidental take permit (number TEXXXX) to the Town of Orleans for incidental take of piping plovers that may occur during OSV access at Nauset Beach South in Orleans, Massachusetts.

Approved by:



Paul R. Phifer, Ph.D.
Assistant Regional Director, Ecological Services
Northeast Region

Date 4/16/15

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