

MASSACHUSETTS
PIPING PLOVER HABITAT CONSERVATION PLAN

REQUEST FOR
2020-2013 CERTIFICATE OF INCLUSION,
NORTH (NAUSET) BEACH, CHATHAM, MASSACHUSETTS

Prepared for submission to:
Natural Heritage & Endangered Species Program,
Massachusetts Division of Fish & Wildlife
1 Rabbit Hill Road, Westborough, MA 01581



Prepared by:
Town of Chatham
Department of Natural Resources

December 2019

Table of Contents

1.0 INTRODUCTION AND OVERVIEW	4
2.0 SITE DESCRIPTION.....	5
North Beach	5
2.1 Description of Piping Plover Habitat, Productivity, and Management	7
North Beach	7
Other State-Listed Species.....	10
3.0 RESPONSIBLE STAFF	11
4.0 BEACH MANAGEMENT	13
Beach Operations	14
Recreational activities.....	14
Parking & Roads	15
Beach cleaning and refuse management	15
Rules and regulations.....	15
Law Enforcement.....	15
Fireworks and Public Events	15
Piping Plover and Least Tern Monitoring and Management.....	16
5.0 COVERED ACTIVITIES	16
5.1 Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1).....	17
5.2 Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2).....	18
5.3 OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3).....	19
5.4 OSV Use in Vicinity of Least Terns.....	24
6.0 BUDGET.....	27
7.0 MITIGATION PLAN.....	28
Appendix 1 North Beach Order of Conditions	
Appendix 2 Intermunicipal Agreement	
Appendix 3 Rules & Regulations/HCP Users Guide	
Appendix 4 Landowner Authorizations	

Appendix 5 Example Logs

Appendix 6 On-site Mitigation Plan

1.0 INTRODUCTION AND OVERVIEW

This request for a Certificate of Inclusion (COI) is an application from the Town of Chatham (TOC) to participate in the Statewide Habitat Conservation Plan for Piping Plovers (HCP). This document also serves as an application for a Conservation and Management Permit (CMP) pursuant to the Massachusetts (MA) Endangered Species Act (MESA; MGL c. 131A; 320 CMR 10.00).

The Town is requesting to implement the following Covered Activities as described in the HCP:

- “Recreation and Beach Operations Associated with Reduced Symbolic Fencing around Nests,” (Sec. 3.2.2.1);
- “Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat,” (Sec. 3.2.2.2)
- “Oversand Vehicle (OSV) Use in Vicinity of Unfledged Chicks” (Sec. 3.2.3)
- “Oversand Vehicle Use in Vicinity of Least Terns”

The Statewide HCP was recently amended allowing individual takes based on 30% - 75% of the total number of pairs. Pairs are based on the number of "breeding pairs" defined as those that produced at least 1 fledged chick. Chatham requested one (1) take in the 2017-2019 COI but is requesting two (2) takes for the 2020-23 COI. Covered Activities and associated impact minimization procedures would be confined to the Chatham portion of Nauset Beach (aka North Beach). The TOC is also requesting to initiate self-escort of OSV past Least Terns (LETES) consistent with the *Guidance for applying for a Conservation and Management Permit for Recreational Activities Affecting Least Terns* developed by the MA Division of Fisheries and Wildlife (DFW). The TOC would follow the same procedures and protocols for this covered activity as approved by DFW in 2015, 2016, and in the 2017-2019 COI.

Chatham is requesting flexibility in the number of HCP Monitors assigned to LETE colonies based on the limited number of unfledged LETE chicks, their proximity to one another, and ability to move OSV Corridors and symbolic fencing away from unfledged chicks to maximize buffers. The habitat in which LETE chicks have been located is flat and sparsely vegetated allowing monitors excellent line-of-site.

The Town is proposing mitigation in the form of funding to implement off-site predator management, educational outreach, and increased law enforcement, overseen by the Natural Heritage & Endangered Species Program (NHESP), as set forth in the HCP. For the past several years Chatham has successfully conducted non-lethal, on-site mitigation to reduce predation of incubating PIPL eggs using electrified exclosures. Use of exclosures on incubating nests is coupled with carefully managed non-lethal efforts toward Coyote behavior modification using baited

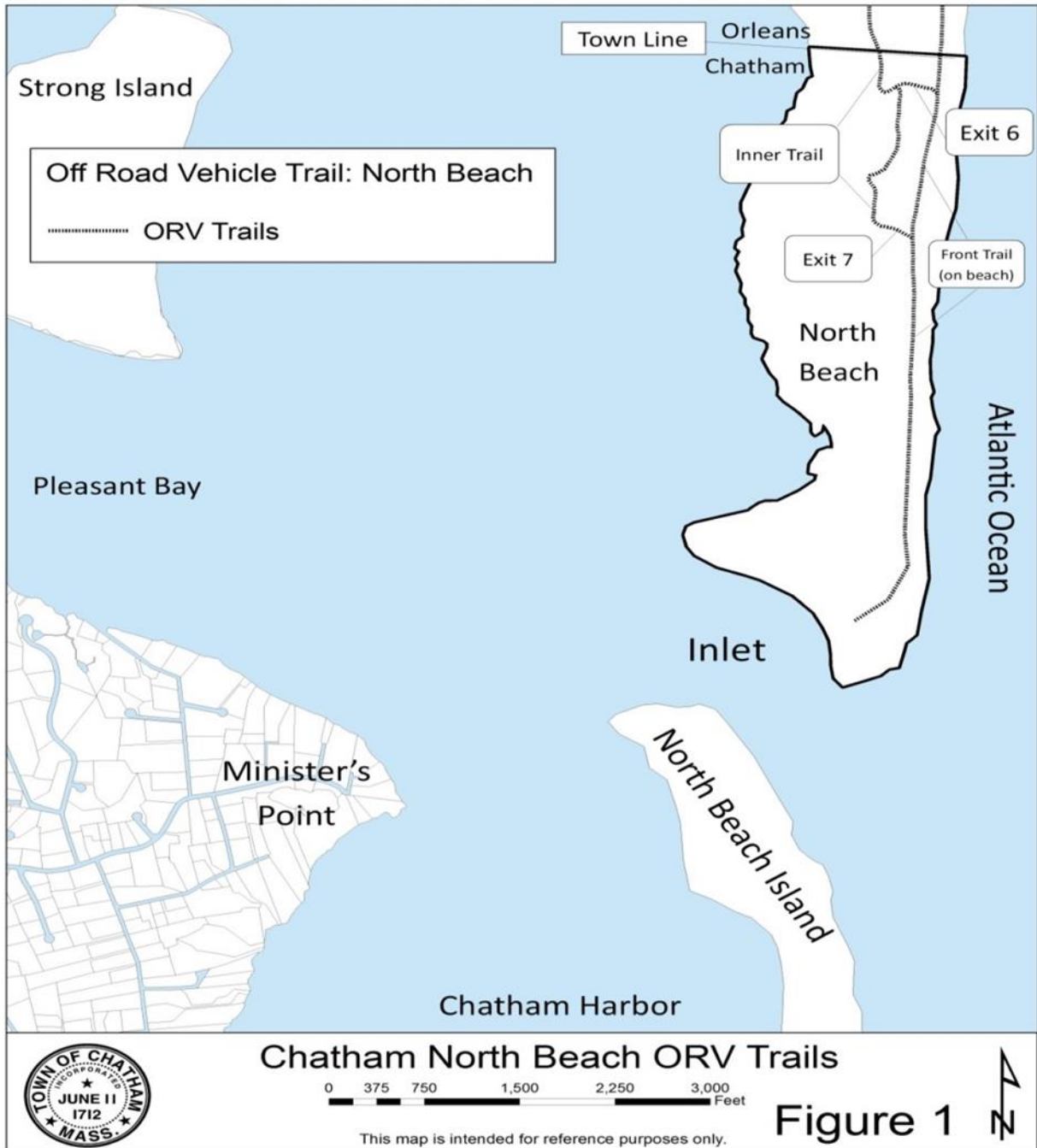
electrified “dummy” exclosures. These efforts reduced the rate of predation of incubating nests to nearly 0%. **Appendix 6** describes the use, design, and deployment of electrified baited exclosures. They have been used effectively in Orleans and Chatham since 2014. To reduce significant HCP costs, the Town proposes receiving a credit for this on-site mitigation.

2.0 SITE DESCRIPTION

The Nauset Beach barrier beach is under the jurisdiction of two municipalities. The northern portion of the system, including Nauset Spit, Nauset Public Bathing Beach, and Nauset Beach South, are owned and operated by the Town of Orleans (TOO). The southern portion of the system, referred to as North Beach, is located within and managed by the TOC. This request for a Certificate of Inclusion (COI) applies to Chatham’s North Beach only. The subject area is classified as Barrier Beach (310 CMR 10.29), a resource area which contains the following resource areas: Land Subject to Coastal Storm Flowage (310 CMR 10.02 (1) (d)), Land Under the Ocean (310 CMR 10.25), Coastal Beaches (310 CMR 10.27), Coastal Dunes (310 CMR 10.28), Salt Marshes (310 CMR 10.32), and Rare Species Habitat (310 CMR 10.37).

North Beach

The area of North (Nauset) Beach affected by this COI, shown in **FIGURE 1**, starts at the Orleans/Chatham town line and continues in a southerly direction terminating at the inlet formed in 2007. North (Nauset) Beach has increased in length from ½± mile in 2007 to just over 1.5± mile in 2019. Most of the area is excellent habitat for PIPL and LETE.



It is recognized the total acreage and morphology of North Beach undergoes constant change due to the dynamic nature of barrier beaches resulting from ongoing accretion and erosion. North Beach is comprised of land owned by TOC, U.S. National Park Service (Cape Cod National Seashore (CCNS)), and private individuals. The exact delineation of property ownership is difficult to ascertain due to ongoing erosion and accretion. All property owners which may have property

rights on North Beach are supportive of the TOC's efforts to manage North Beach in accordance with this COI (**Appendix 4**).

2.1 Description of Piping Plover Habitat, Productivity, and Management

The Nauset Barrier Beach System provides excellent habitat for many species of wildlife. The variety of resource areas previously mentioned which comprises the barrier system provides a unique mixture of suitable habitat for PIPLs and other shorebirds.

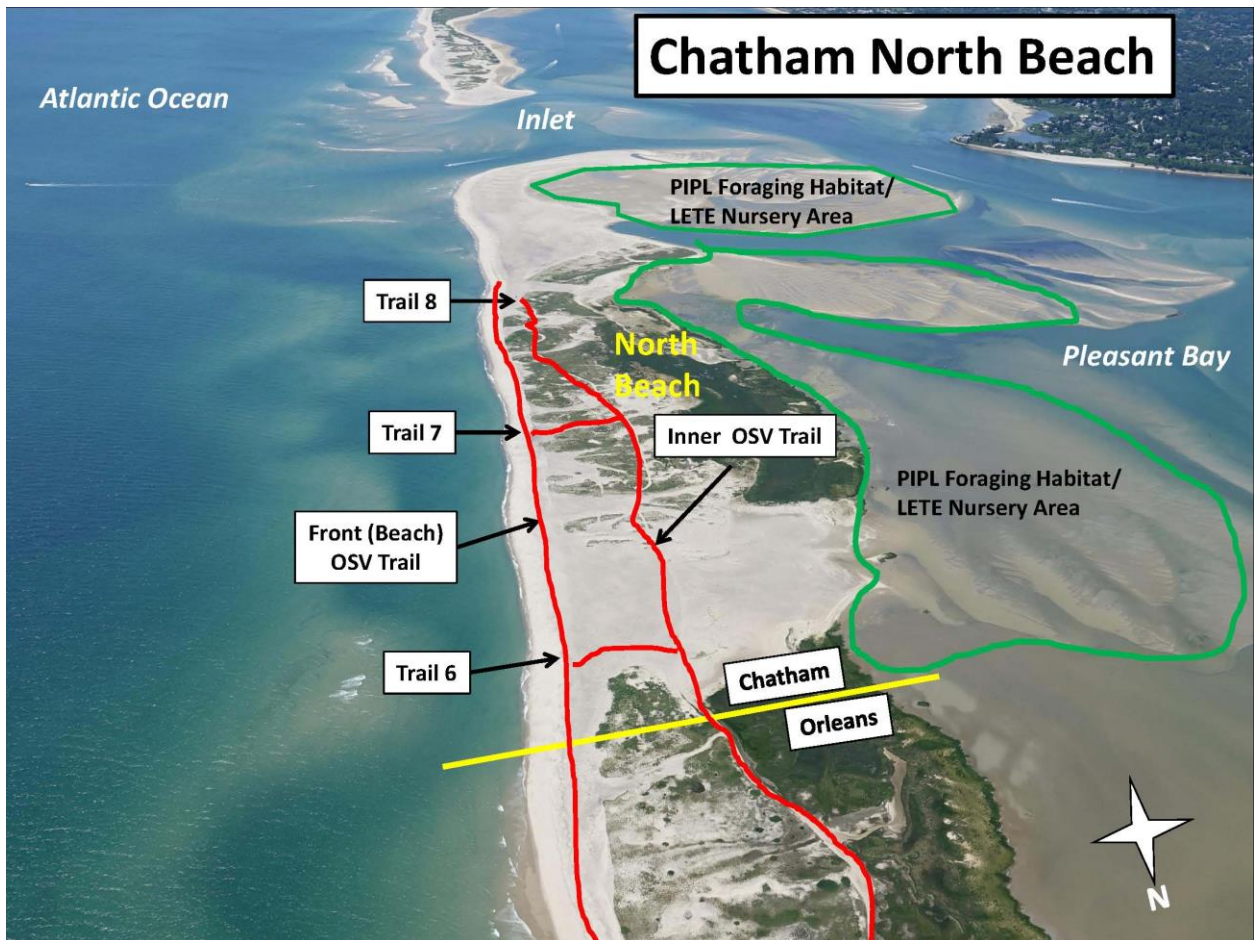
North Beach

North Beach extends in a southerly direction from the Orleans/Chatham Town Line to the inlet, approximately 1.5 miles. North Beach is a Barrier Beach with the Atlantic Ocean to the east and Chatham Harbor/Pleasant Bay to the west containing Coastal Beaches, Coastal Dunes, and Salt Marsh (**Figure 2**). The area does not have many large, steep faced primary dunes, common to northern portions of Nauset Beach South in Orleans. Instead, the area is characterized by overwash fans and numerous pockets of relatively low, sparsely vegetated dunes and grassy "hummocks" often with relatively open access to the bay side. Vegetation consists primarily of Cape American Beach Grass, Smooth Cordgrass, Slender Glasswort, Seaside Lavender, Salt Marsh Hay, Spike Grass, and a variety of typical woody coastal shrubs.

The morphology of the beach creates excellent physical habitat for nesting shorebirds. Erosion and storm events between 2017 and 2019 eroded many of the dunes on the front beach creating large overwash areas suitable for nesting of PIPL and LETE. The land area, including portions of the intertidal zone, encompasses approximately 215 +/- acres. This does not include other extensive bay-side intertidal areas exposed at low tide where many shorebirds forage and stage. PIPL rely on the bay-side intertidal areas for their primary food source(s) including marine worms, crustaceans, beetles, fly larvae, mollusks, and other small marine animals and their eggs. See Figure 2 showing intertidal foraging area.

North Beach is accessible via Over-sand Vehicles (OSV) and is managed in accordance with an Order of Conditions (SE10-3127) and *Off-Road Vehicle (ORV) and Beach Management Plan* (**Appendix 1**) that governs use of OSVs (synonymous with ORV) on the

Figure 2. Chatham North Beach



beach. OSV access is provided by two primary north to south oriented corridors which are a continuation of corridors extending through Orleans. One corridor is located on the outer beach seaward (east) of the fronting dune and the other immediately west of the fronting dune referred to as the Inner Trail (see Figure 2). Access routes (Trails), providing access from the Inner Trail to the outer beach trail, are maintained as conditions allow. The inner Trail terminates approximately 0.8 miles south of the Orleans/Chatham Town Line at Trail 8. OSV traffic then utilizes the outer beach trail to access southern sections of North Beach, terminating at the inlet.

PIPLs have consistently nested in the lower third of North Beach due to the excellent habitat afforded by low dune areas and recurrent overwash. Additional nests have been located along the mid and northern portions of the beach corridor up toward the Orleans/Chatham

Town Line. Over the past few years this area has seen deterioration of the primary dune system from storms and overwash with the result that more plover nests are being found in this section of North Beach.

There are extensive tidal flats located immediately bay-side afford excellent foraging opportunities. Many adults and chicks, whose nests are in proximity to these flats, migrate away from the outer beach to the bay-side soon after hatching to take advantage of the enhanced foraging opportunities and additional cover from predation offered by vegetation.

The numbers of nesting PIPL pairs has increased on North Beach over the past 10 years. The number of observed pairs range from a low of 3 pairs in 2010 to a high of 21 pairs in 2018, As indicated above, this increase may be due to increased habitat created by erosion and overwash of the frontal dunes along the mid and northern sections.

As is typical of other PIPL nesting sites on Cape Cod and surrounding areas, natural predation continues to be the largest contributor to loss of incubating eggs and juvenile plover chicks on North Beach. The main predators continue to be Eastern Coyotes, Red Fox, American Black Crows, Black-back and Herring Gulls, and the occasional raptor. The increase in pairs and productivity can also be attributed to efforts have been made to reduce predation using on-site mitigation. The use of electrified, baited decoy exclosures and a management decision in 2017 to increase the use of exclosures on any incubating nest suitable for exclosure resulted in an increase in productivity. The on-site behavior modification mitigation program dramatically decreased egg loss attributable to mammalian predation by Eastern Coyotes and Red Fox. Plover egg loss attributable to avian predators also decreased with exclosure use and placement of anti-perching spikes on top of all stakes and posts used for symbolic fencing previously used by avian predators to locate protected species.

The table below summarizes the number and rates of fledged chicks on North Beach since 2010. NHESP is provided with annual PIPL census data and reports for North Beach which can be reviewed for more detailed information.

	<u>PIPL PAIRS</u>	<u># OF FLEDGED CHICKS</u>	<u>RATE</u>
2019	15	29	2.23
2018	21	37	2.31
2017	16	31	1.93
2016	11	25	2.27
2015	13	19	1.46

2014	11	11	1.00
2013	13	6	0.46
2012	8	10	1.25
2011	6	8	1.33
2010	3	7	2.33

Productivity increased in 2018-2019 as a result of increased staff presence and implementation of non-lethal behavior modification programs for mammalian and avian predators. Shorebird monitors have observed a greater proportion of PIPL nests in newly developed overwash habitat created by increased storm activity.

Other State-Listed Species

PIPLs are not the only listed shorebird species present on the Nauset Barrier Beach System. Least Terns (LETES) (*Sterna antillarum*) nest on these beaches as do the occasional American Oystercatcher (*Haematopus palliatus*), and Common Terns (*Sterna hirundo*). American Oystercatchers, Red Knots (*Calidris canutus*), Roseate and Arctic terns as well as Black Skimmers are typically seen among staging migratory birds. The habitats described above are available for all these species. The large tidal flats along the bayside, particularly near the southern end of North Beach, are particularly valuable foraging and staging habitat for migrating shorebirds. The tidal flats west of southern tip at the inlet provide important nursery areas during mid- to late August and early September for fledged LETE chicks still being fed by adults.

LETES occupy similar nesting grounds as PIPLs. Terns prefer to lay their eggs in shallow depressions in the open sand. They typically arrive by May 15 and produce clutch sizes with 2-3 eggs. The average incubation is 21 to 23 days. Eggs are generally laid from the last week of May to the last week of July. Fledging occurs at 20-23 days. LETES often construct their nests close to tide lines and as a result suffer nest losses from overwash and/or storm surge. LETE chicks tend to hide or find refuge in dune grass, vegetation, and other objects on the beach during the day and appear when the adults are actively feeding them. They are subject to predation by black backed gulls, American black crow, herring gulls, avian raptors, red fox, and Eastern coyotes.

LETE colonies on North Beach are generally relatively small (less than 20-35 nests) and fledging rates have been low due to predation. LETES were not well established on North Beach in earlier years, seemingly preferring overwash zones near Pochet in Orleans. Between 2017 and 2019, several winter storms created large overwash areas just south of

the Orleans/Chatham boundary. Natural processes resulted in sand steadily being deposited enlarging and elongating North Beach to the South.

During 2017 to 2019 there have been two LETE sub-colonies, Colony A, just south of the Orleans/Chatham Town boundary, and Colony B, South of Trail 8 to the inlet.

Year & Colony	# Paired Adults	Fledged Chicks
2017 A North	20-25	15
2017 B South	40-45	25-30
2018 A North	20-25	20-25
2018 B South	10-15	4-6
2019 A North	20-25	2
2019 B South	15	0

There has been a decreasing trend in overall LETE activity on North Beach. Areas where LETE activity has been predominant are now subject to strong winds due to erosion of dunes and lack of vegetation caused by winter storms and high tide cycles. Predation of LETE nests and chicks by Eastern Coyotes foraging during the night has also contributes to overall reduced LETE productivity on North Beach.

3.0 RESPONSIBLE STAFF

Overall management of North Beach for the TOC is administered by the Department of Natural Resources (DNR).

Robert Duncanson, Ph.D. – Director of Health and Natural Resources

Responsible for overall management and operations of the Department of Natural Resources, including Coastal Resources, Conservation, Shellfish, Harbormaster, Health, Water Quality Laboratory, and Sticker Office. Dr. Duncanson has over 32 years of experience managing various aspects of the natural environment of Chatham. Dr. Duncanson has a B.S. in Biology and Ph.D. in Microbiology.

Theodore Keon - Director of Coastal Resources

Responsible for planning and management of Chatham's coastal related issues including shoreline change and management, dredging and beach nourishment, waterfront infrastructure, and shoreline access since 1998. Oversees the general operations of Chatham's shorebird

management program for North Beach and North Beach Island. Formerly Chief of the Coastal Planning Section of the US Army Corps of Engineers, Philadelphia District. B.A. and M.A in Physical Geography.

Paul Wightman – Assistant Conservation Agent/North Beach Manager

Implements the North Beach shorebird monitoring program with specific responsibility to ensure proper execution of HCP related elements. Ensures implementation and compliance of all activities and protocols identified in this COI, or as may be modified based on DFW guidance.

Mr. Wightman has a B.S. in Natural Resource Management and brings extensive relevant experience to this position. Mr. Wightman is also a licensed attorney and practiced for many years in environmental law, relevant regulatory environmental law, and oversight. While serving as Endangered Species Shorebird Specialist for Orleans Natural Resource Department from 2012 to 2016 he managed the OSV program at Nauset Beach. Mr. Wightman participated in the first USFWS HCP Permit, issued to Orleans, and oversaw implementation of procedures adopted by Orleans to implement the Permit. He monitored and recorded daily observations of nest locations, egg-laying, hatching, chick rearing and fledging of individual broods, trained HCP Monitors. Installed and maintained fencing and signage to delineate OSV corridors and critical habitat areas. Responsible for preparing and submitting required annual census data and final seasonal reports of shorebird activity to NHESP.

Mr. Wightman prepared a Mitigation Plan and public outreach programs associated with the implementation of the USFWS HCP in addition to preparing the Orleans IAMP and Mitigation Plan for the Statewide HCP. He managed the daily operation of the Orleans HCP including training and supervision of 9 seasonal HCP Shorebird Monitors and 1 full-time Seasonal Shorebird Monitor.

Mr. Wightman conducted beach patrols as Beach Ranger and prepared daily logs of patrol events to enforce Nauset Beach Rules and Regulations and violations of HCP conditions. Maintained effective communications with USFWS, DFW and NHESP on program operations.

Other relevant experience includes serving as Chatham Conservation Agent/Assistant Agent and Seasonal North Beach Manager 2015 to present and Natural Resource Officer/Conservation Agent, Town of Dennis, 2008-2012.

Seasonal Shorebird Monitors - (March thru September), 3-5 annually

Terry Bull worked in Orleans as an HCP Monitor for 3 years and was hired by Chatham in 2019 as a Shorebird Monitor. She brings extensive experience in HCP implementation, monitoring, and

management.

Anna Smith was hired as a seasonal Shorebird Monitor in 2019 demonstrating skills in monitoring and is expected to return in 2020.

Tom Olson has over 13 years of shorebird monitoring experience on North Beach.

Additional staff are hired as necessary for HCP implementation or supplemented by Massachusetts Audubon staff as available. Seasonal shorebird monitors support the North Beach Manager. A sufficient number of seasonal monitors are hired to ensure regular monitoring duties on North Beach are not impacted by implementation of the HCP Program. Monitoring is conducted 7 days per week, weather permitting, and in accordance with the DFW and USFWS Guidelines and HCP requirements. Duties of seasonal shorebirds monitors, under the direction of the North Beach Manager, include:

1. Locating and identifying endangered shorebird nesting and feeding areas, setting up exclosures (as necessary), placement of signage, symbolic fencing, conducting surveys and counts of birds.
2. Working in assigned habitat areas to: identify PIPL, Least and Common Terns, American Oystercatcher, and other shorebird species as required; locate shorebird nesting and feeding areas; map the identified areas.
3. Data collection and note taking to document nest establishment, egg laying, hatching, predation of nests, chick rearing, and fledgling activities.
4. Maintain and modify when necessary signage, symbolic fencing, and protective exclosures such that critical habitat areas are protected from human disturbance.
5. Interact with and educate the public to increase awareness of the birds and nesting/feeding areas.
6. Re-route vehicles around protected areas and escort vehicles through protected area as necessary.

4.0 BEACH MANAGEMENT

North Beach operates under an Order of Conditions (OOC) #SE10-3127 issued on April 13, 2016 (**Appendix 1**). The OOC contains a comprehensive Off-Road Vehicle (ORV) and Beach Management Plan (Plan). The Plan includes adherence to the Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program, *Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers and Terns and Their Habitat* (1993) (*Guidelines*); U.S. Fish Wildlife Service (1994); and compliance with resource area

performance standards in the Massachusetts Wetland Protection Act, M.G.L. c 131 § 40; 310 CMR 10.00, including 310 CMR 10.37 Protection of Rare and Endangered Species Habitat; and the Chatham Wetlands Protection Bylaw (Chapter 272) and Regulations.

All OSV traffic on Nauset Beach (and North Beach) is generally halted in the beginning of June soon after Memorial Day, coincident with the first hatching of chicks in the Pochet overwash area in Orleans. This is usually concurrent with the first hatching of chicks on North Beach (south of the Orleans closure). Regardless of where the first closure occurs, OSV management on North Beach includes installation of symbolic fencing to establish OSV travel corridors and to demark prohibited pedestrian access to shorebird habitat area in accordance with the *Guidelines*. Once chicks are present, sections of beach are closed to OSV use and parking is prohibited at least 300 ft. from observed chick activity. Nesting and chick behavior are monitored, and fencing adjusted as necessary to maintain appropriate buffers. As per existing Nauset Beach Rules and Regulations for OSVs, dogs must always be kept on leash not longer than 30 ft. while on North Beach from April 1 through Labor Day.

The TOO and TOC executed an Intermunicipal Agreement (IMA) to manage Nauset Beach South and North Beach (**Appendix 2**). North Beach (within the TOC) represents approximately 1.5± miles and 215 acres of the combined Nauset Beach System. The IMA authorizes Orleans to inspect all registered OSV Permit holders for compliance with the most recently adopted *Nauset Beach Rules and Regulations for ORVs*. Chatham provides enforcement of the Special Conditions in the OOC as well as the *Nauset Beach Rules and Regulations for ORVs* on North Beach. Orleans enforces said *Rules and Regulations* in Orleans. Each respective town's Police Department is available to assist in enforcement efforts as necessary, along with the MA Environmental Police.

Beach Operations

As indicated above, OSVs must first traverse Nauset Beach South within Orleans to access North Beach. Nauset Beach South and North Beach operations are managed daily beginning in April through the Columbus Day Weekend. Beach Rangers are responsible for patrolling and ensuring compliance with the *Nauset Beach Rules and Regulations for ORVs*.

When an HCP is implemented, every vehicle must check in at the station located at the main beach access gate in Orleans before proceeding onto the beach. Vehicle operators are required to have a signed copy of the *HCP Rules and Procedures* in the vehicle which also confirms they have watched the HCP procedure video. When OSVs arrive at the Chatham HCP section, the Vehicle Corridor Monitor records vehicle registration, OSV permit number, and type of OSV permit (Orleans or Chatham resident, non-resident, self-contained or “day tripper”). OSV operators are advised when they must leave the Chatham portion of the beach in order to traverse through all self-escort zones and exit the beach before closure of the last access window in Orleans.

Recreational activities

The Nauset Barrier Beach system is host to many recreational opportunities. Activities such as the OSV program, surfing, bathing, hiking, bird watching, fishing, hunting, metal detecting, and photography are just a few that take place.

Parking & Roads

The Nauset Public Beach parking lot, located in Orleans, is the main parking lot and is accessible from Beach Road. OSV trails to Nauset Beach South and North Beach are accessed from the south corner of the parking lot. Prior to arriving at Nauset Beach South, an OSV must pass through two (2) staffed check stations. The first station is the Nauset Public Beach toll booth which is staffed 24 hours a day from Memorial Day to Columbus Day. The second station, the Buggy Booth, is located at the OSV South Lower Lot and is staffed from 8 a.m. to 7 p.m. daily during the summer months. Airing Stations are also available at the OSV South Lower Lot.

Beach cleaning and refuse management

There are several dumpsters provided at the beach and OSV access areas for beachgoers in Orleans. They are emptied when full. Visitors are encouraged through signage and literature to take all trash off the beach. This decreases predator activity. No beach raking is allowed or conducted on North Beach.

Rules and regulations

The *Nauset Beach Rules and Regulations for ORVs* are developed cooperatively by Orleans and Chatham and are reviewed and updated annually with input from each town (**Appendix 3**).

Law Enforcement

Chatham Beach Rangers patrol day and evening shifts to enforce the *Rules & Regulations* or policies adopted by the respective towns. They are provided with hand-held and vehicle communication radios. In addition, the Town has a working relationship with the Massachusetts Environmental Police who are occasionally called in for assistance in more serious violations. The

Orleans and Chatham Police Departments likewise work in close concert with the Beach Rangers.

Patrols are typically conducted on North Beach from May through Labor Day when the beach is open to OSV traffic. After Labor Day, patrols are conducted on weekends through Columbus Day weekend. The North Beach Manager and some shorebird monitors are appointed as Beach Rangers providing daytime enforcement coverage. Evening patrols by a Beach Ranger, and occasionally the North Beach Manager, are generally conducted between 4:00 p.m. and 12:00 a.m. The beach is cleared by midnight except for self-contained vehicles in compliance with the *Rules and Regulations*. In the off-season, the Beach Manager patrols on an as-needed basis. All Beach Rangers follow established written protocols and are trained in First Aid, AED, and CPR and HCP protocols. These same protocols are applied during implementation of an HCP.

Fireworks and Public Events

Fireworks are strictly prohibited at Nauset Beach by both the TOO and TOC. Should a report of fireworks be reported, officers are dispatched and work cooperatively with Beach Rangers to enforce citations. Education is also provided to anyone using fireworks and their effect on breeding shorebirds. No public events are sponsored or undertaken on North Beach.

Piping Plover and Least Tern Monitoring and Management

The Shorebird Monitoring program for North Beach begins in early March and extends through the entire summer nesting season. The North Beach Manager and monitors assess current conditions along the entirety of North Beach to identify changes in beach and dune conditions from the previous year and identify suitable Plover and Least Tern nesting habitat. Symbolic fencing is installed as necessary around suitable nesting habitat based on existing conditions as well as knowledge of past nesting habits. PIPL arrival on North Beach is generally later than other more sheltered beach locations. Installation of symbolic fencing begins in March and will be completed by April 1st for areas with vehicle access. Changes to the orientation, extent, location, and/or removal of symbolic fencing are ongoing efforts throughout the nesting and fledging season based on monitoring of shorebird nesting and brood activity. Additional fencing is established, where appropriate, to define OSV corridors, limit OSV access into environmentally fragile areas, and to establish areas closed to OSV use (with supplemental signage). The Beach Management Plan (**Appendix 1**) provides a full description of the shorebird monitoring program conducted on North Beach.

5.0 COVERED ACTIVITIES

The TOC is requesting to implement the following Covered Activities described in the HCP: *Recreation and Beach Operations Associated with Reduced Symbolic Fencing around Nests*, (Sec. 3.2.2.1); *Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing*

around Habitat, (Sec. 3.2.2.2); *Oversand Vehicle (OSV) Use in Vicinity of Unfledged Chicks* (3.2.3); and, *OSV use in the Vicinity of Least Tern Chicks*. Regardless of the Covered Activity, the request would expose up to two (2) unfledged PIPL broods (brood defined as one adult pair and up to four chicks) to self-escorted OSV traffic, provide for a reduced symbolic fencing buffer around up to two (2) PIPL nest, or allow a reduced amount of proactive symbolic fencing around suitable PIPL habitat (limited to 10% or 2 acres of available nesting habitat at a given breeding site, whichever is less). The extent and nature of limited OSV use near LETE nests or chicks would be dictated by the size and extent of the LETE colony(s). The specific beach area requested extends from the Orleans/Chatham town line (just north of Trail 6) to the southern tip of North Beach, approximately 1.5± miles. However, it is not intended that activation of self-escorting or reduced buffers for symbolic fencing would be implemented over the entire area at any given time.

5.1 Recreation and Beach Operations Associated with Reduced Symbolic Fencing around Nests (3.2.2.1)

The TOC is proposing to implement reduced symbolic fencing (less than 150 ft. as per *Guidelines*) by up to two (2) PIPL nests if said nests have the potential to limit OSV access along an established OSV trail and no other alternative route is feasibly able to be established. The fencing would be reduced only to the minimum extent necessary to achieve continued OSV passage and would not be reduced to less than a 30 ft. buffer per the HCP. Given the location of North Beach at the southern extremity of Nauset Beach, OSV traffic during the normal seasonal egg laying and incubating period is relatively light (only a few potential vehicles pass per day). Therefore, it is anticipated that utilizing a reduced fencing buffer, if necessary, would have only minimal potential for disturbance to successful egg laying and incubation. The TOC would establish No Stopping and No Parking zone(s) within the area of reduced fencing.

A fencing buffer larger than the target (30 ft.) buffer will be established initially and maintained during egg laying and through at least the first 24 hours after clutch completion. The fencing buffer may be gradually reduced in maximum increments of 30 ft. after clutch completion, no more than once daily. Consistent with the HCP for this covered activity, OSV traffic will be closed once nests hatch.

Monitoring

Shorebird monitors will monitor the nest daily from a distance and document the effectiveness of the reduced buffer on the incubating adults to assess whether OSV (or other occasional pedestrian access) is resulting in any noticeable disturbance to the birds. If

repeated disturbance is observed, the fence buffer will be expanded as necessary until disturbance is minimized.

5.2 Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)

The TOC is proposing to use reduced proactive fencing around suitable PIPL habitat, if necessary, to maintain OSV access through established corridors. The total upland area of NB is approximately 215 acres (+/-) with large areas of suitable PIPL nesting, feeding and sheltering habitat. This habitat is generally comprised of open beach, overwash fans, low sparsely vegetated dunes and large intertidal flats (not included in the acreage calculation). Most of these areas are restricted to access using symbolic fencing on an annual basis during the nesting season.

Given the highly dynamic physical nature of the barrier spit, erosion may reduce the berm width of the outer beach such that it may not be feasible to provide an OSV trail along sections of the outside beach without encroaching into suitable upland PIPL habitat. In addition, erosion of the outside beach may not enable safe OSV access along specific portions of the outer beach corridor and all OSV traffic may need to be rerouted around the “choke-point” to gain access to better beach widths beyond the erosion zone.

Prior to implementation of reduced symbolic fencing the North Beach Manager will confirm that only two (2) pairs are present in the area proposed for reduced symbolic fencing. Reduced symbolic fencing would be utilized only along specific limited areas to maintain a viable, minimum 15 ft. width (“one-way” traffic only) OSV corridor. TOC may relocate an existing or establish a new section of inner trail through a portion of suitable habitat in order to by-pass the erosion zone and maintain an OSV corridor. The total area of impacted habitat due to reduced fencing would never exceed 2 acres as per the HCP. Given the vast amount of habitat afforded on NB, it is not expected that implementation of this covered activity would have a demonstrable effect on PIPL productivity.

Monitoring

Normal baseline shorebird monitoring consistent with the *Guidelines* would be undertaken with specific emphasis for observing any bird activity occurring within the unfenced areas. Any nest discovered within an unfenced area will be immediately fenced and provided with the appropriate buffer distances consistent with the covered activity for reduced fencing around nests as described above.

5.3 OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)

A travel corridor, referred to as a self-escort corridor (SEC), is proposed to be established for self-escorted OSV passage past two (2) PIPL broods with unfledged chicks at distances closer than would normally be allowed by the *Guidelines*. Vehicles would be required to self-escort within this travel corridor and no vehicles will be allowed to stop or park until the brood has been passed by a minimum buffer zone of 200 meters on either side of the identified brood. The beginning and end points of the travel corridor shall be readjusted by shorebird staff as necessary to ensure the minimum distances are maintained.

The TOC, through the DNR, shall provide 24-hour advance notice to DFW before initiating the self-escort program once the brood has been identified warranting the initiation of the Covered Activity.

Hours of operation of PIPL SEC “windows” are proposed to be the same as Orleans:

- i. The hours of operation: Mon through Sunday – 8:00 AM to 10:00 AM, 12:00 PM to 2:00 PM, and 4:00 PM to 6:00 PM.

No vehicles would be allowed to traverse through the area outside these times except for emergencies as described below. The times and days of operation of the self-escort program may be subject to change, following consultation with DFW, based on the location of the nest and other factors which warrant adjustment of the operating window(s) including user demand. TOC will coordinate with DFW regarding specific operational details prior to initiation of any self-escort program.

The OSV self-escort program will only be initiated if up to two (2) broods of PIPL chicks within a designated section(s) of North Beach remain and all other chicks (if any) within the designated area have fledged. The specific location of the SEC is intended to be adaptive and variable to reflect the location of the brood(s). The SEC may shift north or south along the identified route depending on PIPL locations and/or movements. The SEC, as identified by signage and symbolic fencing, shall be a maximum of 15 ft. wide and vehicle escorting will begin at least 200 feet from the closest chick and terminate 200 feet past the last chick in a given brood. The maximum size of any OSV SEC would not exceed 1,000 feet long by 15 wide. The total acreage impacted by implementation of covered activities included in this COI would not exceed 2 acres, even if combined with measures for protection of LETEs. Additionally, 100 feet laterally on either side of the travel lane will serve as a “safety zone”

for plover chicks whereby vehicle traffic will be halted should plover chicks enter this zone. Updated corridor boundaries shall be reported daily to DNR by shorebird monitor(s) prior to commencement of vehicle access and relocated as necessary. In general, a maximum of 50 vehicles per day (100 round trip passes) is proposed although there may be exceptions under specific circumstances. TOC will coordinate with DFW to confirm whether the vehicle limit should be increased or decreased based on the location of bird activity and the morphological constraints of North Beach

Self-escort Procedures

1. Two monitors (shorebird and vehicle) shall be assigned to oversee the operations of each SEC. A shorebird monitor will observe and monitor brood activity (serving as Brood Monitor) during the escort window and the other monitor (serving as Vehicle Monitor) will ensure compliance of vehicles traversing the SEC.
2. At least 1 hour prior to commencement of vehicle escorts, the shorebird monitor will proceed along the designated vehicle corridor and surrounding area to determine locations of unfledged plover chicks of the brood in question. Once the shorebird monitor has established the locations of all chicks, they will review if the limits (start and end points) and associated signage of the SEC should be adjusted based on chick locations and activity. The monitors will then notify the DNR or designee of the brood location and indicate that the trail is ready to be opened. The shorebird monitor shall then take a respective role as Brood Monitor.
3. If all chicks have not been located, opening of the travel corridor may be delayed until such time as all chicks have been accounted for, or it has been determined that no chicks are present within the travel corridor or bordering safety zone.
4. Prior to opening the SEC, the Vehicle Monitor will confirm with the Brood Monitor that the locations of all chicks are accounted for, and/or it is safe for the trail to open. During the self-escort period, the Brood Monitor shall maintain constant oversight on any plover chicks using binoculars from a distance of no less than 200 feet. Disturbance, if any, of the chicks shall be minimized. Once vehicles have passed through the delineated “chick zone”, which shall extend at least 200 ft. past the closest chick, vehicles may proceed to use the sections of beach previously determined to be free of PIPLs in accordance with state and federal *Guidelines* (including but not limited to restrictions on parking within 600 ft. of unfledged chicks; some exceptions apply, see *Guidelines*).

5. Each vehicle must have at least one passenger 16 years of age or older to walk approximately 10 feet in front of the vehicle in the SEC. The escort will look for chicks in the road and stop the vehicle if either a chick is observed or one of the monitors (Brood or Vehicle monitor) requires the vehicle to stop. All self- escorted vehicles must maintain a safe distance of at least 15 feet from the vehicle in front.
6. All OSV operators participating in the self-escort program are required to have read and signed the *HCP Guide and Procedures* and watched the TOO video regarding the HCP self-escort program. Signed proof that the operator of the vehicle has read and understands the rules and procedures must always be carried in the vehicle.
7. In order to allow unimpeded chick passage across the OSV corridor when vehicles are not present vehicle “ruts” will be raked, as needed, at the end of the afternoon self-escort period. Mechanized raking will be utilized only with a trained observer walking in front of the vehicle to search for chicks.
8. If at any time during the escorting process, the shorebird monitor(s) lose visual contact with one or more chicks, the vehicles will be allowed to continue on their way and the period between the self-escort time frame (or after the afternoon session) will be used to determine the presence of the chick(s) in the area or absence of chicks in the corridor. Shorebird monitors will document in the daily report the approximate time that visual contact with the chick(s) was lost and efforts made to relocate it.
9. Each Brood Monitor will keep a separate daily observation log and record the activity of the adults and the chicks specific to foraging and territorial behavior. Monitoring will also include recommending the need for increased signage or fencing to afford greater protection to the HCP brood. The monitoring logs will be reviewed daily by the North Beach Manager or designee.
10. The Director of Health and Natural Resources, Director of Coastal Resources, North Beach Manager, and each individual shorebird monitor will have the independent authority to temporarily close the trail at any time for any reason. For example, if at any time a shorebird monitor determines that chicks have approached within 100 feet of the SEC, the monitor will immediately notify the Vehicle Monitors to temporarily halt traffic and allow the chicks to cross the corridor and/or move >100 feet from it. The OSV trail will not reopen until Director of DNR or designee determines that is safe

to do so. Monitors will document in the daily report the approximate time that the OSV trail was closed and the duration of the closure.

11. Vehicle and Brood Monitors will be additional staff as necessary. They will have a minimum of a high school education, have a valid driver's license, familiar with safely operating a 4-wheel drive OSV on the beach, have clear written communication skills, and either possess or the ability to learn shorebird identification and behavior. All monitors shall receive specific training in the HCP protocols at least two weeks prior to the initiation of their duties.

Contingency Plan

Personnel availability

Two monitors (Vehicle Monitor and Brood Monitor) will be on-site to locate and observe PIPL chicks and oversee the compliance of the self-escorted vehicles. If one of these employees is not available then either another shorebird monitor, vehicle monitor, North Beach Manager, Director of Coastal Resources, or designee shall assume this duty.

Inclement weather

The Director of DNR, North Beach Manager, or designee, will monitor weather forecasts daily. If a storm warning is predicted by the National Weather Service, or any other weather warning that could jeopardize public safety within a 24-hour period, the OSV trail shall be closed for the duration of the hazard or the start time may be moved one hour later or earlier. The OSV trail may not reopen until the Director of DNR, North Beach Manager, or designee has given the all clear. It shall be presented in writing prior to purchasing an OSV sticker that users shall use the beach at their own risk. OSV sticker holders shall be informed in writing that a "shelter in place" policy will go into effect until the inclement weather has passed or scheduled exiting escorts have begun.

Medical or family emergencies

OSV sticker holders shall be advised in writing at the time of OSV sticker application, via affidavit, that egress from the beach outside of the self-escort windows shall be strictly prohibited (see permit Rules and Regulations for information to report an emergency). In the event of a life-threatening medical emergency, the staff of the Nauset Beach Administration Building and/or emergency responders should be notified. Essential vehicles will assist in escorting the vehicle off the beach.

Violations

Any violations of the protocol will not be tolerated. A zero-based tolerance policy will be fully enforced. Monitors and Beach Rangers will be in constant contact to ensure enforcement. Beach Rangers will be authorized to revoke OSV stickers and eject the violators from the beach immediately. Violators of the escort protocols shall be subject to OSV sticker revocation and shall have their rights to operate an OSV on Nauset Beach suspended immediately for a period of one year from the date of the violation.

Self-Escort Program Reporting

Chick numbers, chick locations, and travel corridor locations/dimensions shall be provided to the North Beach Manager, Dir. Of DNR or designee by the shorebird monitor daily, prior to commencing OSV escorts. A map showing the locations shall be posted at the Nauset Beach “Buggy Booth” and shall be updated as necessary. As required by the HCP, a daily log will be kept to document staffing, frequency of brood monitoring, and compliance with OSV escorting procedures, and will be made available to DFW upon request. Any violations, incidents or accidents associated with the vehicle escort program, including take of a chick(s) shall be immediately reported to DFW and USFWS staff. In the event of an alleged incident related to the escort program, the Director of DNR, North Beach Manager, or designee, in coordination with a shorebird monitor, shall cooperate with and assist Town, State, and Federal officials with the investigation of the incident. Depending on the nature of the incident, the TOC, DFW, and US Fish & Wildlife Service (USFWS) reserve the right to suspend all vehicle escorts for such time as they deem appropriate.

Each week, a summary report will be submitted to DFW. The report will include; (1) daily vehicle trip count; (2) for each affected brood, daily observations of chick numbers and behavior including a daily sketch map of the observed range of the brood on the beach; (3) weekly tally and description of any rules violations and enforcement actions taken; (4) weekly tally and description of all observations of broods crossing or approaching <100 feet from the vehicle corridor, both during the OSV travel windows and any other such observations during routine monitoring; (5) any other notes, observations, or recommendations relevant to operating the escorting program.

By October 31 of each calendar year, the TOC will submit an escort monitoring report to DFW. The report shall describe, at minimum, the estimated age of chicks in each brood when self-escort was initiated, fledging success, escorting dates, number of broods, number of chicks present during self-escorting on each date, estimated daily chick survival based on daily brood counts, number of vehicle passages, and any documented “take” of chicks resulting from the

vehicle escort program. The report will also contain recommendations for improving the efficiency and/or effectiveness of the escort program in the future.

5.4 OSV Use in Vicinity of Least Terns

The TOC is proposing to employ many of the same protective elements to allow OSV access by LETE chicks as has been proposed for protecting PIPL chicks. The protective protocols would be consistent with what has been successfully implemented by the TOC on North Beach in 2015 and 2016 as outlined in the Conservation and Management Plans (CMP) approved by DFW for each respective year. The areal extent of where LETE colonies may be established is difficult to predict. Based on recent nesting seasons, small (less than 20 nests each year) LETE colonies have been established in two general areas of North Beach: one located in the northern portion near the town line, and one in the southern portion. Total numbers of breeding pairs are difficult to estimate but the total number of LETEs comprising the north and south colonies was less than 50 birds each location.

The TOC would establish a self-escort corridor (SEC) by an established LETE colony, if feasible, based on colony size and location to enable limited continued OSV access. Based on past LETE nesting habits the Town is requesting no more than 2 SECs in 2020. In prior years two OSV SECs have been established (one by the north colony and one by the south colony) with a maximum length of 1,000 feet by 15 feet width each. This would represent a total impact area of approximately 0.7 acres. The TOC shall notify DFW of its intent to implement OSV access through LETE colonies at least 7 days prior to initiation. The location, approximate numbers of LETE adults, nests, eggs, and chicks as well as maps depicting the layout of the proposed SEC(s) and associated No Stopping and Parking areas will be provided to DFW for their concurrence and guidance. If additional SECs or a change in dimension would be required based on conditions, review and approval will be sought from DFW prior to any implementation.

The procedures and protocols for providing OSV use in the vicinity of LETE chicks are consistent with the methodologies approved in previous CMPs as generally described below:

1. **Least Tern Monitoring** – Continued regular, intensive shorebird monitoring to verify nest status and the number and distribution of chicks utilizing existing bird monitor resources.
 - a. Baseline survey – Within 5 days prior to initiation of the activities authorized by the CMP, qualified shorebird monitors will conduct a thorough survey to reassess the number and location of active least tern nests and unfledged chicks. This information, including GPS coordinates of active nests and approximate

coordinates of unfledged chicks, will be provided to the DFW, to assist DFW in assessing the number of unfledged chicks present. Less intensive surveys may be required to reassess the number and distribution of unfledged LETÉ chicks to refine the locations of self-escort and no parking zones as described below. Results of these surveys and resulting changes will be provided promptly to DFW.

- b. Observation map and notes – While unfledged LETÉ chicks are present, a qualified shorebird monitor will roughly map (by hand) the approximate locations of active least tern nests and observations of chicks or suspected chick locations based on parental feeding behavior. Observations will be made on an ad hoc basis, generally from outside of the symbolic fencing, and are not expected to be comprehensive, in part because of the need to avoid excessive disturbance by repeated entry into symbolically fenced areas. The Town will develop a base map or maps including key landmarks (e.g. fence or sign posts, footpaths, natural features) to facilitate accurate mapping. During days when the vehicle corridor is open, qualified shorebird monitors will keep daily logs to record field observations about chick movement, predation, chick mortality, LETÉ interactions with recreational beach users, the presence of chicks outside of symbolically fenced areas, and other observations. During periods when the vehicle corridor is closed, qualified shorebird monitors will make and record regular field observations about chick movement, predation, chick mortality, the presence of chicks outside of symbolically fenced areas, and other observations. Field observation shall be made at least once within 48 hours prior to each anticipated vehicle access opening period. In 2016, surveys were conducted on Wednesday or Thursday for an anticipated Friday to Sunday vehicle access period. Field notes will be made available to DFW upon request.
 - c. Estimate of unfledged LETÉ chicks present – Although challenging, the qualified shorebird monitors will continue to estimate the number of active nests, number of chicks present, as well as counts of the number of successfully fledged chicks. The TOC will report these estimates to DFW weekly (with map showing nests and areas of unfledged chick activity) until such time as chicks are no longer present.
2. **Symbolic Fencing** – Symbolic fencing for the identified LETÉ nest/colony area will be located to provide buffer between human activities and known nests/chicks based on the *Guidelines*, LETÉ nesting activity, and physical configuration of the beach. The TOC will continue to make reasonable adjustments to the symbolic fencing, consistent with the *Guidelines*, to account for changes in LETÉ distribution.
3. **No Parking Areas** – No Stopping or Parking areas with appropriate signage will be established as necessary along any SEC and within a sufficient buffer away from an established LETÉ colony. The locations of the no parking areas will be adjusted on an as-needed basis, based on daily least tern monitoring, to ensure a minimum setback of 100

yards from parking areas to unfledged least tern chicks is always maintained. Because least tern chicks are difficult to monitor, the no parking area boundary should be set conservatively based on cumulative observations of chick activity areas.

4. **Vehicle Self-escorting** – SECs will be established based on observed LETE nesting activity. Opening of the self-escort area will be preceded by a review of the area for the presence of chicks by a qualified shorebird monitor(s). Conditions for the “self-escort” will require that a qualified passenger (16 years of age or older) walk in front of the vehicle as it traverses through the escort area at no more than 5 mph. Signage for the escort area will be consistent with the state approved signage which has been used in the TOC in the past. The SEC will be adjusted on an as-needed basis, based on daily LETE monitoring, to ensure that the SEC extends at least 200 feet laterally, down the beach, past the nearest unfledged chick. Because LETE chicks are difficult to monitor, the corridor should be set conservatively based on cumulative observations of chick activity areas.

5. **Hours of Operation**

Days of the week and hours of operation will be based on the extent and population size of the LETE colony(s). The TOC will review the proposed days and hours of operation with the DFW prior to initiation of the self-escort program.

6. **Vehicle Traffic and Quantity**- Two-way traffic would be allowed in the SEC to accommodate those who drive to the southern point area and choose not to stay. For 2020 the Town is requesting a maximum of 75 vehicles per day. The number of vehicles allowed through the SEC will be reviewed with DFW prior to initiation of the self-escort program. This number may be adjusted, following consultation and approval from DFW, based on changes in the number and location of LETE nests and unfledged chicks, and changes in beach conditions (topography, tides, etc.) that impact the area available for parking of OSV's. DFW will be notified prior to any such changes.
7. **Interim Reporting** – The TOC shall provide a weekly interim report to DFW including the map of chick and nest observations, an accounting of any changes to the no parking and escort zones based on chick distribution and movements, a tally of the number of vehicle trips per day, a tally of violations, if any, and other noteworthy observations or management concerns. If necessary, the TOC will provide additional email updates to DFW on the status of nests, chicks, and overall beach conditions that may affect components of this program (see Least Tern Monitoring, above).
8. **Changes** – The TOC shall request from DFW any necessary adjustments to the program in response to changed conditions, i.e. contraction of no-parking areas or changes to the self-escort hours, etc. Any changes must be approved in writing in advance by DFW.

Reasonable adjustments to symbolic fencing to account for changes in LETS distribution or expansion of no-parking areas can be made without advance approval by DFW, as described above; however, DFW shall be notified of such changes within 24 hours.

9. **Enforcement** – Monitors will be on-site during the daily self-escort travel period, unless otherwise approved in writing by DFW.
 - a. A Vehicle Monitor will be positioned at the beginning of the SEC. Each OSV user entering the beach will check in before self-escorting, and the monitor will record license plate number and OSV permit type and number. The monitor will keep a tally of vehicles entering and exiting and provide the daily tally to the TOC Beach Ranger to aid effective enforcement of OSV use restrictions outside of the self-escorting periods (e.g. license plate numbers are needed to detect the entry of unauthorized OSV's outside of the self-escort windows).
 - b. Bird Monitors will monitor LETS chick movements throughout the LETS colony(s) (one each location), including but not limited to the specific SEC. If one brood of PPL chicks are also present, then two bird monitors shall be present; one to monitor movement of the LETS chicks and the other for PPL chicks. The Bird Monitors will exercise discretion in spending more time monitoring the movement of chicks located near travel corridors or the edge of the symbolic fencing. Monitoring to be conducted with a preference for viewing from a distance with binoculars or viewing scope to minimize repeated encroachment into, and disturbance of, the colonies.
 - c. Either monitor will have the authority to temporarily stop OSVs if chicks enter, or approach within 50 feet of the SEC, or to re-route vehicles and readjust self-escort zone and no parking areas, as described above, if chicks move outside of the symbolic fencing and into OSV use areas elsewhere on the beach.
 - d. The TOC provides enforcement patrols on North Beach. These patrols will be provided information on vehicle counts, etc. as discussed above, daily. TOC will keep logs documenting all visits to the site, and any issues or incidents, said logs to be made available to DFW upon request.
 - e. The existing joint Orleans/Chatham Nauset Beach Regulations, adopted by the Chatham Conservation Commission, remain in effect and address issues such as dogs, etc.
 - i. An informational flyer will be provided to all vehicles entering the SEC providing details on SEC hours, procedures, and contact information for "after hours" emergencies.

6.0 BUDGET

The budget covering management and staff associated with Endangered Species management and HCP implementation is outlined below:

FY2020 Budget

Staffing	\$124,225 (includes Assistant Cons. Agent/NB Manager [50%], Bird Monitors, HCP Monitors)
Expenses	\$ 25,000 (HCP mitigation funding, radios, signage, fencing, etc.)

FY2021 Budget Proposed

Staffing	\$118,64* (includes NB/Conservation Lands Manager [50%], Bird Monitors, HCP Monitors)
Expenses	\$ 25,000 (HCP mitigation funding, radios, signage, fencing, etc.)

*reduction reflects more accurate assessment of actual needs (hours)

7.0 MITIGATION PLAN

The TOC is proposing to provide funding for two (2) piping plover broods, nest or territory exposed to the covered activity to DFW to implement predator management, educational outreach and increased law enforcement off-site, as described in the HCP. To fund the mitigation, in advance of carrying out covered activities, the TOC will establish an escrow agreement with DFW as per the HCP. Prior to the implementation of Covered Activities for potential disturbance to PIPLs in 2020 the TOC will deposit \$11,600 (i.e. two takes) into said escrow account in accordance with the schedule set forth in the Escrow Agreement. For 2020 it is understood that \$11,600 is adequate to cover mitigation for both LETS and two (2) PIPL “takes”. Future escrow amounts will be determined in consultation with DFW considering the number of permitted “takes”, covered activities, and mitigation implementation costs.

As explained in Chapter 4 of the DFW Habitat Conservation Plan for Piping Plovers, June 2016, plan participants have the choice of mitigating the impacts of covered activities in one of two ways. Plan participants can provide funding for the DFW to implement mitigation (including predator management, educational outreach or increased law enforcement) or implement mitigation themselves. A combination of these two approaches can also be selected but would need to be explained in the mitigation plan. If plan participants elect to implement their own mitigation on-site, the mitigation plan must include the following.

- a. Detailed description of the proposed mitigation activities.
- b. A description of how the proposed mitigation activities will benefit piping plovers, including a quantitative assessment for predator management, and other mitigation activities if possible. In cases where a quantitative assessment is not possible a qualitative assessment must be provided.

- c. A proposed monitoring plan for the mitigation activities, including specific criteria to assess effectiveness.
- d. Itemization of costs for implementing the mitigation program. As with the IAMP, a plan participant must provide evidence that it has secured mitigation funding commensurate with its proposed mitigation budget. If the timing of plan participant budget cycles does not allow for approval of an annual budget prior to submittal of this plan, a budget proposal to be subsequently approved prior to undertaking covered activities will suffice. But any COI issued will not be effective in any given year until evidence that the annual mitigation funding has been assured and DFW confirms that take is authorized.

Chatham will provide funding to DFW for off-site mitigation commensurate with the number of takes (\$5,800/take). Chatham's 2020-23 COI is proposing two takes for a yearly total of \$11,600.

For the past three years, Chatham has implemented successful on-site predator mitigation as described in Appendix (6). This program of on-site mitigation has virtually eliminated mammalian predation of incubating PIPL eggs, thus substantially increasing the chances of chick hatching and fledging. As detailed in the 2019 HCP annual report, the cost of operating the HCP was \$17,594 for a program that operated for 7 days. These costs would have been substantially higher without the assistance of TOO in providing staff to assist in monitoring a brood that hatched in Orleans but migrated into Chatham. The total cost must be viewed as excessive in relation to the limited use by OSV (157 vehicles).

Therefore, Chatham requests that its ongoing non-lethal predator control program be credited as on-site predator mitigation in the 2020 to 2023 and that Chatham receive a reduction in its annual off-site mitigation fee.

Appendix 1

North Beach Order of Conditions



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

Chatham

City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: Chatham
Conservation Commission

2. This issuance is for
(check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

a. First Name Town of Chatham b. Last Name _____
c. Organization _____
d. Mailing Address 549 Main Street
Chatham MA 02633
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

a. First Name _____ b. Last Name _____
c. Organization _____
d. Mailing Address _____
e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location:

Chatham North Beach Chatham
a. Street Address b. City/Town
c. Assessors Map/Plat Number Multiple; see attached sheet
d. Parcel/Lot Number

Latitude and Longitude, if known:

d m s d m s
d. Latitude e. Longitude

Chatham North Beach
Property Contact List

- 1) Parcel Tract #: 41-8000; 41-8002
Owner: Town of Chatham, 549 Main Street, Chatham, MA 02633
- 2) Parcel Tract #: 41-8001; 41-8131; 41-8132; 41-8135
Owner: United States Of America, National Seashore Superintendent, 99 Marconi Site Rd. Wellfleet, MA 02667
- 3) Parcel Tract #: 41-8147
Owner: North Beach Nominee Trust, William R Hammatt, Trustee, PO Box 649, Chatham, MA 02633
- 4) Parcel Tract #: 41-8133
Owner: Brooks B. Thayer, Trustee, PO Box 1377, Orleans, MA 02653
- 5) Parcel Tract #: 41-8134
Owner: AMMRC Realty Trust, John S. Kelley, Trustee, 58 Bridge Road Orleans, MA 02653
- 6) Parcel Tract #: 41-8136
Owner: NB Nominee Trust II, Claire Shea Trustee, PO Box 777, Dennisport, MA 02639
- 7) Parcel Tract #: 41-8137
Owner: Colin M Fuller MD Family Trust, Roy Coppedge, 1625 Painted Rock Trail, Reno, NV 89502
- 8) Parcel Tract #: 41-8138
Owner: Kenneth F. Eldredge, Atwood/Baker/Backlash/RT/Et Al, 507 Orleans Rd. Rt 28, Orleans, MA 02653
- 9) Parcel Tract #: 41-8146
Owner: James E & Robbin A Fitzgerald, PO Box 129, Norwell, MA 02061

Assessed Properties Map

408000

408000

408000

408000

408001

408002

418131

418132

418133

418134

418135

418136

418137

418138

418139

418140

418141

418142

418143

418144

418145

418146

418147

418148

418149

418150

418120

418121

418122

418123

418124

418125

418126

418127

418128

418129

418130

418131

418132

418133

418134

418135

Atlantic Ocean



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Barnstable

a. County

b. Certificate Number (if registered land)

c. Book

d. Page

7. Dates: March 8, 2016 March 23, 2016 April 13, 2016
a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Assessed Properties Map and Wetland Resource Map-North Beach & NHESP 2012 Map

a. Plan Title

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

e. Scale

Project Narrative- "Offroad Vehicle (ORV) and Beach Management
Plan for Chatham's North Beach"

3/7/2016

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

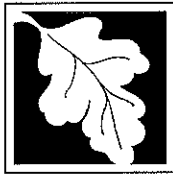
Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☒ Bank	<u>70</u> a. linear feet	<u>70</u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. ☐ Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. ☐ Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. ☐ Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. ☐ Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. ☐ Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☒ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☒ Coastal Beaches	No alteration	No alteration	cu yd c. nourishment	cu yd d. nourishment
14. ☒ Coastal Dunes	No Alteration	No alteration	cu yd c. nourishment	cu yd d. nourishment
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☒ Land Subject to Coastal Storm Flowage	No alteration	No alteration		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on April 13, 2019 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

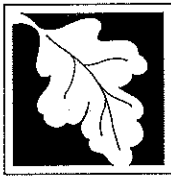
Chatham

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number SE 10-3127 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) ☐ is subject to the Massachusetts Stormwater Standards
 - (2) ☒ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

Chatham

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
SE 10-3127
MassDEP File #

eDEP Transaction #
Chatham
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

Chatham

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The _____ hereby finds (check one that applies):
Conservation Commission

a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

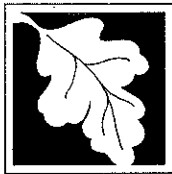
1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See Attached Special Conditions pgs1-17



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

Chatham

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

April 13, 2016

1. Date of Issuance

Please indicate the number of members who will sign this form.

5 of 7

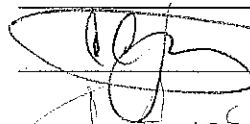
This Order must be signed by a majority of the Conservation Commission.

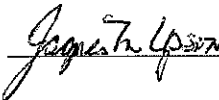
2. Number of Signers

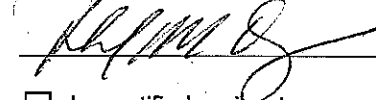
The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:









☒ by hand delivery on

☐ by certified mail, return receipt requested, on

April 13, 2016

Date

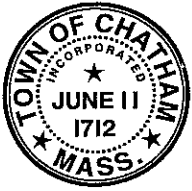
Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



SE 10-3127
CWP16-075N

File Number

TOWN OF CHATHAM CONSERVATION COMMISSION

Findings on Application filed under the
Chatham Wetlands Protection Bylaw, Chapter 272

Issuance Date

APPLICANT: Town of Chatham

ADDRESS: 549 Main Street

Chatham MA 02633

OWNER: Multiple parcels-see attached sheet

(If other than applicant)

ADDRESS: _____

April 13, 2016

LOCATION of WORK: Chatham North Beach Assessors' Map _____ Parcel Various

Property recorded at the Registry of Deeds or Land Court in Barnstable County:

certificate (if registered land)

plan book

page

After public hearing in accordance with the Open Meeting Law (MGL Ch 39, s23B) closed on
March 23, 2016, the Chatham Conservation Commission, in accordance
with the Town of Chatham Wetlands Protection Bylaw (Ch 272) finds:

☒ **Permit is granted;**
work may proceed subject to the attached Special Conditions

☐ **Permit is denied;**
see attached explanation

Chatham Conservation Commission:

M. Gompertz

James W. Upson
R. H. M. G.

[Signature]
[Signature]

signed by 5 of 7 Commissioners

Off Road Vehicle (ORV) and Beach Management Plan for Chatham's North Beach

FINDINGS

A. THE ACTIVITY

The Town of Chatham seeks a permit under provisions of the State Wetland Protection Act M.G.L. c. 131 §40 and the Town of Chatham Wetlands Protection Bylaw § 272, hereafter "CWPB", the Chatham Wetland Protection Regulations ("CWPR") and the Regulations promulgated thereunder, for continued operation of Off Road Vehicles (ORVs) on the Chatham portion of Nauset Beach known as North Beach, a Barrier Beach as defined by 310 CMR 10.29 and CWBR 2.04. Although the permit requested is narrowly defined to ORV use, where ORV use/management issues overlap pedestrian and boating uses, it is herein recognized by the Chatham Department of Natural Resources (DNR) and the Chatham Conservation Commission (Commission) that these uses will be controlled in a manner consistent with permitting requirements for the ORV use. Management will include such activities, among others, as signage, fencing, temporary closures, etc. Management consistency is established in accordance with the Massachusetts Barrier Beach Management Guidelines (1994), Guidelines for Managing Recreational Use of Beaches to Protect piping plovers and Least terns and their Habitats as defined by 310 CMR 10.37, and Estimated Habitats of Rare Wildlife (for coastal wetlands).

The area of North Beach, as shown in Figure 1, starts at the Orleans/Chatham town line and continues in a southerly direction terminating at the inlet formed in 2007. The total area as of 2015 is approximately 150+/- acres. It is understood that the total area and form of North Beach will change with time due to the dynamic nature of the system resulting in ongoing accretion and erosion of the barrier beach.

The Commission so finds that the area in which the proposed activity will take place is a Barrier Beach (310 CMR 10.29, CWPR 2.04), a resource area which itself contains the following wetland resource areas: Land Subject to Coastal Storm Flowage (310 CMR 10.02(1)(d), CWPR 2.10), Land Under the Ocean (310 CMR 10.25, CWPR 2.09), Coastal Beaches (310 CMR 10.27, CWPR 2.02), Coastal Dunes (310 CMR 10.28, CWPR 2.03), Salt Marshes (310 CMR 10.32, CWPR 2.06) and Estimated Habitats of Rare Wildlife (310 CMR 10.37).

For the above cited regulations, provided that where the proposed activity involves alteration of a resource area, the issuing authority shall presume the resource area to be significant to the interests as noted in the regulations governing that specific area, unless that presumption is overcome by a clear showing otherwise, and the Commission makes a written finding to that effect.

B. PROJECT COMPLIANCE WITH M.G.L. c. 131 § 40 PERFORMANCE STANDARDS

Project compliance with M.G.L., c.131 § 40 performance standards as cited in the attached regulations: Coastal Beaches, 310 CMR 10.27 and CWPR 2.02; Coastal Dunes, 310 CMR 10.28 and CWPR 2.03; Barrier Beaches, 310 CM R 10.19 and CWPR 2.04; and Estimated Rare Habitat of Rare Wildlife, 310 CMR 10.37.

The proposed project calls for the following activities, designed to prevent impacts of ORV usage upon the resource areas of North Beach cited above:

1. Maintenance of two primary north to south oriented ORV corridors on North Beach. One corridor located on the outer beach seaward (east) of the primary dune and the other immediately west of the primary dune referred to as the Inner Trail. Two access routes are currently maintained (Exits 6 and 7) providing access from the Inner Trail to the outer beach corridor.
2. Placement of signage, wooden barrier posts, and stakes with twine, (symbolic fencing) to be located as necessary to confine ORV traffic to the defined access ways and vehicle corridors, maintained by hand, and spaced an average of 50 feet apart; signage to be attached to posts and/or fencing where possible; such posts to be placed in such a manner as not to disturb vegetative cover;
3. Placement of symbolic fencing and/or predator exclosures, as necessary, around potential nesting habitat, actual nesting, and foraging sites;
4. Placement of fencing barriers for access closures and/or openings, as deemed necessary for tern and plover habitat, nesting, and foraging protection. The Commission finds that the above activities, as controlled by the conditions herein, meet the performance standards set forth in 310 CMR 10.27(3), (6), and (7); 10.28(3), (5), and (6); 10.29(3) and (4). See "Rare Species" for compliance with Coastal Beaches 310 CMR 10.27.
5. With regard to the primary activity proposed, ORV usage itself, the Commission finds the following:
 - a. Coastal Dunes: 310 CMR 10.28 and CWPR 2.03
 - i. An evaluation of these areas shows them to be sensitive to environmental concerns with respect to sinuosity and topography. The existing layout is not believed to promote wind tunneling, erosion, or wave overwash. A field inspection will take place annually prior to April 1, in consultation with Massachusetts Division of Marine Fisheries & Wildlife Natural Heritage staff,

Chatham Conservation Agent, and representatives from the Chatham DNR and Coastal Resources Department to evaluate ORV access and egress trail locations, ORV trails, and Coastal Dunes and piping plover and least tern habitat in order to fence off areas which are sensitive and may be potential nesting habitat. The fencing and layout of trail corridors will be in accordance with the recommended management measures as defined by the Massachusetts Barrier Beach Guide for Off Road Vehicle Driving Corridors (see p. 85-89). Therefore, the Commission finds that based on the history and references of record, maintenance of the existing ORV trail routes are appropriate, and meets the performance standards set forth in 310 CMR 10.28, CWPR 2.02 as follows:

310 CMR 10.28(3)(b) and CWPR 2.03(3)(a)(2) Use of existing access and egress corridors through the dunes will be restricted to corridors already without vegetation due to previous ORV use. No further de-vegetation and consequent destabilization should occur given appropriate posting as required in the Special Conditions.

310 CMR 10.28(3)(c) and CWPR 2.03(3)(a)(3) It is recognized that the ongoing use of an ORV corridor may cause limited modification to small dune areas. However, the Commission finds that due to the orientation, location, restriction in size, and proposed maintenance activities, no significant increase from storm or flood damage is anticipated.

310 CMR 10.28(3)(d) and CWPR 2.03(3)(a)(4) No interference with the landward movement of Coastal Dunes will occur as a result of the Special Conditions that provide for managing ORV traffic on the existing ORV trails of Coastal Dunes, with the possible exception of temporary alternate routes, provided in response to plover and tern protection needs, will be permitted.

310 CMR 10.28(3)(f) and CWPR 2.03(3)(a)(7) No interference with mapped or otherwise identified bird nesting habitat (and rare and endangered species habitat) will occur as a result of the Special Conditions that provide for managing ORV traffic on the existing ORV trails of Coastal Dunes, with the possible exception of temporary alternate routes, provided in response to plover and tern protection needs, will be permitted.

ii. Ocean Side North/South Corridor

Given the Special Conditions requiring that this corridor be a minimum of 15 feet seaward of the toe of the Coastal Dune, no change in vegetation should

occur, and the performance standards set forth in 310 CMR 10.28 (3)(b) and (c), CWPR 2.03(1)(b)&(c) should be met. Furthermore, the general location of the ocean side ORV corridor is typically westerly of the normally occurring wrack line. Corridors will also be laid out to minimize any impacts on wrack lines and fencing will be moved periodically to minimize any driving on wrack lines which provide food for nesting and foraging shorebirds.

b. Coastal Beaches: 310 CMR 10.27(3) & (7), CWPR 2.02(3)

The Commission recognizes that North Beach is highly dynamic given the regional climatic regime and geomorphological characteristics of the Nauset Beach system. The continued use of the existing ORV corridors may cause temporary limited impact to the profile (form) of the beach area; however, these minor changes will not result in increasing the potential for wind and wave erosion.

The Commission recognizes that sediment disturbed by the passage of ORVs is not lost from the Beach resource area, and that significant sediment movement is not attributable to ORV use. Therefore, it finds ORV use as proposed will not result in a significant decrease to beach volume, and that significant changes in beach volume are more likely influenced by coastal processes associated with climatic and/or meteorological factors (also see Rare Species 310 CMR 10.27(3) & (7), CWPR 2.02(3)).

C. PROJECT COMPLIANCE WITH 310 CMR 10.00 AND CWPR PERFORMANCE STANDARDS AND REGULATIONS

- 1) The Commission finds that special provisions of the North Beach Off-Road Vehicle and Management Plan will prevent the proposed activity from having an adverse effect on identified sites of rare or endangered species and preserve beach resource areas.
- 2) The Commission finds that a variance from the Chatham Wetlands Protection Regulations can be granted as the project is necessary to accommodate an overriding public interest (CWPR 4.03(1)(d)) for the following resource areas -- Barrier Beaches (CWPR 2.04(3)), Coastal Beaches and Tidal Flats (CWPR 2.02(3)(c)), Coastal Dunes (CWPR 2.03(c)), Coastal Banks (CWPR 2.05(3)(a)(5)), and Salt Marshes (CWPR 2.06(3)(b)).
- 3) The Commission finds that the proposed activities will not have an adverse effect on the Coastal Beaches or Coastal Dunes as required by 310 CMR 10.27(3) and 310 CMR 20.28(3)(a-f).

- 4) The Commission finds that the existing public roadway (i.e. trail) may be maintained and improved in a very limited manner (310 CMR 10.53(3)(f)).
- 5) The Commission finds that "certain portions of Bordering Land Subject to Flooding are also likely to be significant to the protection of wildlife habitat. These include all areas within the 10 year floodplain or within 100 feet of the bank or bordering vegetated wetland within the 100 year floodplain, and vernal pool habitat, except for those portions of which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated . . . and similar areas lawfully existing on November 1, 1987 and maintained as such since that time." The Commission finds that historic and continuous use of the ORV trails qualifies them for the exception above and, thus can be permitted under 310 CMR 10.57(1)(a)3.

APPROVE/DENY

The Commission finds that this project can be permitted with the following special conditions.

SPECIAL CONDITIONS

A. PREAMBLE

The Commission, in setting forth the following Special Conditions, intends that these conditions be flexible enough to reflect the needs of the changing environment they are designed to protect. The Nauset Barrier Beach system has been shown to be extremely dynamic over time. Significant changes in geomorphic form and wildlife habitat have occurred both prior to and during recreational uses of this resource area. The challenge for this Commission is to manage competing uses of this Barrier Beach system under the provisions of both the Massachusetts Wetlands Protection Act, M.G.L. C. 131 § 40 and the Town of Chatham Wetlands Protection Bylaw, Chapter 272 of the Code of the Town of Chatham.

These Conditions are designed to:

- protect Coastal Resource areas and identify wetland interests for the North Beach barrier beach system;
- allow for the historic, ongoing public recreational use of North Beach including pedestrian, ORV, and boat access;
- allow for access to private property on North Beach;

- require greater restrictions on ORV users with respect to environmental education, scheduled and unscheduled temporary closures of access routes, etc;
- require continued management of the barrier beach system resource area to include hiring of specially qualified personnel to conduct detailed monitoring of and reporting on estimated and priority habitat areas for federally and state listed threatened and endangered shorebirds, which will serve as basis for modifying permitted management procedures/policies; and
- require interdisciplinary and agency cooperation which will result in sensitive, flexible, and responsive management of the barrier beach system.

B. RULES AND REGULATIONS

The Commission is responsible for implementing and enforcing the Rules and Regulations for ORV use on North Beach. These regulations shall be periodically reviewed as necessary by the Commission and, at a minimum, require the following:

- a) Coordination with the Town of Orleans regarding the maximum limit of ORVs permitted on the beach (south of the Orleans Nauset Beach parking lot) at any one time. This number is determined by the Town of Orleans Natural Resources Manager, with input from Chatham's DNR, after taking into consideration general beach and nesting conditions. Based on management since the 2007 breach, the maximum number of ORVs permitted on the beach at any one time shall be 375. This number shall include those vehicles passing through Orleans to Chatham's portion of the beach but shall not include ORVs used to access the 12 private camps and private homes/cottages on Pochet Island in Orleans, as they have their own dedicated parking areas.
- b) Posting of temporary closures due to tide conditions or nesting considerations.
- c) Driving on the Pleasant Bay (west) side, along the shoreline, is prohibited.
- d) Driving on the low beach (below the high tide line) may be permitted during the winter season between the first Friday in November to the Friday before Memorial Day, and at any additional specially designated times and places to avoid disturbance of nesting birds.
- e) Parking is permitted seaward of a 37' corridor consisting of 15' from the toe of the dune, plus 12' for the vehicle track, plus a 10' margin between the vehicle track and parking area.
- f) Closure of the beach between the hours of 11 PM and 6 AM except for active fishing and fowling and self-contained vehicles. Driving outside of designated ORV corridors is prohibited.

- g) In posted areas near bird nesting a speed limit of 5 mph shall be enforced.
- h) No jet ski launching or landing.
- i) No kite flying from March 15 to September 15.
- j) Pets shall only be allowed as designated by the Nauset Beach Rules and Regulations for ORVs. Rules and Regulations on pets shall be developed to maximize protection of nesting shorebirds and shorebird habitat.
- k) All ORV permittees must view an educational film/slide presentation prior to issuance and renewal of an ORV permit.
- l) Carriage of minimum required equipment, including but not limited to, tire size and pressure, shovel, tow rope, and jack support, as listed in the Nauset Beach Rules and Regulations.
- m) Any other conditions responsive to significant environmental changes and/or any conditions necessary to protect the North Beach barrier beach system, public health, safety, and welfare of the users and/or property owners.
- n) Fines and penalties may be invoked, as necessary, by the Commission.
- o) Walking between the bayside and the oceanside shall be prohibited in all but designated areas. No walking is to be allowed upon vegetated dunes, slopes or bare dune faces. No activity, i.e. sand sliding, dune jumping, or similar, is permitted at any time.

C. CLOSURE OF THE BAYSIDE (WEST) TO ORV TRAFFIC

Salt Marsh, tidal flats, and shellfish beds which adjoin the Pleasant Bay side of the beach are extremely sensitive to ORV use. Therefore, ORV use shall not be permitted in these resource areas other than via existing ORV access corridors. Where the existing access corridors terminate, so shall the ORV use. Resources being accessed from the end of these ORV corridors for fishing, fowling, or passive recreation shall be via foot travel only. Furthermore, the Department of Natural Resources shall install signage, as necessary, at these locations indicating no ORV use.

D. TEMPORARY ALTERNATIVE ROUTES:

The Town of Chatham has proposed that should the ORV corridor or ORV trail network be closed to protect shorebirds, alternate routes may be approved on a temporary basis. When considering a location of a temporary route, the route will be designed to provide greater protection for nesting shorebirds.

Establishment of temporary alternate routes could inhibit the landward migration of the Barrier Beach in violation of the performance standards and CMR 10.28 and 10.29, CWPR 2.02 and 2.04. However, the Commission recognizes that seasonal weather, storm and wind patterns, along with the textural components (coarse sand and gravel) of the back shore area, indicate it is unlikely that the limited seasonal use of proposed alternative routes would result in increasing potential for storm and flood damage in violation of 310 CMR 10.28(3)(c), CWBR 2.03(3)(c)&(d) or interfere with the landward movement of the Dunes of the Barrier Beach in violation of 310 CMR 10.28(3)(d) and 310 CMR 10.29(3) CWPR 2.04.

When the need to protect specific habitat, nesting, and/or foraging sites by closure of the access routes is necessary, the Town may propose temporary access routes. When specific temporary routes are proposed that are consistent with the performance standards cited herein, they will be done so after consultation with the Conservation Agent, Director of Natural Resources, any affected property owners and staff from the NHESP.

E. RARE SPECIES

In addition to Piping plovers and Least Terns that receive special protection measures under the Federal and State Endangered Species Acts, and have specific management requirements detailed herein, the Commission recognizes that North Beach is habitat for other migratory shorebirds and shorebirds. Use of this habitat may be for nesting, staging, resting, or feeding, either in the nesting season or during spring and fall migration periods. The performance standards and management guidelines documented herein for use in protecting Rare Species may be applied, as needed, to benefit other nesting shorebirds following consultation with Shorebird Monitors and at the recommendation of the Director of DNR.

1. Project Compliance with Performance Standards

The Commission finds that a potential to alter the resource area within part of the mapped habitat for State-listed rare species does exist. However, the Commission finds that the project as proposed and conditioned herein, inclusive of the hiring of a qualified habitat specialist and incorporation of temporary beach closure measures, should provide the protection necessary so that no effect will result within these specified habitat sites.

The presumption that the maintenance activities requested in order to continue ORV use of North Beach will impact specified habitat sites, is in the opinion of this Commission, been overcome and rebutted by the proposed Beach Management Plan and ongoing endangered species monitoring program. This

Management Plan will require, among other measures, observation and tracking of the plover and tern species to determine exact habitat sites, nest sites, foraging habitat areas for brood and adult plover and for the Least terns; temporary closures of the identified sites and routes to ORV and pedestrian use; and placement of fencing and predator barriers to afford habitat protection. The Commission, as the issuing authority, therefore finds that the project as proposed, and herein conditioned, should not result in an impact to specified habitat sites identified for plover and tern populations on North Beach. If, however, these conditions prove inadequate to protect the wetland interests defined in M.G.L. c. 131, § 40, or to ensure that there is no impact on rare species habitat as required by 310 CMR 10.37, the Commission reserves the right to impose the necessary additional conditions and restrictions upon the use of ORVs on North Beach.

2. Plover & Least Tern Monitoring

The DNR shall be responsible for the hiring of suitably qualified personnel to serve as Piping plover and Least Habitat Analysis Specialists, hereafter referred to as "Monitors," responsible to the Director of Natural Resources. The Monitors will be employed annually from April 1 through August 31 to provide technical information relative to the habitat and characteristics of the Piping Plover and Tern populations on North Beach, and will be responsible for alerting the Director of Natural Resources, or designated agents, as to the need to temporarily close or limit access to ORV traffic during plover nesting and fledgling activity periods. The Monitors will also be responsible for providing the Director of Natural Resources regular updates on plover and tern activity, as well as a season-end Census Data Report to be submitted to the Commonwealth.

3. Limitation of Access to Prime Nesting Habitat Areas

a. Vehicular Access

Parking in, or vehicular access through, identified Plover and Least Tern habitat as determined annually by the Monitors and coordinated with the Director of Natural Resources (or agent) shall be prohibited. This restriction will not necessarily prohibit vehicular access past (i.e. northward/southward) such areas if consistent with specific management guidelines.

b. Boater and Pedestrian Access

It has been the custom for visitors to the North Beach to arrive by boat. Generally, this takes place in the area of the barrier beach terminus.

Disturbance of threatened and endangered shorebirds by these pedestrians may be minimized by installing posts, signs, and fencing to indicate closed areas. Pedestrians will be encouraged to use the designated walkways thereby helping to protect dune form, vegetation, and birds.

Pedestrians may be excluded from existing washover areas in a manner which does not interfere with, or cause any effect to, the ability of such washover areas to serve as nesting habitat for shorebirds.

4. Piping Plovers

The beach management strategy for Piping Plovers includes devoting the highest priority to encouragement of the earliest arriving birds to nest as early and successfully as possible: i.e. minimizing human disturbance. The result, in addition to a high reproductive success rates, may be to minimize the period during which the beach is closed to ORV use.

Plover Biological Breeding Behavior Overview with Specific Dates for Breeding Behavior and Development of Nests, Eggs and Chicks

Spring Arrival (March 16 - April 30)

Piping Plovers return from their southern winter quarters to establish nesting territories along Cape Cod beaches in early spring. They then pair up and establish nest territory areas which they defend from intrusion by humans, other shorebirds, and predators. Once a pair has established a nest area the male will establish several scrapes and the female will eventually choose one to begin laying her clutch. Adults are very attentive to the nest and their chicks and will defend the nest, territory and chicks vigorously. If threatened, the plover will attempt to lead the predator away from the eggs and nest by feigning a broken wing which often results in their mortality by predators such as red fox, coyotes or black crows. Those three predators, in addition to Raptors, are the 3 main predators of plovers and terns on the Cape. Herring Gulls and Black Back Gulls are also predators of plovers, their eggs, and chicks. Overall productivity is determined by the number of breeding pairs, nest attempts and the number of chicks which fledge. They have the capability to re-nest after predation of eggs or chicks. However, if one chick survives to fledge they will not re-nest. Their re-nesting attempts can be 3-4 times prior to the 1st week of July. Chicks must be capable of 50' of sustained flight before they are considered fully fledged.

Management

Prior to the arrival of Piping Plovers, potential nesting areas shall be visited by a monitor to evaluate the natural changes that have occurred through the winter, and to identify areas of suitable nesting habitat. Suitable nesting habitat shall be posted, with endangered species nesting area signs, and delineated with symbolic fencing, prior to the arrival of plovers (no later than April 1) to reduce the potential disturbance of potential habitat by beachgoers for Plovers establishing their nesting territories. Vehicular access into or through posted areas shall be prohibited, though vehicles may pass by such areas at this time.

Laying and Incubation of Eggs (April 20 – August 10)

Normally the nest, scrape in the sand, is established at the toe of the dune, in a wash-over, along the spring tide wrack line, or in sparsely vegetated areas of dunes. The first of the sand-colored eggs is laid in late April and may contain a full clutch of 4 eggs a week after the first egg is laid. Then both adults incubate the eggs, alternating every few hours, for the next 28 days.

Management

Symbolic fencing shall be erected and repositioned as necessary around known nesting areas. Endangered species signs shall be placed outside the symbolically fenced area to add additional protection. Vehicular access within the symbolically fenced area shall be prohibited. When a monitor, in consultation with the Director of Natural Resources, determines a nest should be enclosed, a welded wire fence shall be placed around the nest, using a design recommended by the Massachusetts Division of Fisheries and Wildlife.

Before the eggs hatch, it is necessary to close the beach and to level ORV tire ruts to prevent an adverse effect on young hatchlings. This must be accomplished within a 28 day period after incubation commences. If ruts are to be leveled by natural processes, one week should be allowed, and the beach should be closed 21 days after the last egg is laid or the start of incubation. If ruts are to be leveled by hand, the beach could remain open a few additional days. When plover nests are found after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles should begin on a date determined by 1 of 3 scenarios:

- 1) If a plover nest found with a complete clutch is monitored twice per day, at dawn and dusk (before 0600 hrs. and after 1900 hrs.), vehicle use may continue until hatching begins. Nests should be monitored at dawn and dusk to minimize the time that hatching may go undetected if it occurs after dark.

Whenever possible, nests should be monitored from a distance with spotting scope or binoculars to minimize disturbance to incubating plovers.

2) If a plover nest is found with a complete clutch before May 22 (the earliest recorded hatch date for piping plovers in Massachusetts), and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin May 22.

3) If a plover nest is found with a complete clutch on or after May 22, and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin immediately.

Hatching Eggs and Movement of Young (May 20 - August 20)

Piping Plovers have precocial young, capable of walking and feeding themselves within 24 hours after hatching. The most vulnerable stage in their breeding cycle is the period when hatchlings are less than 10 days old, when they accompany the adults in their feeding forages. Normally, all eggs in a clutch hatch within a 24 hour period between the hatching of the first and last eggs. The hatchlings then accompany the adults to feed on small invertebrates along the wrack line, toe of the dunes, and inter-dunal blowouts. During their first week, the young usually do not wander more than 100 yards from their original nest site. They do not use the nest after the first couple of days from their hatch date, but depend on their cryptic coloration to blend in with their surroundings. If an adult Plover sounds an alarm note, the young either run for cover beneath one of the adults, or seek cover in vegetation, among stones, along the wrack line, or in a vehicle rut. Plover chicks over a week old may accompany the adults for greater distances, up to 1/4 mile, and spend increasingly more of their time foraging along the wrack line and out into the intertidal zone.

Management

Plover chicks on North Beach may be seen foraging with adults in areas anywhere between the Bay and the ocean intertidal zones in areas where there is little vegetation to obstruct their movements. Because they may go from the ocean side to the bay side within minutes, using existing blowouts and over wash areas, they are vulnerable to vehicular travel through these areas at all times. Additionally, the ruts left by vehicles are known to trap young chicks that subsequently may be run over by another vehicle using the same ruts, or they remain trapped in the rut, may die from exhaustion, or are found in the rut by a predator.

Therefore, when unfledged plover chicks are present, vehicles will be prohibited from all dune, beach, and intertidal habitat within 100 yards of either side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting 200 yard-wide area of protected habitat for plover chicks should extend from the ocean-side low water line to the bay-side low water line or to the farthest extent of dune habitat if no bay-side intertidal habitat exists. However, vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to plover chicks because of steep topography, dense vegetation, or other naturally-occurring obstacles. If unfledged plover chicks move outside the original 200 yard-wide area of protected habitat, then the boundaries of the protected area should be adjusted to provide at least a 100 yard buffer between chicks and vehicles. It is possible that in some areas 1 or more broods can close the entire beach to ORV traffic, if they are located at the beginning of an access area.

Fledging of the Young (June 28 - August 20)

Young plovers are capable of flying short distances within 30 days of their hatch date. Typically, these novice fliers remain with the adults, foraging in the same general area anywhere from a few days, to the rest of the summer. Adults may lead fledged young to more remote portions of neighboring beaches if they are disturbed by recreation or predation.

Management

Once the Monitor has determined that the young have fledged or left the beach, the area may be re-opened to vehicular traffic. If the chicks have not fledged by 35 days a "regulatory fledge" occurs and the beach may be opened.

5. Least Terns

North Beach has been home to Least Tern nesting colonies.

Spring Arrival (May 7 - July 10)

Least Terns return from their winter quarters in South America to establish nesting colonies ranging in size from a dozen pairs to over 1,000 pairs. Least Terns have used North Beach, and data over past years shows that colony size has varied annually.

Management

Prior to the arrival of Least Terns, potential nesting areas shall be visited by a Monitor to evaluate the natural changes that have occurred through the winter, and to identify areas of suitable nesting habitat. The suitable nesting habitat shall be posted, with endangered species nesting area signs, and delineated with symbolic fencing, prior to the arrival of the Terns to reduce the potential disturbance of this potential habitat by beachgoers. Vehicular access into or through posted areas shall be prohibited, though vehicles may pass by such areas at this time. On North Beach, it is likely that the protected area will have to be adjusted to encompass additional portions of the colony.

Laying and Incubation of Eggs (May 20 - August 5)

Most clutches of 2-3 eggs are laid in early June. The nests are simple scrapes in the sand or on bare stone between the wrack line and the toe of the dune, or in an open blow-out.

The adults incubate the eggs for 21 days after the last egg is laid. It is not uncommon for Least Terns to lose nests to storms or high tides. Least Terns will attempt to discourage mammalian, avian, or human intruders who come near their nests by attacking in unison, calling loudly, and dropping their "white wash."

Management

Incubation is the most vulnerable stage for breeding Least Terns. The presence of people, dogs, kites, and predators too close to a colony causes the entire flock of nesters to leave their nests during the disturbance. If the disturbance lasts more than 15 minutes, the eggs may be destroyed by exposure to the sun, rain, or wind-blown sand. Therefore, it is critical that the Monitor for the colony adjust the perimeter of the fence and signs to include a buffer zone wide enough to prevent disturbance to incubating adults.

Hatching of Eggs and Movement of Young (June 9- August 25)

The 2 to 3 semi-precocial young are active within 24 hours of hatching. Least Tern young are fed by the adults. Although the young are capable of running within a week of hatching, they typically do not wander more than 15 feet from their nest depression during the first 10 days. However, at ages between 10 and 28 days, they will run long distances to flee an intruder, find better locations for hiding, or await the return of adults with food. These older juveniles, over 14 days old, are often difficult to see. Their plumage is camouflaged, and they hide in vegetation and cover on the wrack line.

Management

When unfledged least tern chicks are present, vehicles should be prohibited from all dune, beach and intertidal habitat within 100 yards of either side of lines drawn through the outermost nests in the colony and perpendicular to the long axis of the beach. The resulting area of protected habitat for least tern chicks should extend from the ocean-side low water line to the bay-side low water line or the farthest extent of dune habitat if no bay-side intertidal zone exists. If unfledged chicks move outside the original protected area, then the boundaries of the protected area should be adjusted to provide at least a 100-yard wide buffer between unfledged chicks and vehicles. However, vehicles may pass through any portions of the protected area considered inaccessible to least tern chicks because of distance, steep topography, dense vegetation, or other naturally-occurring obstacles. Because least tern chicks disperse from nests shorter distances and at older ages than plover chicks, under some circumstances it may be possible to allow passage of vehicles through portions of least tern chick habitat if, in the opinion of the Division of Fisheries and Wildlife, this can occur without substantially increasing threats to least tern chicks or their habitats.

Fledging of Young (July 9 - September 10)

Least Terns young are capable of weak flight about 28 days after hatching. Most young in a colony fledge in mid-to late July in Massachusetts, unless the colony has been abandoned because of by tides, storms, or predators and the survivors re-nest. Once the young are capable fliers, they are led by the adults further from the busy colony to quieter portions of beaches and sandbars. The young will even fly out to the fishing grounds where they rest on the water and wait to be fed.

Management

The monitor of the colony will determine when the terns have left the nesting area. As long as Least terns are landing in the fenced area, it is likely that they are still nesting or rearing young. Most Least terns will have left Massachusetts by late August or early September.

F. MANAGEMENT AND REVIEW

Management of the resource areas in terms of ongoing use, use restrictions, etc. will be the primary responsibility of the Chatham & Orleans Department of Natural Resources

(DNR), with provisions for review of management guidelines to be made cooperatively with Commission input as necessary.

Changes in management, in relation to Rare Species, such as waivers of ORV closure requirements, by the State and Federal Agencies, may be allowed, upon notice to the Commission (e.g. Conservation & Management Permit).

The ORV management plan will be periodically reviewed and approved by the DNR and Commission, based upon the reports and recommendations resulting from the implementation of this ORV Management Plan.

Any temporary alternate routes for the travel corridor must be approved in writing in advance by the Division. The Division reserves the right to require rerouting of the travel corridor in a given year as necessary to avoid impacts to state-listed species.

Any changes to rules, regulations, beach management procedures or special conditions that have the potential to affect Piping Plovers, Least Terns, other state listed species or their protected habitats must be approved in writing in advance by the Division.

All management activities must be carried out in accordance with State and Federal Guidelines and in accordance with the Off Road Vehicle (ORV) and Beach Management Plan for Chatham's North Beach unless expressly approved in writing in advance by the Division.¹

It is essential that the Town conduct adequate patrols, take enforcement action for unleashed dogs when necessary, and document the extent of compliance with leash rules. In this context, the Town personnel shall keep patrol logs and report patrol frequency and frequency of leash rule violations to the Division as part of the ongoing annual data reporting program.

In addition to measures necessary to avoid adverse effects to Resource Area habitat, the ORV and Beach Management Plan and Draft Findings and Special Conditions contain provisions to avoid the direct Take of Plovers and Terns through harm, harassment, injury or mortality that could result from ORVs or other recreational activities (e.g. additional ORV closures when chicks are present, restrictions on dogs).²

¹ For example, if the Town of Chatham applies for a Certificate of Inclusion (COI) and MESA Conservation & Management Permit (CMP) associated with the Statewide Habitat Conservation Plan (HCP) for the Piping Plover, the Division could approve deviations from the Guidelines and from the Beach Management Plan.

² Although some measures such as symbolic fencing may be necessary to avoid both a Take and adverse effects to the Resource Area habitat, other measures are only necessary to avoid direct Take; for example restrictions on dogs and timing restrictions on use of a limited ORV travel corridor through an area with unfledged plover or least tern chicks.

The Division reserves the right to impose additional restrictions on pets, should the Division determine that additional measures are needed to prevent harm to nesting plovers and terns. Finally, the Division reserves the right to impose additional conditions on ORV beach management should the Division determine that conditions are necessary to avoid Take of staging, migratory, or post-breeding state-listed birds.

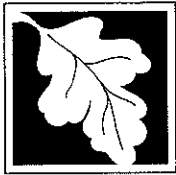
Any additional conditions necessary to protect Piping Plovers, Least Terns in connection with the issuance of a Massachusetts Statewide Habitat Conservation Permit (HCP) shall be approved by the Division. To the extent that they may alter any of the Conditions contained herein, the HCP Permit Conditions and Procedures as outlined in the a Habitat Conservation Plan for the town of Chatham, approved by the Division shall control.

G. ENFORCEMENT

Enforcement of North Beach ORV corridor to include expanded patrol coverage during off-peak usage, specifically weekday and pre-season periods. Should expanded patrol prove inadequate to protect the natural and wildlife resources which are the subject of this ORV Management Plan, the Commission may require additional enforcement.

The enforcement and management responsibility of North Beach as described by this ORV Management Plan, is designated by state and local statutory requirements to Town of Orleans and Town of Chatham officials who have historically co-managed the resource. In this instance, primary enforcement responsibility will be shared by the Chatham Conservation Commission, Orleans Park Commission, and their respective agents.

All management activities must be carried out in accordance with Massachusetts GUIDELINES FOR MANAGING RECREATIONAL USE OF BEACHES TO PROTECT PIPING PLOVERS, TERNS, AND THEIR HABITATS IN MASSACHUSETTS, Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (April 1993) & 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, Northeast Region, U.S. Fish and Wildlife Service (April 1994) the (Guidelines) and in accordance with the Off Road Vehicle (ORV) and Beach Management Plan for Chatham's North Beach unless expressly approved in writing in advance by the Division.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE 10-3127

MassDEP File #

eDEP Transaction #

Chatham

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Chatham

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Chatham

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

48 Ryder Pond Road South

Project Location

SE 10-3129

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Barnstable

County

Book

Page

for: Town of Chatham
Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number: _____

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

a. Street Address _____

b. City/Town, Zip _____

c. Check number _____

d. Fee amount _____

2. Person or party making request (if appropriate, name the citizen group's representative):

Name _____

Mailing Address _____

City/Town _____

State _____

Zip Code _____

Phone Number _____

Fax Number (if applicable) _____

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name _____

Mailing Address _____

City/Town _____

State _____

Zip Code _____

Phone Number _____

Fax Number (if applicable) _____

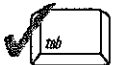
4. DEP File Number: _____

B. Instructions

1. When the Departmental action request is for (check one):

- ☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- ☐ Superseding Determination of Applicability – Fee: \$120
- ☐ Superseding Order of Resource Area Delineation – Fee: \$120

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

DEP File Number: _____

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Appendix 2

Nauset Beach Intermunicipal Agreement

NAUSET BEACH AGREEMENT

This agreement made this 20th day of March, 2019 by and between the Town of Orleans ("Orleans") and the Town of Chatham ("Chatham") pursuant to the provisions of M.G.L. c. 40 §§4 and 4A, and every other power which they may have, acting by their respective Boards of Selectmen.

WHEREAS, Nauset Beach is a unique conservation and recreation area located in the Town of Orleans and the Town of Chatham;

WHEREAS, the parties desire to provide for the joint patrol and management of Nauset Beach, including, but not limited to, beach patrol, fire protection, rescue services, and endangered shore bird monitoring, within the Town of Orleans and the Town of Chatham from a point south of the Nauset Beach Parking lot to the Chatham Inlet;

NOW THEREFORE, in consideration of the foregoing and the mutual promises and agreements contained herein, the parties agree as follows:

I. Responsibilities.

Chatham agrees to:

Orleans agrees to:

1. Supply qualified personnel to adequately patrol the Chatham portion of Nauset Beach, considering varying seasonal demands and any reasonable contingency which may arise.	1. Supply and maintain a vehicle(s) and qualified personnel to adequately patrol the Orleans portion of Nauset Beach, considering varying seasonal demands and any reasonable contingency which may arise.
2. Enforce the Rules and Regulations of Nauset Beach in the Chatham portion of Nauset Beach.	2. Enforce the Rules and Regulations of Nauset Beach in the Orleans portion of Nauset Beach.
3. Registration-related procedures: a. Inspect all registered Chatham residents' Off Road Vehicles ("O.R.V.") for compliance with the most recently adopted <i>Nauset Beach Rules and Regulations for O.R.V.s</i> ; b. Collect registration fees and account for such fees collected; c. Maintain accurate records of vehicles registered in Chatham, including the names of respective owners and provide information to other town; d. Provide an educational movie on the use and management of Nauset Beach for	3. Registration related procedures: a. Inspect all registered O.R.V.s, except those as registered in Chatham, for compliance with the most recently adopted <i>Nauset Beach Rules and Regulations for O.R.V.s</i> ; b. Collect registration fees, except for those vehicles registered in Chatham, and account for such fees collected; c. Maintain accurate records of vehicles registered in Orleans and to non-residents, including the names of respective owners and provide information to other town; d. Provide an educational movie on the use and management of Nauset Beach for

showing to all O.R.V.s registered to Chatham residents.	showing to all O.R.V. operators and Orleans Camp Licensees.
4. Supply and install signs, string, posts, wire fencing, and other necessary equipment, materials, and personnel to mark trails, delineate O.R.V. corridors, protect vegetation, and protect shorebird species that are listed as Threatened, Endangered, or of Special Concern in the Chatham portion of Nauset Beach.	4. Supply and install signs, string, posts, wire fencing, and other necessary equipment, materials, and personnel to mark trails, delineate O.R.V. corridors, protect vegetation, and protect shorebird species that are listed as Threatened, Endangered, or of Special Concern in the Orleans portion of Nauset Beach.
5. Provide protection for shorebird species that are listed as Threatened, Endangered, or of Special Concern in the Chatham portion of Nauset Beach, and monitor the protection measures implemented, including, but not limited to, the following: a. Cause a qualified person(s) to monitor the Chatham section of Nauset Beach if shorebird species listed as Threatened, Endangered, or of Special Concern are present, as well as provide protective measures for the birds and information to the Town of Chatham in case vehicle closures are needed; b. Supply the Massachusetts Division of Fisheries and Wildlife with data and year-end reports on shorebird protection on the Chatham portion of Nauset Beach; c. Supply and maintain All Terrain Vehicle(s) ("A.T.V.") and/or O.R.V.(s) for the monitoring of shorebirds in the Chatham portion of Nauset Beach as needed.	5. Provide protection for shorebirds species that are listed as Threatened, Endangered or of Special Concern in the Orleans portion of Nauset Beach, and monitor the protection measures implemented, including, but not limited to, the following: a. Cause a qualified person(s) to monitor the Orleans section of Nauset Beach if shorebird species listed as Threatened, Endangered, or of Special Concern are present, as well as provide protective measures for the birds and information to the Town of Orleans in case vehicle closures are needed; b. Supply the Massachusetts Division of Fisheries and Wildlife with data and year-end reports on shorebird protection in the Orleans portion of Nauset Beach.
	6. Provide, maintain, operate, and staff a check booth in the Orleans portion of Nauset Beach, as needed.
	7. Provide printed regulations, applications, permits, stickers, and educational material for both Towns to issue, on a uniform basis, to their residents and other users of the beach.
	8. Provide a trash dumpster(s) at the gate of Nauset Beach in Orleans for the use of all O.R.V. operators, except for use by Orleans

	Camp Licensees, and provide for disposal of the trash collected. Without limiting the generality of the foregoing sentence, Camp Licensees are expressly prohibited from using the dumpster(s) to dispose of any bulky waste, including but not limited to, household trash, propane tanks, building debris, furniture, or the like.
	9. Maintain informational signs at the parking lot of Nauset Beach in Orleans regarding the appropriate use of Nauset Beach south of the parking lot.

General

1. All O.R.V.s, including those of Orleans Camp Licensees, must check "on" or "off" upon entering or leaving Nauset Beach at the check booth provided for in section I.6. above during the season when the check booth is open South of the Nauset Beach parking lot.
 2. All persons, including residents, non-residents, and Orleans Camp Licensees, who seek to register vehicles to use Nauset Beach shall yearly submit complete registration forms and all applicable registration fees, as well as view the educational movie, referred to herein on the use and management of Nauset Beach.
 3. In the event that Nauset Beach is full, visitors to camps may only access the beach provided the Orleans Camp Licensees has delivered a "visitor pass" form, signed by the Orleans Camp Licensees (on a form approved by the Orleans Park Department), to the Orleans gate at least 8 hours in advance. A camp visitor pass will allow vehicle access to the specific camp only. Vehicle access to other areas of the beach is not permitted.
- II. Cross Jurisdiction Patrols. It is agreed that each Town shall be responsible for patrols on their own portion of Nauset Beach.
- III. Annual Review. The Orleans and Chatham Boards of Selectmen shall meet annually to review this Agreement, related fees, and rules and regulations governing Nauset Beach. They may, if deemed appropriate, adopt new fees and/or rules and regulations, revise the provisions contained herein concerning the Responsibilities of each Town (Section I) and Beach Management (Section VIII), and take any other action consistent with this Agreement. Any amendments to this agreement must be expressed in writing and executed by the Boards, of Selectmen from both towns.
- IV. Termination. Notwithstanding anything contained herein to the contrary, each Town shall have the right to terminate this Agreement by thirty (30) days prior written notice, at any time during the period from November 1 to February 1 of any year the Agreement is in effect, for any of the following:
1. Material breach by the other Town of any of the provisions contained in this Agreement.

2. Lack of appropriation of funds necessary to fulfill the Town's responsibilities set forth in this Agreement.
 3. Physical changes in Nauset Beach resulting in the Town being unable to fulfill its responsibilities set forth in this Agreement.
 4. The issuance of a Decision, Order, or Directive from a governmental agency of competent jurisdiction, the effect of which is to prevent the Town from carrying out its responsibilities under this Agreement.
- V. Employee Status. Employees of the Town of Orleans and employees of the Town of Chatham shall, while acting pursuant to the provisions of this Agreement, be deemed to be employees of their respective Towns even though they may be working, under the terms of this Agreement, on a portion of Nauset Beach owned by the other Town.
- VI. Term/ Duration of Agreement. Unless otherwise terminated under the provisions of Section IV of this Agreement, above, the Agreement shall run for a period of one (1) year from May 1, 2019 to April 30, 2020.
- VII. Revenue Distribution. Revenue will be allocated as follows:
1. Chatham keeps all fees charged to Chatham residents and property owners, excluding the Orleans HCP surcharge collected from Chatham residents which shall be paid to Orleans by September 30, 2019.
 2. Orleans keeps all fees charged to Orleans residents and Camp Licensees.
 3. All non-resident sticker fees charged by Orleans, excluding the Orleans HCP surcharge, shall be allocated 75% to Orleans and 25% to Chatham. Orleans shall pay Chatham its allocated amount by September 30, 2019.
 4. Orleans shall be under no obligation to provide special escort services for Chatham property owners.
- VIII. Beach Management.
1. Management of that portion of Nauset Beach located in Chatham shall be as set out in Order of Conditions, DEP SE10-3127, issued April 13, 2016. The provisions of the Chatham order of Conditions are incorporated fully herein by reference.
 2. Management of that portion of Nauset Beach located in Orleans shall be as set out in Order of Conditions, DEP SE 54-2246, issued June 25, 2014, recorded in the Barnstable Registry of Deeds in Book 28280 Page 185 ("Orleans Order of Conditions"). The provisions of the Orleans Order of Conditions are incorporated fully herein by reference.
 3. To the extent that the Chatham Order of Conditions is inconsistent with this Agreement, the provisions of the Chatham Order of Conditions shall control, except that Orleans shall not be required to manage and enforce the Special Conditions contained in Sections F and G.

4. To the extent that the Orleans Order of Conditions is inconsistent with this Agreement, the provisions of the Order of Conditions shall control.
5. To the extent permitted by "*Guidelines For Managing Recreational Use Of Beaches To Protect Piping Plovers, Terns, And Their Habitats In Massachusetts*," (1993) issued by the Massachusetts Division of Fisheries and Wildlife, the entirety of Nauset Beach will be managed to remain open to all O.R.V. traffic, taking into consideration tide and erosion.

6. Recreational and General Vehicular Access.

- a. Recreational and general public access of vehicles shall be permitted only in authorized areas and trails of the beach as posted.

When a Piping Plover or Least Tern nesting habitat is located and identified, it should be clearly marked with symbolic fencing and warning signs. Plover or tern nests that are located and identified shall be mapped by monitors, and the information shall be shared between the Towns as soon as possible.

When vehicular access infringes upon the nesting habitat, vehicle traffic and parking shall be rerouted, or altered, around the outside edge of the nesting habitat for as long as the nesting habitat is active, to ensure the safety of the plovers or terns. Marking and posting of the habitat shall be performed in accordance with the guidelines set forth in the Management Plan.

As long as adequate provisions have been made to alter the traffic pattern around the habitat area, vehicular access may be continued. However, if no viable rerouting of traffic is possible due to the location of the nesting habitat, vehicles shall be prohibited through, or into the delineated nesting habitat area. Vehicular access shall be prohibited for as long as necessary to ensure the proper fledging of the plovers and terns as set forth in this beach management plan.

Only essential vehicles, described below, shall be permitted to have access into or through the nesting habitat area, and only under the conditions described below.

All vehicular access restrictions, and conditions of access, will be consistent with the Massachusetts Division of Fisheries and Wildlife document, known as, "*Guidelines For Managing Recreational Use Of Beaches To Protect Piping Plovers, Terns, And Their Habitats In Massachusetts*" (1993), utilizing signage, symbolic fencing, use of monitors, and methods that are designed to protect the plover and tern nesting habitat.

- b. Definitions of Essential Vehicles.

Essential Vehicles (Category 1): Public Safety Vehicles used for emergency service purposes belonging to a municipality, county, state, or federal entity for a police agency, fire service or rescue service; vehicles belonging to natural resources, and

public works of the Towns of Orleans or Chatham providing necessary services or maintenance, and vehicles operated for species monitoring and management.

Essential Vehicles (Category 2): Vehicles bearing an Orleans Camp Licensees sticker and belonging to Licensees of "camps" (structural dwellings), their immediate family members and contractors providing emergency repair.

c. Access of Essential Vehicles.

Under restricted conditions, as outlined below, essential vehicles may be permitted to have access into and through a nesting habitat area containing unfledged chicks. Access will take place only during daylight hours, with the exception of emergency situations involving imminent threat to public health and/or safety. Open, 3 or 4-wheel all-terrain vehicles (ATVs) shall be used whenever possible for monitoring and law enforcement because of the improved visibility afforded the operator.

The access of essential vehicles (Category 1) shall be limited by utilizing monitor(s), who, after determining the location of unfledged chicks, shall accompany and walk in front of the vehicle operating at a speed of five (5) miles per hour proceeding through plover or tern nesting habitat. These essential vehicles (Category 1) will be restricted to operate in this manner, through a plover or tern nesting habitat, on a public safety, need-only basis, and will limit the number of trips through the identified area to only the minimum necessary to accomplish the necessary objective.

Town of Chatham public safety essential vehicles operating through the Orleans portion of Nauset Beach will operate in the above described manner, and additionally, shall be required to notify the Town of Orleans Natural Resources Department, in advance, to make arrangements for access through the Orleans section of Nauset Beach. Emergency situations may require provisional arrangements, but will be conducted as closely in this manner as possible.

Vehicular access for essential vehicles (Category 2) shall be required to make arrangements, notifying Orleans in advance, utilizing the above described method. In addition, essential vehicles (Category 2) shall be required to have the Orleans Natural Resources personnel on scene to supervise the method of vehicular access. It is anticipated that such vehicular access will be limited to 1-2 times per day, and limited to one camp owner pass per day, subject to the availability of personnel. It is further anticipated that any escort service will require the hiring of additional personnel. An operator of an essential vehicle (Category 2) shall be responsible for all incremental escort costs, and shall reimburse Orleans as applicable.

Any decision as to providing vehicular access for essential vehicles (Category 2) to restricted areas of the Beach shall be discussed, reviewed, and approved by the Orleans Natural Resource Manager prior to access being granted, subject to the availability of personnel.

There shall be no vehicular access other than the methods described above, and shall be consistent with the document, "Guidelines For Managing Recreational Use Of Beaches To Protect Piping Plovers, Terns, And Their Habitats In Massachusetts," (1993) issued by the Massachusetts Division of Fisheries and Wildlife.

5. Hold Harmless. Each Town agrees to hold harmless and, to the extent permitted by law, to indemnify the other Town and its representatives, employees and agents, from and against any and all liability, suits, claims, losses, injuries or expenses (including reasonable attorneys' fees) brought by a third party, arising from or with respect to any acts or omissions of the representatives, employees and agents of the indemnitor Town as referenced in, related to and/or arising out of this Agreement.
6. Representations. Each Town warrants and represents that its Board of Selectmen is duly authorized to enter into this Agreement.

This agreement is binding upon on the respective towns as well as their various boards, commission, departments and officers.

Executed as of the day and the year first above written.

TOWN OF CHATHAM
Board of Selectmen

Dean P. Nicastro
[Signature]
Peter H. Coombs
Maureen Davis
J. J. S. Byrne

TOWN OF ORLEANS
Board of Selectmen

Mark Mathison
[Signature]
Ala W. Cleaveland
Mike [Signature]
Maureen [Signature]

Appendix 3

Nauset Beach Rules and Regulations For OSVs & HCP OSV User Guide

A. MOTOR VEHICLE RULES & EQUIPMENT

1. Maximum **SPEED** of motor vehicles may not exceed **15 miles per hour**. In no case will the tire pressure on vehicles exceed **20 lbs. psi**. All persons shall operate vehicles in a reasonable and prudent manner. **The provisions of Chapter 90, Mass General Laws (Ter. Ed) shall apply to the operation of all motor vehicles. All persons should be aware that the State of Massachusetts Seat Belt Regulations and child car seat usage are still in effect while on the Beach and the vehicle is underway. (This simply means that if it is required on the road, it is required on the Beach.)** Driving at reasonable speeds on the low beach will be permitted during the winter season between the first Friday of November and the Friday before Memorial Day. Traveling above the mean high water mark in a closed area is prohibited. Headlights must be on half hour after sunset until half hour before sunrise.

2. The operation of off road vehicles shall be prohibited year round from the outer beach from a point 1 mile South to a point ¼ mile North of the Nauset Beach parking lot unless otherwise posted (except emergency and maintenance vehicles). Access to outer beach only at posted areas. No vehicles shall be operated in designated swimming areas.

3. All persons shall ride within and be seated within the confines of any motor vehicle operated on the Beach, and the number of riders at any one time shall be limited to the normal seating capacity of the vehicles. Vehicles shall not park within 10 feet of established tracks or routes and shall not interfere with traveling traffic. Portions of the Beach shall be considered off limits to vehicular traffic when high tides force passage within 15 feet of vegetation and frontal dunes. **Vehicles driving off the Beach shall have the right of way.**

4. Driving of motor vehicles between the surf and the rise or crest of the Beach and driving or walking on or over any partially or fully covered vegetation area and on or across the dunes or any other closed areas except as designated by specified routes is strictly prohibited. The driving of vehicles on the West side of the dunes or the bay side of the dunes is strictly prohibited.
5. Each visitor to the Beach shall remove from the Beach all rubbish, trash or refuse for which he or she has been responsible. Receptacles for the disposal of such are provided at the Beach parking lot. Emptying of holding tanks and disposal of human waste on Nauset Beach and its adjoining waters is positively prohibited. Human waste may be disposed of at the Septage Treatment Plant for a fee.

6. **EQUIPMENT:** Before a permit will be issued, each vehicle will be inspected to ensure that it is equipped with the following.

a. **SHOVEL** of a heavy type equal to or better than the military folding entrenching tool.

b. **TOW ROPE**, chain cable or other towing device, not less than 14 feet in length with a minimum load strength of 1400 lbs. (Chain size 5/16", cable 1/4", nylon 3/4", or polypropylene 3/4", hemp 1".) The towing device will be equipped with grab hooks or other suitable attaching device on both ends.

c. **JACK SUPPORT**, board or similar, to have a surface of not less than 144 square inches nor be more than 18 inches in length. Thickness to be not less than 1 1/2" if of solid wood. Other materials must equal strength and durability of the standard wood supports.

d. **JACK** of the standard size and type as that which comes with the vehicle.

e. **TIRE GAUGE**, low pressure, able to register to a minimum of 10 lbs. psi.

f. **TIRE SIZES:** Minimum size tires for 13" is 185, for 14", 15", and 16" it is 215. Note – no snow tires will be allowed on the Beach except from November 1 through April 13. (See Tire Terminology in addendum.)

g. **SPARE TIRE**, meeting same standard as other tires required for type of vehicle in which it is carried.

SELF-CONTAINED VEHICLES, must be equipped with:

h. **Rod and Reel** for each occupant over 12 years of age.

i. **Permanently Mounted Beds**

j. **Permanently Mounted Self-Contained Water or Chemical Toilet**
- COMMUNICATIONS
- TO REPORT AN EMERGENCY
- Orleans 508-255-1213
Chatham 508-945-1213

If dialing from a cell phone and you dial 911, the call goes to the Framingham State Police.

When requesting an emergency, please give specific location:
North End or South End of Nauset Beach, Trail # and Vehicle Registration, Color and Make.
- COMMUNICATIONS
- TO REPORT A VIOLATION
- Orleans Nauset Beach Administration Building in season between 9am-5pm 508-240-3780

Nauset Beach Toll Booth in season between 5pm-9pm 508-240-3705

Orleans Police off season 508-255-0117
Orleans Parks off season 508-240-3700 ext. 465
Chatham Police 508-945-1213
- If you observe a Violation, the following information is needed for the Beach Patrol to take action against violators:*
1. Date & time of day

2. Location/landmark/trail #

3. Vehicle description (license plate # / color)

4. Operator/occupant description

5. Violation/incident description
- Report violations in Orleans to Orleans
Report violations in Chatham to Chatham*
- | Reg. # / State | |
|---|--------------------------|
| RO | ☐ |
| OS | ☐ |
| OSS | ☐ |
| SC | ☐ |
| OC | ☐ |
| Inspected by | |
| | |
| Tire Size | ☐ |
| Spare Tire | ☐ |
| Board | ☐ |
| Tow Strap | ☐ |
| Tire Pressure Gauge | ☐ |
| Shovel | ☐ |
| Jack | ☐ |
| Remove Old Sticker | ☐ |
| S/C ONLY | |
| Permanently Mounted Beds | ☐ |
| Permanently Self-Contained Water or Chemical Toilet | ☐ |
| Fishing Rods | ☐ |
- Nauset Beach
Rules and
Regulations
for ORVs
-
- This unique conservation and recreation area is under the joint supervision of the Towns of Orleans and Chatham. We hope you as visitors to Nauset Beach will enjoy the natural and recreational values of the area, as well as observe the rules that have been adopted for its protection.
- All applicable Federal and State laws and regulations, town by-laws, rules and regulations, and fire regulations shall apply and are enforceable.

B. VEHICLE REGISTRATION – EFFECTIVE MAY 1, 2015 TO APRIL 30, 2016

1. **STICKERS:** Registration shall be obtained from the Orleans Parks & Beaches and the Chatham Coastal Resources departments. Applicants of Nauset Beach registration cards will be issued stickers that must be affixed to the stationary window on the driver's side of the vehicle. **No vehicle shall operate on the Beach without a valid registration sticker. All registration stickers are non-transferable and expire April 30 of following year. All previous years' stickers must be removed.** Registration stickers issued to camp lessees, Chatham residents, nonresident self-contained, and oversand vehicles are valid only South of Nauset Beach parking lot and not valid to park in beach parking lots. All S/C vehicles must clock on and off the Beach during the season when the gate house is operational when driving South of the Nauset Beach parking lot. All other ORVs must stop at the booth and check on the Beach. The only time they will be required to check off is when the vehicle limit is at its maximum.
2. **HOURS:** All non-self-contained vehicles using the beach South of the parking lot and all legal residents and real estate taxpayers of Orleans using the beach

North of the parking lot are allowed on the Beach only between the hours of 6:00 a.m. and 11:00 p.m. (unless actively fishing). Fishing gear must be shown upon request. Oversand vehicles must stay off the Beach six (6) hours before returning. Self-contained vehicles will be allowed to stay on the Beach for a maximum of 96 consecutive hours and a 72-hour period must elapse before they may return to the Beach. The Natural Resources Manager may reduce the maximum stay for self-contained vehicles at any time. All vehicles remaining overnight, except those vehicles used by camp lessees or their guests, shall have permanently mounted self-contained water or chemical toilet and permanently mounted sleeping accommodations sufficient for all persons in the vehicle.

3. **LIMITS:** The number and types of vehicles allowed on the Beach at any one time shall be set each year and may be changed depending on prevailing conditions and the amount of usable beach. All registered vehicles using the beach South of the Nauset Beach parking lot must check on and off the Beach.

**DRIVE ONLY IN DESIGNATED TRACKS AND ESTABLISHED WAYS.
KEEP OFF THE GRASS, DRIVING OR WALKING !!!**

C. GENERAL RULES AND REGULATIONS

1. **ALL VEHICLES** must carry a current copy of rules and regulations and tide chart in vehicles at all times.
2. **ACCESS** to the beach **NORTH** of parking lot is in a residential area. Please be courteous and obey all rules and regulations when entering, leaving, and during your visit to the Beach. **NO PARKING ALLOWED AT THE ACCESS ROAD AREA ON NAUSET SPIT.**
3. **LESSEES, NAUSET BEACH PROPERTY (ORLEANS):** All regulations listed herein shall apply while using other areas of the Beach.
 - a. **REPAIR AND/OR MAINTENANCE OF PROPERTY:** Any and all motorized equipment or machines taken on the Beach must secure permission from the Orleans Natural Resources Manager before proceeding on Beach.
4. **No DOGS** allowed on Nauset Spit from April 1 through Labor Day. From Trail #1 North to Nauset Spit, dogs are prohibited from April 1 through Labor Day. From Trail #1 South to the Chatham Inlet, all dogs must be on a leash not more than 30 feet at all times from April 1 through Labor Day.

(These will be a zero tolerance enforcement issue.) Dogs are prohibited from areas closed to vehicle or human traffic for Piping Plover protection. Owners are responsible for cleaning up after their animals. Beach camp lessees would retain traditional use rights for their leased property.

5. **SLEEPING** in the open between 8:00 p.m. and 8:00 a.m. and the use of camping tents, sleeping bags, bed rolls, and camping trailers for overnight camping on all Beach areas is prohibited.
6. **No open FIRES on the Beach** are allowed unless permits are obtained from the Orleans Fire Chief or Natural Resources Manager. Charcoal fires in grills are permitted. Douse coals before leaving.
7. **BEACH PARTIES** of more than twenty (20) persons shall be required to carry a special permit (no additional fee), and shall name, in applying for such a permit, one individual in the group who shall agree to assume the responsibility for the activities of all members of the group while on the Beach. Such a permit shall be applied for 48 hours in advance of its proposed use. The permit for the Orleans portion of the Beach shall be issued only by the Orleans Natural Resources Manager, who shall designate the Beach area on which such a party may be held.

C. GENERAL RULES AND REGULATIONS continued

8. **WINDSURFING, SURFBOARDING** permitted only in certain specified areas and separate regulations shall apply to the conduct of same.
9. **SCUBA DIVING, SKIN DIVING:** All other methods of underwater swimming requiring mechanical aids shall be permitted only in specified areas, and shall be subject to separate regulations.
10. The use of rafts, tubes, inflatables, and other similar types of **SWIMMING OR BATHING DEVICES** are prohibited.
11. **FISHING GEAR** must be kept at waters edge at all times year round while in the act of fishing. There shall be no more than five (5) fishing rods per person or more than twelve (12) fishing rods per vehicle to be in use at any one time.
12. **SHELLFISH** regulations of Orleans apply to the Orleans portion of the Beach. Shellfish regulations of Chatham apply to the Chatham portion of the Beach.

D. VIOLATIONS

Fines listed below may be imposed for violations of the Parks and Beaches Rules and Regulations and the Nauset Beach Rules and Regulations for ORVs:

- Operation of a motor vehicle on Nauset Beach in closed areas and off marked trails.
Fine: \$200 and Revocation of ORV Permit
- Emptying of holding tanks and disposals of human waste.
Fine: \$200 and Revocation of ORV permit
- Violations of Habitat Conservation Plan (HCP)
Fine: \$200 and Revocation of ORV Permit

Unless otherwise specifically provided herein, any person who violates any of the Parks and Beaches Rules and Regulations or the Nauset Beach Rules and Regulations for ORVs shall be subject to the following penalties:

First Offense: Warning
Second Offense: \$50
Third and Subsequent Offense: \$100

- Operation of a motor vehicle on Nauset Beach without a valid ORV permit
- Operation of motor vehicle on low beach when prohibited
- Failure to air down tires to proper p.s.i.
- Violation of Rules and Regulations related to dogs. In addition to any other penalties set forth in these regulations, any violation of the dog regulations in closed areas due to shorebirds will result in no less than automatic revocation of the offender's Beach permit rights from the date of violation

13. **PRIVATE PROPERTY: PERSONS WHO VISIT THE BEACH BY BOAT, MOTOR VEHICLE, OR ON FOOT ARE REQUIRED TO RESPECT PRIVATE PROPERTY AND TO CONFORM TO ALL REGULATIONS LISTED HEREIN.**
14. **PROHIBITED VEHICLES:** Two-wheel vehicles, motorcycles, minibikes, mopeds, snowmobiles, ATVs, and ATCs. No towing of paraglides permitted. Except in an emergency, no airplanes or helicopters shall land and no trailers are allowed on Nauset Beach.
15. **TEMPORARY RESTRICTIONS:** In addition to the foregoing regulations, the Orleans Park Commission may from time to time and at the recommendation of the Orleans Natural Resources Manager issue temporary restrictions applying to specific areas of Nauset Beach in Orleans.
16. **No vehicles may park on the Back Trail between the Lower Booth to Trail #1.**

until May 1st of the following year. Subsequent violations will result in the offender's Beach permit rights being revoked for a period of three (3) full years from the date of the violation.

- Operation of motor vehicle and not having passengers properly seated within the confines of the vehicle
- Speeding
- Littering
- Open container(s) of alcohol
- Open fire without a permit

An ORV Permit Holder who receives three violations of any of the Rules and Regulations in any one season (other than operation of a motor vehicle on Nauset Beach in closed areas and off marked trails, the emptying of holding tanks and disposal of human waste and violations of habitat conservation plan rules, which are subject to immediate revocation of the ORV permit) shall have his or her ORV Permit revoked and shall not be permitted on the beach for ONE YEAR from the date of the revocation of the ORV Permit.

Persons whose permits have been suspended or revoked have within seven days a right to appeal to the enforcing authority, who upon receipt of written request shall arrange a hearing on the appeal to the appropriate authority. Authority for the enforcement of the Parks and Beaches Rules and Regulations and the Nauset Beach Rules and Regulations for ORVs shall rest with the Orleans Natural Resources Director, his or her designees, including the Beach Patrol, and any Orleans Police Officer.

*These Rules and Regulations were adopted at a public hearing of the Orleans Park Commission dated 1/14/15.
Copies of changes to be posted in Orleans Town Clerk's Office.*

General Rules and Regulations for ORVs

1. The maximum number of ORVs allowed on the beach at any one time shall be set each year and may be changed depending on prevailing conditions and the amount of usable beach.
2. Nesting Areas: No kite flying will be permitted on the beach during the Tern and Piping Plover nesting season (March 15 through September 15). Dates subject to change. Nesting areas will be fenced and signed, pedestrians and ORVs are requested to stay as far away from slits as possible. Speed limit when near nesting areas is 5 mph. **Vehicles and pedestrians are prohibited in symbolically fenced areas.**

3. If because of high tides or storms the designated ORV routes become obstructed, the limit of ORVs may be reduced or the beach may be temporarily closed to ORV traffic.
 4. Driving on the foreshore of the beach is prohibited from the Friday before Memorial Day until the first Friday of November, unless otherwise directed. Refer to the Beach Terminology Diagram below. For complete list of rules, see *Orleans Nauset Beach Rules and Regulations for ORVs*.
- NOTE: The "dog allowed areas" to the North and South of the Nauset Beach Parking Lot are only accessible by ORVs with valid permits.**

BEACH DRIVING TIPS

- You are required to decrease tire pressure before entering the beach ORV driving corridor. Tire pressure is critical for successful over sand driving. 15 p.s.i. is recommended. Friction may cause pressure to increase while you drive, making it necessary to stop and reduce pressure again. Your beginning tire pressure should not exceed 18 p.s.i.
- Always check tides before entering the off-road corridor. Portions of the beach may be impassable at high tide.
- If you feel you are in danger of getting stuck, check your tire pressure and let air out if necessary; try backing up in your tracks before moving ahead. Do not spin tires - this will only cause the vehicle to dig in.
- Do not speed - excessive speed endangers you, your vehicle, other beach users, and wildlife. Experienced beach drivers know that a slow, steady speed and correct tire pressure are more effective than faster speeds.
- Always be alert for wildlife when driving on the beach - tern and plover chicks may attempt to hide in vehicle tracks when frightened.

Violations

Penalties for infractions of any of the above regulations shall be revocation of registration sticker, dismissal from the beach, and/or a fine of not less than Fifty Dollars (\$50.) nor more than Three Hundred Dollars (\$300.) for each offense.

Persons whose permits have been suspended or revoked have within seven (7) days a right to appeal to the enforcing authority, who upon receipt of written request shall arrange a hearing on the appeal to the Park Commissioners.

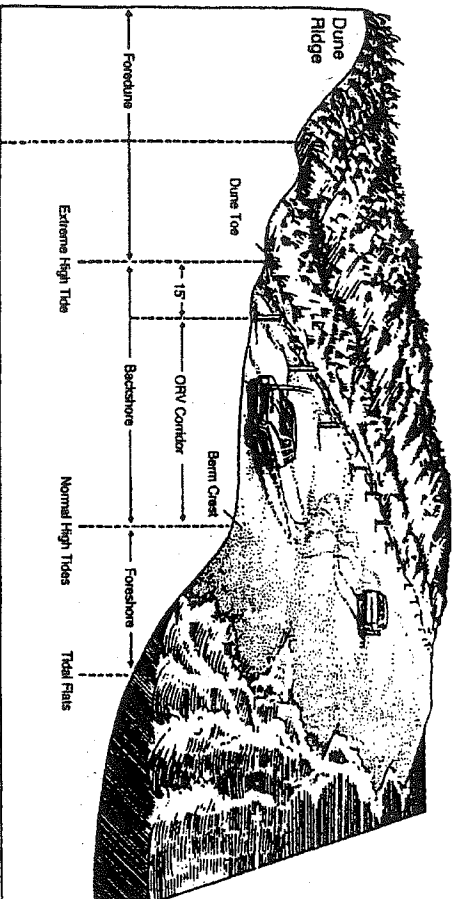
Authority for the enforcement of the above regulations shall rest with the Orleans Natural Resources Manager and Orleans Chief of Police.

Copies of the above regulations may be obtained at the Town Offices and Police Station in Orleans and the official on duty at Nauset Beach.

These Rules & Regulations were adopted at a public hearing of the Orleans Park Commission dated 1/14/15.

Copies of changes to be posted in Orleans Town Clerk's Office.

BEACH TERMINOLOGY DIAGRAM

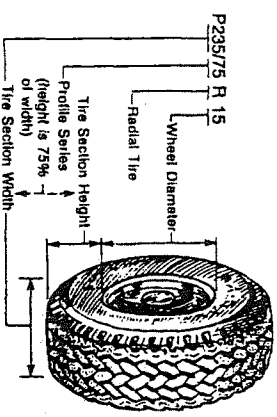


Cape Cod National Seashore Illustration adapted for Nauset Beach

TIRE TERMINOLOGY

Minimum acceptable tire and wheel dimensions for all vehicles being registered for a permit are as follows:

Metric tire designation as shown on sidewall:



Minimum tire size: 13" = 185
14", 15" and larger = 215

ORLEANS

Inspections for permits may be obtained:
9 am – 4 pm on all days open

April 30 – September 7
Thursday through Monday
139 Main Street
(former American Legion Building, lower level)

Note: No inspection/permit will be issued on July 4th.

September 8 – April 30, 2016
Weekdays by appointment only at Parks & Beaches Office.
Call 508-240-3700 ext. 465

For information, please visit our website at
www.town.orleans.ma.us

NAUSET BEACH INFORMATION

Please call the Nauset Beach Administration Bldg.
for information June 13 – September 7

(508) 240-3780

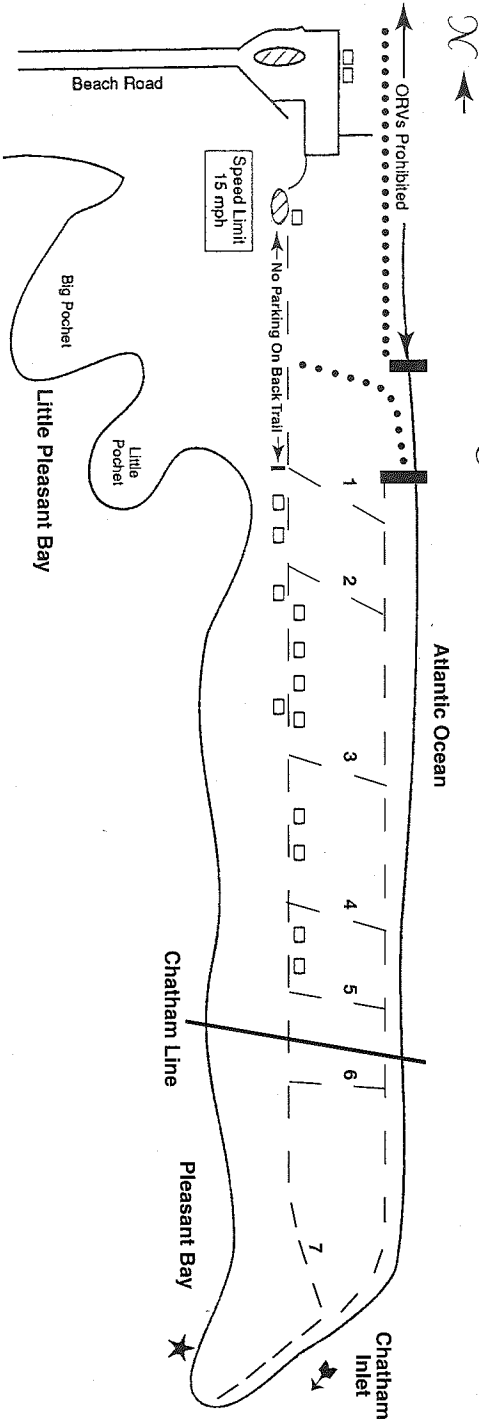
CHATHAM RESIDENTS ONLY

Please visit www.town.chatham.ma.us
for Sticker Sale Days and Times

For Chatham Resident Information
508-945-5176
Chatham Coastal Resources Department

APPENDUM TO Nauset Beach Rules and Regulations for ORVs

Using the South End of Nauset Beach

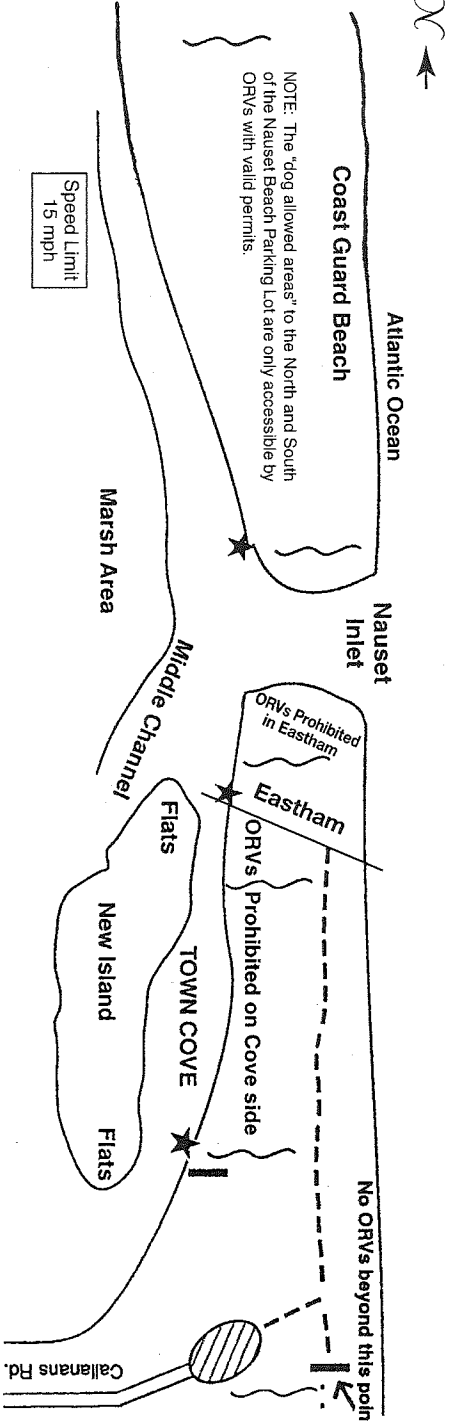


1. From Trail 1 North to Nauset Spit, dogs are prohibited from April 1 through Labor Day.
2. From Trail 1 South to the Chatham Inlet, all dogs must be on a leash not more than 30 feet at all times from April 1 through Labor Day. (This will be a zero tolerance enforcement issue.) Dogs are prohibited from areas closed to vehicle or human traffic for Piping Plover protection. Owners are responsible for cleaning up after their animals. Beach camp lessees would retain traditional use rights for their leased property. In addition to any other penalties set forth in these regulations, any violation of this Section constituting a first offense will result in no less than automatic revocation of the offender's beach permit rights from the date of violation until May 1st of the following year. Subsequent violations will result in the offender's beach permit rights being revoked for a period of three (3) full years from the date of the violation.
3. Driving is restricted to backshore area and established trails. Refer to Beach Terminology Diagram on reverse side.
4. Parking is restricted to backshore area and established trails. Refer to Beach Terminology Diagram on reverse side.
5. Dogs, vehicles, and pedestrians are prohibited from shorebird nesting areas that are symbolically fenced.
6. Fishing rods must be at water's edge at all times.
7. The Order of Conditions issued to the Orleans Park Commission, dated 6/24/14, is hereby incorporated herein and made a part of these rules and regulations.



Using the North End of Nauset Beach ~ Resident Orleans (R-O) Sticker only

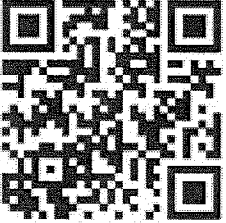
Self-Contained, Pochet, Resident-Chatham, and Over-Sand Nonresident Prohibited on North End = Minimum Fine \$100



1. ORVs are prohibited driving past the Eastham town line.
2. No dogs allowed on Nauset Spit from April 1 through Labor Day.
3. Driving on Town Cove side of Nauset spit is prohibited.
4. All vehicles using the beach between the hours of 11 pm and 6 am must be actively fishing and must check on and off the beach at the Nauset Beach gate house during the summer season (Memorial Day to Labor Day).
5. Driving and parking shall be restricted to the backshore area, unless otherwise directed.
6. Self-contained vehicles are prohibited from the North end of Nauset Beach.

Key

- ORV Routes ———
- One Way only → → →
- Pedestrian Crossover ~~~~~
- Official Vehicles only ■■■■■
- Checkpoint (hatched oval)
- Recommended Boat Landing Area ★



7. The Order of Conditions issued to the Orleans Park Commission, dated February 13, 1991, is hereby incorporated herein and made a part of these rules and regulations.



TOWN OF ORLEANS
STATEWIDE HCP
OSV USER GUIDE

PROCEDURES & CONDITIONS



HABITAT CONSERVATION PLAN

Basic Introduction: Over the past decade, Over-sand vehicle (OSV) access has been precluded to Nauset Beach South due to unfledged piping plover chicks located in an area north of Trail 1 known as the "Pochet Wash". Piping plovers are listed as threatened species under both the U. S. Endangered Species Act and the Massachusetts Endangered Species Act.

To regain access to the area, the Town of Orleans successfully applied for Incidental Take Permits under the Acts. Required by the permits, the Town of Orleans developed a Habitat Conservation Plan (HCP). The HCP allows up to 180 OSV per day to pass through the Pochet Wash where up to 8 unfledged piping plover chicks and 4 adult parents are living.

Piping plover chicks leave the nest about two hours after hatching and are able to feed themselves within a few hours of being out of the nest. Piping plovers eat a variety of aquatic and terrestrial invertebrates such as worms and amphipods. They move from one tidal area to another, multiple times per day, crossing the OSV corridor to feed on the east and west side of the Trail. Chicks blend into their surroundings very effectively because of their camouflaged plumage. They are highly mobile, very fast, and can be observed feeding over large areas of the habitat. When disturbed they may run in spurts, stop, and hide in dune grass or a small depression in the sand.

To lessen the impact from OSV running over chicks and help us implement a successful program, the town adopted a "**self-escorting**" procedure. It is critical that you adhere to the self-escorting procedure to insure that the HCP is successful. This means you must have a person with you at least 16 years of age or older that can walk 15 feet in soft sand in front of the OSV looking for chicks and or adults in the OSV corridor. **OSV that are unable to provide a competent self-escorter over the age of 16 will be denied access. The areas where you will be self-escorting are called "self-escort zones."** **The self-escort zones will be clearly marked with signs giving you notice when to BEGIN and END the self-escorting.**

It will be a requirement for all OSV to contain a copy of the Nauset Beach Rules and Regulations for ORV as well as a signed copy of this document by the vehicle driver. Both copies will be required to be produced by the OSV operator at the time of check in. In the event that the OSV operator cannot produce either, then he/she shall be provided with a copy at the entrance booth. By signing the copy of the HCP Procedures and Conditions, the operator acknowledges that he/she has read and understands the HCP requirements.

IMPORTANT READ ! Medical or Family Emergencies: When the permit is in effect, access to and from Nauset Beach South outside of the self-escort access windows shall be strictly prohibited. In the event of a life-threatening medical emergency, the staff of the Nauset Beach Administration Building and/or emergency responders should be notified. Contact telephone numbers are provided in the Nauset Beach Rules and Regulations for OSV. Essential vehicles will assist in escorting the vehicle off the beach. Your stay on the beach could be as long as 10 hours with a **MINIMUM REQUIRED STAY OF 2 HOURS.** **Please plan for less than ideal conditions, e.g. flying insects, rainy, cold conditions.**

Self-Contained Vehicles - All self-contained vehicles will be required to commit to and reserve their day of departure when they check in. All other self-contained check in procedures and maximum stay restrictions remain unchanged while the permits are in effect.

OSV Access Date and Times:

Start Date: Start date dependent on # of un-fledged chicks present

Morning Session: 8:00 a.m. - 10:00 a.m.*

Mid-Day Session: 12 noon - 2:00 p.m.*

Afternoon Session: 4:00 p.m. - 6:00 p.m.*

**Times may be flexible within one (1) hour of each side of the access windows due to inclement weather or chick location.*

Natural Resources Manager / Beach Director will have the independent authority to close the trail at any time for any reason.

The HCP OSV PROTOCOLS

STEP 1: Accessing Nauset Beach South & Staging:

All OSV must stage in the pre-determined area of the Nauset Beach parking lot shown in (Figure 1). Line up in a single row. Air down; check all your gear and safety equipment and supplies. Access will be granted on first come first serve basis.

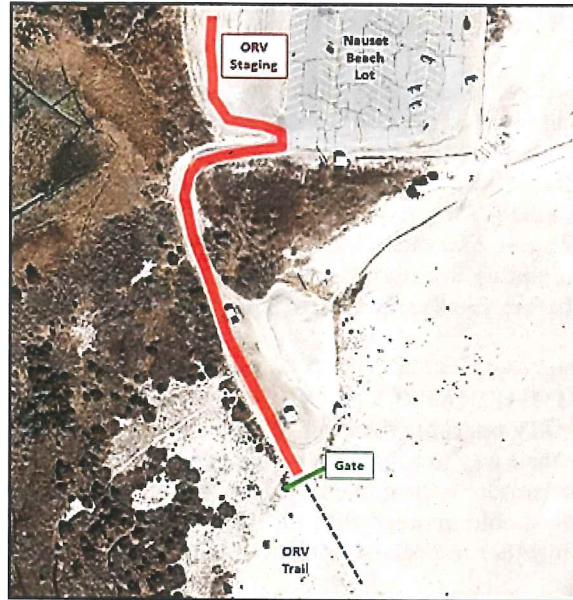


Figure 1: Entrance to HCP Staging area & Gate

STEP 2: From Nauset Beach South Gate (lower lot) to the self-escort zones:

When shorebird monitors have established the locations of the chicks, they will notify staff stationed at the entrance gate and the gate will be opened. The OSV will then proceed through the entrance gate at **10 M.P.H.** until they arrive at the self-escort zone. Each self-escort zone will be marked with signs as shown below indicating where the self-escort zone begins and ends. **BE ON THE LOOK OUT AT ALL TIMES** for these signs. Remember the locations of the signs may change daily due to the chick's locations. When you arrive at a self-escort zone, stop your OSV, have your escort person exit the OSV and walk 15 feet in front of the OSV. The OSV will follow behind the escort person at **WALKING SPEED**. It is your responsibility to identify the **SELF-ESCORT BEGINS & ENDS SIGNS**.

THE ESCORT ZONE SIGNS YOU WILL ENCOUNTER ARE SHOWN BELOW



Figure 2 represents examples of the location of two (2) separate self-escort zones. While you proceed through the self-escort zone be aware that piping plovers are very territorial. Consequently the broods may be separated, so each escort-zone may contain 1 brood with up to 4 chicks and 2 adult plovers. If they are close together there will only be 1 self-escort zone. **Plovers may be moving throughout the habitat area as you are walking and driving through the self-escort zones. They can appear at ANY TIME and ANYWHERE.**

Figure 2: Example showing two (2) self- escort zones

STEP 3: Moving through the Self-Escort Zones:

While walking and driving through the self-escort zones you should be focused on looking for chicks and/or adults in the OSV corridor. Walk slowly; keep your attention and eyes on the OSV corridor in front of you. Also use your peripheral vision to look for chicks near the edge of the corridor that may dart out. Chicks may also hide in small depressions in the sand including the tire ruts or in dune grass. They rely on blending in with their surrounding habitat. When unfledged chicks are close, the adult parent plover will often get excited and move directly into your path. They may also pretend their wing is broken and cannot fly; they may flap their wing on the ground while moving away from you. This biological defense behavior is commonly referred to as the "broken wing display." **If you see this, the adults are attempting to draw attention to themselves and away from the chicks. You may hear the parent adult sounding an alarm call before you see the chicks. The call sounds like "peep-peep" repeated rapidly.**

If the escort person or OSV driver sees a chick and/or adult in the OSV corridor or within 100 feet of the self-escort zone, **they MUST signal the vehicle behind them to IMMEDIATELY STOP. The signal for this is: the self-escort designee raises his/her right arm and then shouts "STOP."** The OSV operator must safely stop the vehicle. The driver will then honk his horn in **three (3) short bursts.** Monitors will make their way to you. No herding of chicks or adults will be permitted. The Monitor will sweep the area and then determine when the corridor is clear to travel. They will speak through a megaphone, **"IT IS SAFE TO PROCEED."** OSV may then proceed. **You should proceed with the understanding that chicks may reappear, at any time in the corridor. Chicks tend to travel close together, especially in the first 10 days after they hatch.**

Below are photos of chicks and adult plovers' acting out the feigned or broken wing display.



STEP 4: Nauset Beach South Exiting Protocols:





Figure 3: Exiting gate Staging Area near Trail 1

OSV will be expected to begin preparing at least 1 hour before planning to exit the beach during the 4:00 p.m. to 6:00 p.m. access window.

All OSV are to be clear of the self-escort zones by 6:00 p.m. In order to alleviate traffic congestion, management recommends that OSV begin preparation at 3:00 p.m. for their 4:00 p.m. departure. **OSV are required to be at the Trail 1 gate by no later than 5:30 p.m.**

At approximately 1.5 hours before the 6:00 p.m. closure, Beach Ranger staff will sweep the beach in a patrol vehicle with flashing strobe lights on. Starting in the south and working north, this **final drive-through is a directive for all non-self-contained OSV to begin preparations to be at the Trail 1 gate by 5:30 p.m. and clear of the self-escorting corridor and the beach by 6:00 p.m.**

Due to varying high tides, changing beach conditions and additional plover related closures outside of the self-escorting zones, portions of Nauset Beach South may be closed to OSV traffic. Therefore OSV traffic should anticipate having to use a combination of frontal beach and back trails (as we have in the past) to exit the beach. As mentioned, there will be a gate located near Trail 1 staffed with an attendant. All OSV exiting the beach shall line up in a row when approaching the gate. No OSV or their self-escort designee are to pass by the gate prior to 4:00 p.m. At 4:00 p.m., the gate attendant will open it once the shorebird monitors have determined that the corridor is open and it is safe to proceed. **The 4:00 p.m. opening may be delayed up to 1 hour due to location of the chicks in the self-escort zone.** OSV will proceed at no more than 10 mph driving speed until they reach the boundary of the self-escort zones. Here, you will be required to repeat the same procedure from when you accessed the beach. **Once again, all self-escorting protocols discussed earlier will remain in-effect during the exiting window. Your cooperation with the required protocols will help to promote an enjoyable experience for you and your fellow permit holders.** Use good judgment in planning your day, especially if it is one in which there are many vehicles remaining on beach between 4 and 5 p.m. A congested OSV corridor when leaving will not contribute to an enjoyable experience.

On occasion there could be as many as 180 vehicles attempting to exit during the 4:00 p.m. to 6:00 p.m. window. If everyone waits until the last minute to leave, the Town of Orleans will be unable to meet their legal requirements and conditions of the Permits. Plan your stay accordingly and enjoy.

Airing Stations: As always there may be a line waiting to use the two air supply lines at the Nauset Beach South air station. If you choose to wait and use the air station, be patient. During times of intense traffic congestion, management may close down the air station in order to move along traffic and keep the corridor open. Please have a backup plan for airing up.

VIOLATIONS: Any violations of the aforementioned protocol **will not be tolerated.** **Violators of the HCP Procedures and Conditions shall be subject to OSV sticker revocation, and shall have their rights to operate an OSV on Nauset Beach suspended immediately for a period of one year from the date of the violation. A ZERO TOLERANCE POLICY WILL BE IN EFFECT AT ALL TIMES on all rules regarding the HCP.** The cooperation of the general public in complying with the conditions and regulatory requirements of the Permits will be critical in determining the success of the HCP Program. You should all consider yourselves as active stakeholders in the entire HCP process and its successful implementation.

Enjoy your day at Nauset Beach.

Remember, staff are here to help you. They are also responsible for making sure the OSV permit conditions are met.

Question: Will the HCP be in effect this year and for how long?

Answer: *The HCP will be implemented when there are no more than 2 broods and 8 unfledged chicks remaining in the Pochet Wash area. There is **NO GUARANTEE** or definitive start and end date for when this scenario will occur.*

The Natural Resource Manager, Beach Director or their designee, will monitor weather forecasts on a daily basis. In the event that a storm warning is predicted by the National Weather Service, or any other weather warning that could jeopardize public safety within a 24-hour period, the OSV trail shall be closed for the duration of the hazard or the start time may be moved one hour later or earlier. The OSV trail may not reopen until the Natural Resource Manager, Beach Director or their designee has given the all clear. **The OSV sticker purchaser and any operator of the OSV agree to use Nauset Beach South during the time the HCP is in effect at their own risk and have been advised in writing of the HCP Shelter in Place Condition. Exiting escorts will not take place due to unpredicted weather.** The OSV Permit purchaser and any operator of the OSV Permit holder's vehicle hereby agree to adhere to a "shelter in place" policy which will go into effect until the inclement weather has passed, or scheduled exiting escorts have begun.

Each person operating the OSV must read the HCP Procedures & Conditions and sign this Acknowledgment before access to Nauset Beach South will be allowed when the HCP is in effect regardless of whose name the OSV Permit is in.

STEP 5: ACKNOWLEDGEMENT OF HCP PROCEDURES AND CONDITIONS

I, (Print Name & OSV Permit #) (fill in below), have read the HCP Procedures and Conditions contained herein. By signing this HCP Acknowledgment, I acknowledge that I understand and agree to fully comply with the HCP Procedures & Conditions. I understand that if I or any of my occupants fail to comply with or violate any of the HCP Procedures & Conditions, it shall result in a \$200.00 fine and immediate revocation of the OSV Permit.

I also understand that the Town has adopted a ZERO TOLERANCE POLICY for violations of the HCP Procedures and Conditions. I further agree that when requested to do so by Town of Orleans staff, I will produce this signed copy.

Please keep a copy of the HCP Conditions and Procedures in the OSV at all times.

Print Name & Permit #

Sign & Date:

Print Name & Permit #

Sign & Date:

Print Name & Permit #

Sign & Date:

Print Name & Permit #

Sign & Date:

Print Name & Permit #

Sign & Date:

Appendix 4

Landowner Authorizations



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5188

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5176

Shellfish
(508) 945-5184

Harbormaster
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: **41-8133** with owner of record as **Brooks B. Thayer, Trustee, PO Box 1377, Orleans, MA 02653** is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, PhD., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.

Brooks B. Thayer
Signature

12/12/2019
Date

Brooks B. Thayer
Print Name



Town of Chatham
Department of
Natural Resources



Health
508-945-4184

Water Quality Laboratory
508-945-4184

Conservation
508-945-4184

Coastal Resources
508-945-4184

Sanitation
508-945-4184

Marine Matters
508-945-4184

FAX: 508-945-5165

303 George Wythe Road, Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

As owner of real property identified as Parcel Tract #: 41-8147 with owner of record as North Beach Nominee Trust, Mary A. Hammatt, Trustee, PO Box 649, Chatham, MA 02633, the undersigned owner allows the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Protective Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Protective Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncan, PhD., Department of Natural Resources at (508) 945-5165, or

rduncan@chatham-ma.gov.

M. Hammatt
Signature

Mary A. Hammatt
Print Name

12/16/19
Date



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5188

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5176

Shellfish
(508) 945-5184

Harbormaster
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

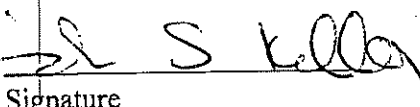
Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: 41-8134 with owner of record as **AMMRC Realty Trust, John S. Kelley, Trustee, 58 Bridge Road Orleans, MA 02653** is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, PhD., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.


Signature

12-13-19
Date

John S. Kelley
Print Name



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5188

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5176

Shellfish
(508) 945-5184

Harbormaster
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

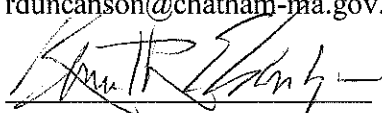
Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: **41-8138** with owner of record as **Kenneth F. Eldredge, Atwood/Baker/Backlash/RT/Et Al, 507 Orleans Rd. Rt 28, Orleans, MA 02653** is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, PhD., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.


Signature

12 - 12 - 19
Date

Kenneth Eldredge
Print Name



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5165

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5175

Wildlife
(508) 945-5184

Marshland
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: 41-8137 with owner of record as Collin M. Fuller MD Family Trust, Roy Coppedge, 1625 Painted Rock Trail, Reno, NV 89502 is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, Ph.D., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.

Signature

Print Name

Date

Roy F. Coppedge
Roy F. COPPEDGE

12/11/19



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5188

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5176

Shellfish
(508) 945-5184

Harbormaster
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

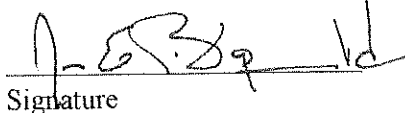
Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: **41-8146** with owner of record as **James E. & Robbin A. Fitzgerald, PO Box 129, Norwell, MA 02061** is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, PhD., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.


Signature

12.13.19
Date

James E. Fitzgerald
Print Name



Town of Chatham
Department of
Natural Resources



Health
(508) 945-5165

Water Quality Laboratory
(508) 945-5188

Conservation
(508) 945-5164

Coastal Resources
(508) 945-5176

Shellfish
(508) 945-5184

Harbormaster
(508) 945-5185

FAX (508) 945-5163
261 George Ryder Road Chatham, MA 02633

**Agreement for Implementation of Activities Covered Under the Habitat Conservation Plan
for Piping Plovers on Private Property**

Private property ownership on North Beach within the Town of Chatham ("Town") is unclear due to the dynamic nature of the outer beach and the erosion and accretion that has occurred following the 2007 inlet break. The actual existence or extent of real property identified as Parcel Tract #: **41-8136** with owner of record as **NB Nominee Trust II, Claire Shea Trustee, PO Box 777, Dennisport, MA 02639** is not confirmed. However, the property is listed as an assessed North Beach property, and as such, the undersigned owner(s) allow the Town to implement the Covered Activities listed below and as described in the Town's Habitat Conservation Plan for Piping Plovers Request for Certificate of Inclusion ("Plan") submitted to the MA Division of Fisheries and Wildlife on any remaining portions of our property.

Covered Activities:

- 1) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Nests (3.2.2.1)
- 2) Recreation and Beach Operations Associated with Reduced Proactive Symbolic Fencing around Habitat (3.2.2.2)
- 3) OSV Use in the Vicinity of Unfledged Piping Plover Chicks (3.2.3)
- 4) OSV Use in Vicinity of Least Terns

It is understood that the Town is responsible for fully implementing the Plan, including risk minimization measures and mitigation. The Town is responsible for "take" that occurs as a result of the implementation of the covered activities which may occur over the course of the summer nesting season.

Any questions or concerns regarding the Plan or implementation of the Plan, or if the undersigned decides to suspend permission to conduct the covered activity, the undersigned shall contact Robert Duncanson, PhD., Department of Natural Resources at (508) 945-5165, or rduncanson@chatham-ma.gov.

Signature

Date

John Shea

Print Name

12/13/19

Appendix 5

Compliance Monitoring

Daily HCP Compliance Log & Daily HCP Vehicle Log

HCP Compliance Monitoring Logs

Name of HCP Monitor:

Date of Monitoring activity:

Time Monitor visually acquires brood and location:

Time of Day and Number of Hours Monitor conducted observations:

Location of Broods:

Diagram Map drawn by hand showing movement and general location of brood:

Draw on back of page.

Adults and chicks and number of chicks observed:

Monitors comments on brood's reaction to recreational activity and self-escorting and vehicle movement:

Whether brood crosses OSV corridor and time of day observation made:

If stress of brood is observed by covered activates describe brood behavior and movement in detail:

Recommendations to improve monitoring (if any) at conclusion of last window:

Comment on Effectiveness of Monitoring to be Reviewed by Beach Manager Daily:

Daily HCP Vehicle Log

Date:

Window Covered:

Name of OSV Corridor Monitor:

OSV Permit #: _____

License Number & State: _____

Resident: _____ **Orleans** _____ **Chatham:**

Non-Resident: _____

OSV (Day-tripper): Y N

Self-Contained: Y N

Record Vehicle Time On:

Record Vehicle Time Off:

Note: All non-self-contained vehicles must be off the beach in sufficient time (5:15 p.m. to 5:30 p.m.) to clear the last Orleans HCP self-escort zone by 6:00 p.m.

Appendix 6

On-site Mitigation Plan

TOWN OF CHATHAM

North Beach 2020-2023 On-Site Predator Mitigation Program

Introduction

Since 2014 baited electrified “dummy” exclosures (EDE) have been used effectively on the Nauset Barrier Beach System to increase Piping Plover (PIPL; *Charadrius melodus*) productivity. Use of EDE’s has become a highly effective, non-lethal behavior modification program, targeting Eastern Coyotes (*Canis latrans*) and Fishers (*Pekania pennanti*). These mammals are apex primary predators of PIPL nests.

Exclosures, when used properly, also decrease predation caused by a host of avian predators including nearly every species of hawk, gull(s), American Black Crows (*Corvus brachyrhynchos*), and Ravens (*Corvus corax*). USFWS authorized use of exclosures (Type A) to reduce predation of PIPL nests. See “*Predator Exclosures: A Technique to Reduce Predation at Piping Plover Nests, 1992*”.

Introduction of exclosures was initiated before coyotes first appeared on the Nauset Barrier Beach system. Over time as their population increased, coyotes began to adapt and associate exclosures with a food reward. Their behavior evolved and they became what is commonly referred to as “smart predators.” Coyotes key in on exclosures and will often dig at the base of an exclosure containing a nest with incubating adults or they engage in close encounter circling of exclosures. This behavior ultimately results in the incubating adults abandoning nests soon after initiation of coyote activity. There is also the possibility of adult mortality. When a nesting PIPL defends a nest, they will exhibit the “feigned broken wing defense.” This defensive behavior creates a situation in which the defending adult becomes highly vulnerable to predation by a coyote. The adult PIPL will move slowly away from the exclosure exhibiting broken wing behavior allowing a coyote to pounce and carry the carcass away from the nest.

The potential for these predators to impact incubating exclosed nests is illustrated by events in Orleans in 2013. Paul Wightman, working as the Shorebird Specialist for Orleans, exclosed 16 nests on Nauset Beach in Orleans. Coyotes, sometimes with their pups, keyed in on the exclosures digging at the base of the exclosures and circling them repeatedly. This resulted in all 16 nests being abandoned almost immediately. Most of the adults did not attempt a re-nest and some left the area.

Lethal predator control is not a publicly supported option on North Beach. However, coyotes are canine animals and their behavior can be modified with non-lethal methods providing an alternative to reduce predation of incubating nests. Building on the program initiated in Orleans, Chatham implemented the use of EDEs beginning in 2017.

Mr. Wightman developed a prototype for baited EDEs, and following consultation with DFW, baseline data was collected on coyote response to being shocked when attempting to gain access to the bait in the EDE. Non-electrified exclosures utilized to exclose incubating PIPL

nests were designed to look identical to the EDEs. Coyote tracks were recorded at both baited EDEs and exclosures containing a nest with incubating adults. Evidence of coyote tracks was documented from the base of the exclosure out to a distance of 5 feet, 5 feet to 15 feet, and 15 to 25+ feet.

Game cameras were set up at the EDEs to capture coyote reaction to the shock. This helped document responsive behavior to determine if a shock resulted in behavior modification from “smart predators,” to predators that avoided the exclosures altogether. Within a few days, observed coyote tracks indicated that coyotes began to move further and further away from all exclosures when passing through an area where exclosures were located. Once the coyote made the association from viewing exclosures as a food reward to one that resulted in a negative, unpleasant experience they remembered and avoided exclosures.

EDE use has been shown to reinforce modified behavior through monitoring and tending the EDEs. Non-electrified exclosures are designed to look exactly like the EDEs absent the electrical energizer used to generate the necessary voltage, on average 6,000 volts. Bait is changed regularly, observations recorded, and tracks from the previous evening of foraging raked. EDEs are moved periodically and placed on game trails where observations indicate coyotes enter or leave the beach.

No predator control method is 100-percent effective and there are few non-lethal methods available to beach managers. Based on the combined experience, beginning in 2013 in Orleans and over the past three years (2017-2019) on North Beach, Chatham has concluded this method is effective at reducing mammalian predation of incubating PIPL eggs. Predation of unfledged chicks continues to be an issue on North Beach and throughout the region. However, Chatham’s utilization of EDEs has improved productivity by increasing the number of eggs reaching hatching stage.

The Gateway National Recreation Area at Sandy Hook, NJ (U.S. National Park Service) has been deploying electrified exclosures on incubating nests for many years. See NPS video <https://www.youtube.com/watch?v=RX1lm6oFnF8&feature=youtu.be>.

Electrified Exclosure Goals and Objectives

- To identify primary predators of piping plovers;
- To introduce behavior modification of canine omnivores and other predators through use of non-lethal predator control;
- To promote early and first-time adult PIPL nesting attempts;
- To decrease abandonment of incubating exclosed nests;
- To decrease re-nesting due to nest failure; and
- To increase PIPL productivity.

Conclusion

Proper use and management of predator exclosures has repeatedly been shown to increase nest hatching rates. Widespread use of exclosures from the late 1990s to mid-2000s, coupled with improved management in accordance with the *Guidelines*, were likely the main factors

driving the higher productivity and overall PIPL population growth in Massachusetts observed during this period.

The use of predator exclosures to protect nesting PIPL nests is a vital part of overall management of the North Beach Endangered Shorebird Program. For the past 3 years use of EDEs has been shown to modify coyote behavior toward all exclosures and improve Chatham's productivity.

Chatham is confident that utilization of EDEs has increased PIPL productivity on North Beach. Therefore, Chatham requests that its ongoing non-lethal predator control program be credited as on-site predator mitigation in the 2020 to 2023 COI and that Chatham receive a reduction in its annual off-site mitigation fee.

¹ Predator Exclosures: A Technique to Reduce Predation at Piping Plover Nests, 1992, Scott M. Melvin, Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, Westborough, MA 01581; Laurie H. McCivior, Department of Forestry and Wildlife Management, University of Massachusetts, Amherst, MA 01003; Curtice R. Griffin, Department of Forestry and Wildlife Management, University of Massachusetts, Amherst, MA 01003, Wildl. Soc. Bull. 20:143-148.

B10 Energizer with 3 levels of electrified wire emitting 6000 volts on 3 second intervals. Unit operates on 6 D-cell batteries, operates for 20-30 days.



Photo of fully deployed electrified exclosure.



A digital voltage meter provides the most accurate reading of electricity delivered. This unit is showing 6.56 (6,560 volts). Since 2017 more grounding rods were introduced to boost shock level to 7000 volts.

Average time for installing a non-electrified exclosure over an incubating nest was 10 minutes or less. There have been no observed nest abandonments based on the electric wire and stakes needed to mimic the electric exclosure. This time period complies with U.S. Fish & Wildlife standard for installation, which is no more than 15 minutes using 3 people to install.

A game camera was installed at one or more of the electrified exclosures to gather information on the type of predators visiting the exclosures. The information gathered is useful in determining the number and species of predators in the area as well as the effectiveness of the program.

Typical predators found in Orleans and Chatham:

- Red Fox (*Vulpes vulpes*)
- Coyotes (*Canis latrans* var.)
- Fisher (*Martes pennanti*)



Red fox reacting to the electric shock received. This Red Fox was recorded on Nauset Spit in 2015.



Coyotes did not gain entry to baited exclosure. Once it was shocked it did not return.



Fisher (above) observed in Orleans in 2015



**Fisher attempt to dig under electrified exclosure.
After initial shock, Fisher never returned.**
