

BEACH MANAGEMENT PLAN WASQUE, LELAND, AND CAPE POGE WILDLIFE REFUGE



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Part I. Background, History, and Natural Features

1.1.0 Introduction

Since 1891, The Trustees of Reservations has worked to protect special places in Massachusetts. These protection efforts have relied upon the generosity of private individuals and the collaborative efforts of volunteers, local communities, professionals, and other conservation organizations. Charles Bird and Oliver Filley gave the first parcel of land at Cape Poge to The Trustees. Since then, several others have donated land or have helped The Trustees raise funds to protect additional parcels, forming the Cape Poge Wildlife Refuge and Wasque Reservation. Together, with the Commonwealth's Leland Beach parcel, these properties protect the eastern shore of Chappaquiddick Island. Since the early protection effort in 1959, the properties have stood out as two of The Trustees' hallmark properties.

People. Places. Perpetuity.

OUR MISSION

To protect, for public use and enjoyment, places of exceptional scenic, historic, and ecological value.

The Trustees owns and manages approximately 10 miles of barrier beach system extending from Cape Poge Wildlife Refuge to Wasque, one of the most significant and loved coastal areas on Martha's Vineyard (

). Visitors can access these beaches in several ways, including walking from parking areas, by boat, or by oversand vehicles. Over-sand vehicle (OSV) use is a longstanding privilege on the 10-miles of beach and one highly valued by a broad section of the local and visitor communities. Given the length of the beach system, some more remote portions of the beach are difficult to access without an OSV or boat, primarily portions of the Cape Poge Wildlife Refuge. Moreover, OSV use is critical for Trustees staff conducting resource management, research, enforcement, and public safety actions as well as for residents needing access to private property.

Consistent with its charter, The Trustees maintains a strong commitment to public access to exceptional ecological areas while also operating a beach management program that conserves the scenic, natural, and historic resources for generations to come. The multitude of values provided by a barrier beach system includes protection of inland resources (i.e., infrastructure) from sea level rise and storm surge, compatible recreational opportunities for the public, and high-quality habitat. The habitat on these beach ecosystems supports viable populations of wildlife, including migratory bird species, as well as species such as shellfish and finfish that are important for the local economy and recreation. Lastly, and importantly, coastal habitats (such as salt marsh) play a critical service of sequestering carbon and safeguarding the beach dune system.





Figure 1. Map of existing trails on Wasque, Leland (top) and Cape Poge Wildlife Refuge subject to this beach management plan.

To support these values, it is critical to protect the beach from erosion and the impacts of rising sea levels and increased storms. Sea level rise and greater storm intensity are projected to cause increasingly frequent, and more severe, erosion and flooding. This will result in more frequent loss of public access as well as wildlife habitat. If not effectively managed, public access (both pedestrian and OSV) can damage or destroy vegetation that lend strength and resilience to barrier beaches by trapping and consolidating sand. Inappropriate recreational use risks damaging the physical integrity of our beaches that underlies the full range of uses the beaches serve. Public use must be managed in concert with other values to promote resiliency and minimize impacts on wildlife, flora, and other beach users.

This Beach Management Plan describes the history, climate change impacts, delicate ecology and the important management of the system that preserves the delicate beach system and recreational access for the public's use and enjoyment.

The goal of this plan is to outline current usage of the beach and detail ongoing management activities and provide guidance for current and future Trustees staff managing the diverse and fragile natural resources associated with this barrier beach system. Numerous state, federal and local regulatory statutes exist to protect barrier beaches and ensure that ongoing or proposed activities have limited or no adverse impacts on the functions, habitats or species associated with this landform. This plan is grounded in the *Guidelines for Barrier Beach Management in Massachusetts* which was produced in 1994 as a collaborative effort of public and private groups. In addition, the plan follows other state and federal guidelines addressing barrier beach management and the species relying on these systems including but not limited to the *Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts*. The Trustees produced this plan with significant feedback and guidance from the Beach Management Stakeholder Working Group, the community of Martha's Vineyard, visitors, regulators, conservationists, and all who enjoy these extraordinary places. The Beach Management Plan was produced to secure an Order of Conditions from the Town of Edgartown to enable Oversand Vehicle Access on the subject area as well as clearly articulate our management approach to the public.

1.1.1 Public and Stakeholder Process

In June 2022, The Trustees released a draft Beach Management Plan (BMP) to the public and our partners at the local, county, and state level, and asked the community to review, evaluate, weigh in with their ideas, and work with us towards a final plan. The Trustees presented the plan at the following public meetings:

- Cape Poge District of Conservation Planning Concern: June 30, 2022
- Dukes County Commission: July 6, 2022
- Edgartown Conservation Commission: July 13, 2022

The Trustees created a webpage and a link to a survey for the public to provide feedback on the draft plan. The Trustees received more than 400 survey responses, and many members of the community expressed a desire to have even more voice and input into the initial planning process. The Trustees responded by rescinding our draft beach management plan and began work expanding our process to allow for more discussion of these complex issues through local collaboration. We aspired to come out with consensus on as many things as possible. While we know we won't reach a full consensus on everything, having these conversations informed a collaborative plan that best balances recreation, resource protection and resiliency.

The Trustees hired the Consensus Building Institute (CBI) to facilitate a beach management planning process guided by public interest, feedback, and support. The process began with CBI interviews of 20 stakeholders representing a wide array of interests including conservation, shellfishing, OSV access, kiteboarding, surfcasting, birding and more. After initial interviews, The Trustees and CBI created a stakeholder working group to relaunch the beach management planning process. The goal of the working group was to create space for more collaboration and input from various local stakeholders, align knowledge on regulatory and environmental processes driving beach management, understand values toward the beloved beaches, and work towards consensus on areas of divergence. The working group consisted of representatives from:

- Edgartown Town officials (Town Manager, Conservation Agent, Conservation Commission)
- Cape Poge and other Chappaquiddick residents
- Members of the MV conservation community
- Members of the fishing and Shellfishing community
- MV Beach Access Group
- An experienced beach manager of an OSV beach in Massachusetts
- Dukes County Commission
- Commonwealth of Massachusetts, Division of Marine Fisheries
- Chappaquiddick landowners

The group met every three weeks beginning in October 2022 until February 2023. Starting in December 2022, these meetings were open to the public. The Trustees posted written summaries, responses to

public questions, presentations, meeting recordings, and a summary report of public feedback on our website: thetrustees.org/bmp.

Finally, The Trustees hosted a public hearing on May 3, 2023 summarizing the process and results of the working group, as well as our proposed new approach to beach management based on the results of the working group.

1.1.2 Foundational regulations and research

This Beach Management Plan outlines current and existing usage, management practices, and protection of the Wasque Reservation, Leland Beach, and Cape Poge Wildlife Refuge beaches. This beach management plan pertains to practices on the areas owned by or managed through contract with The Trustees.

Regulations, agreements, designations, and guidelines that shape this plan include:

- Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts, MDFW 1993¹
- Massachusetts Tern and Piping Plover Handbook: A Manual for Stewards, MDFW 1996
- Massachusetts Piping Plover Habitat Conservation Plan Handbook, 2021²
- Piping Plover Habitat Conservation Plan, 2016³
- The Trustees Habitat Conservation Plan Certificate of Inclusion⁴
- Developing a Beach Management Plan that Protects Piping Plovers and Terns in Massachusetts, Natural Heritage and Endangered Species Program, 2021
- The Massachusetts Wetlands Protection Act;⁵
- The Massachusetts Endangered Species Act⁶
- Federal Endangered Species Act
- Federal Migratory Bird Treaty Act
- The Trustees Policy: Over-sand Vehicles on Beaches, 2021
- The Trustees Policy: Managing Non-listed Bird Species on Coastal Beaches (2021)
- Cape Pogue District of Critical Planning Concern 1994 ⁷
- Cape Pogue District of Critical Planning Concern, as Amended 2021⁸
- Coastal District of Critical Planning Concern⁹

The Trustees owns and/or manages over 1,600 acres across Martha's Vineyard and approximately 800 are subject to this beach management plan. Areas of these properties not subject to beach management, e.g., Wasque Grasslands and Heathlands, are not included in the plan. Additionally, the Cape Poge Lighthouse is located on Trustees land and is owned and maintained by the U.S. Coast Guard.

⁴ https://www.mass.gov/doc/edgartown-ttor-beaches-hcp-coi-june-2020/download

¹ <u>https://www.mass.gov/doc/quidelines-for-managing-recreational-use-of-beaches-to-protect-piping-plovers-terns-and-their/download</u>

 $^{^{2} \}underline{https://www.mass.gov/doc/massachusetts-piping-plover-habitat-conservation-plan-handbook/download}$

³ https://www.mass.gov/doc/piping-plover-habitat-conservation-plan/download

⁵https://www.mass.gov/doc/310-cmr-1000-the-wetlands-protection-act

⁶ 321 CMR 10.00: Massachusetts Endangered Species Act | Mass.gov

⁷ DCPC Cape Poge Decision 0.pdf (mvcommission.org)

⁸ Article (dukescounty.org)

There are also several privately owned inholdings within the Cape Poge Wildlife Refuge, including a community of private parcels near the Cape Poge Elbow.

The Trustees manages Leland Beach under the *Cooperative Management Agreement Between the Commonwealth of Massachusetts and The Trustees of Reservations Regarding Management of Leland Beach, Chappaquiddick Island, Martha's Vineyard, MA, 1994* (Appendix E).

1.2.0 History

1.2.1 The Chappaquiddick Wampanoag

The land subject to this beach management plan is the ancestral homeland of the Chappaquiddick Wampanoag. Their presence dates back 12,000 years ago¹⁰ at the last glacial retreat to today. They are a first-contact tribe with European settlers where their land was overtaken over several centuries despite the Tribe's legislative, legal, and petitioning to protect their tribal homelands and the Tribe itself. In the late 1700s, land not previously sold on Chappaquiddick was divided and the Chappaquiddick Wampanoag retained only 20% of their ancestral lands, comprising two reservations, the Cleared Reservation on North Neck and the Woodlands Reservation. ^{11,12}

We acknowledge the Chappaquiddick Wampanoag lands on Cape Poge Wildlife Refuge, Leland and Wasque.

1.2.2 Land Use History and Cultural Resources

Land clearing for hunting, subsistence, heating, building and agriculture was prominent on Cape Poge and Wasque. As land was cleared to provide for agriculture, specific sections were set aside as pasture for animals. Curiously, land-clearing and grazing practices on Chappaquiddick were so intense that as early as the 1660s, the Town of Edgartown began to pass measures that limited the number of trees to be cut and the number of livestock to be pastured on Chappaquiddick. In 1663, the town imposed a fine of "five shilling for every tree that shall be cut without order from the town."

Nonetheless, cattle, goats, and sheep were instrumental to survival and provided products such as wool, milk, cheese, and meat. Since Chappaquiddick was surrounded by water and free from natural predators, relatively little effort was used to confine livestock at Cape Poge and Wasque. Grazing on Chappaquiddick at this time was unique in that it was practiced seasonally. Livestock that were held in Edgartown for the summer were led to Chappaquiddick through low waters via "the swimming place" every fall. The animals were released to graze the upland and salt marshes throughout the winter and spring and the following year sheep were shorn of their wool while other livestock was returned to Edgartown. The sheep and new lambs on Chappaquiddick were herded into Shear Pen Pond at Cape Poge. The animals were then washed in this pond, shorn of their winter wool, re-marked with ocher for identification, and united with their owners. Once these animals were returned to Edgartown, regrowth of the "pastures" was allowed during the summer months. "The swimming place" is a short-distanced, shallow area in Edgartown Harbor that was used to walk or swim animals from Edgartown to Chappaquiddick. By 1782, 20,000 sheep and 2,000 cattle were being raised on Martha's Vineyard. By

¹⁰ Capece, J.A. 2001. Land-use History of Cape Poge and Wasque. Vineyard Haven: The Trustees of Reservations, white paper.

¹¹ Our History — Chappaquiddick Wampanoag Tribe: https://www.chappaquiddickwampanoag.org/

¹² Chappaquiddick Wampanoag Tribe | Martha's Vineyard Island Community | Massachusetts:

https://www.chappaquiddickwampanoagtribe.org/

1850 there was a dramatic decline in sheep farming on the Vineyard, and in 1880, only 9,225 sheep were reported. $^{\rm 13}$

New Englanders began to abandon farming in the 1800s. Land at Cape Poge and Wasque, meanwhile, was still being cultivated at various intensities at this time. In 1826, an estimated 140 acres - nearly all the tillable land of both Great and Little Necks¹⁴ was plowed and planted with corn, while nearly all Wasque was under cultivation of various sorts. This was, however, the final recorded occasion of significant agricultural activity on Cape Poge.¹⁵

1.2.3 Protecting the Land

The collapse of large-scale agriculture caused farmlands to revert to shrublands and forests. Large tracts of land once serving as agricultural fields and pastures became enticing to developers looking to establish housing lots. Throughout the island, pressure for additional housing led to widespread development, fragmentation of natural areas, and a decline in the total area of natural woodland, shrubland, and grassland.¹⁶

As development on Martha's Vineyard progressed through the turn of the twentieth century, land at Cape Poge and Wasque became especially desirable to developers. Pamphlets circulated advertising "The Sea Breezes and Healthful Climate of the Fashionable Summer Resort, With the Additional Advantages of Superior Fishing, Quiet Seclusion, and the Lowest Summer Temperature on the New England Coast. A Rare Opportunity for Investment or for Building." In 1892, Cape Poge and a stretch of East Beach were surveyed for subdivision. The plans included a hotel adjoining the lighthouse and a wharf reaching out into the sound (Figure 2).

Between 1889 and 1894, development pressures continued while Wasque still served as a pasture for approximately 100 sheep. By 1909, the Pease family sold their inheritance at Wasque to Maude A. Ayer of Woburn, who assigned The State Street Trust Company as trustee. In 1913, Wasque was subdivided into 775 housing units, and was to be named "Chappaquiddick-By-The-Sea." Wasque Point was laid out into a grid-like pattern of streets, avenues, parks, clubhouses, and docking facilities for yachts. (Figure 2). By 1914, developers sold a few lots, but for the next 15 years, not a single lot was sold. By 1959,

¹³ This and the following figures have been excerpted from Foster and Motzkin 1999. Historical Influences on the Landscape of Martha's Vineyard: Perspectives on the Management of the Manuel F. Correllus State Forest. Harvard Forest, Harvard University. Harvard Forest Paper No. 23

¹⁴ The Vineyard Gazette, August 24, 1922, "Cape Poge". The author of this article received this information from his father, who was 23 years old at the time and alone planted and cultivated 30 acres of land at Cape Poge for that year.

¹⁵ Dunwiddie, Peter W. 1994. Martha's Vineyard Landscapes: The Nature of Change. The Vineyard Conservation Society. 60 pp. 3 – Land Use History and Cultural Resources 3-3 3.3

¹⁶ Foster, David R., and Glenn Motzkin. 1999. Historical Influences on the Landscape of Martha's Vineyard: Perspectives on the Management of the Manuel F. Correllus State Forest. Harvard Forest, Harvard University. Harvard Forest Paper No. 23.

Charles S. Bird and Oliver D. Filley donated most of Cape Poge to The Trustees. The Trustees purchased the remaining parcels of Cape Poge between 1972 and 1986.¹⁷





Alternatively, The Trustees purchased Wasque with funds raised from the public. In December of 1967, the Washqua Point Trust was formed to purchase Wasque in five units, and subsequently sell each parcel to the Trustees of Reservations. In January of 1968, The Trustees of Reservations purchased the first parcel and within the following three years, purchased all five parcels.

¹⁷ Original acreage a gift, with endowment, of Charles S. Bird and Oliver D. Filley in 1959. Additional land purchased in 1972, 1975, 1977, and 1995; and in 1970, 1971, and 1976 with funds given by Mrs. Seth Wakeman. Additional land given by Mr. and Mrs. Richard M. Parmenter in 1964; Doris H. Chouinard in 1965; Dr. and Mrs. Edward B. Self in 1978 and 1984; Dr. and Mrs. Joseph Murray in 1983; and Philip B. Norton in 1986. Additional lands purchased in 1995 from Donald Greenstein.

I.3.0 Geology

The island of Martha's Vineyard is a relic of the last ice age and the warming trends that followed. Repeated glaciations scraped soil and rock from the mainland of New England. Eighteen thousand years ago, the glaciers reached their southernmost extent and began to melt and retreat, depositing the rock and soil once trapped within the ice as terminal moraines. These terminal moraines are found on the Elizabeth Islands, Cape Cod, Long Island, Nantucket, Block Island, Martha's Vineyard, and Chappaquiddick.¹⁸ Moraine deposits are composed of a mixture of rocks, stones, sand, silt, and clay. On top of this moraine, the glacier deposited outwash materials as it melted. This outwash is composed primarily of sands, which are the foundation for the predominant soil type, Carver soils, at Wasque and Cape Poge proper. Carver soils are excessively drained with rapid permeability and low water capacity. Beach, dune, and marsh soils, in contrast to glacially deposited soils, are more recent creations with new soil being deposited every year by the oceans and vegetation decay. Marsh soils such as those at Little Neck, Simon's Point, and around Poucha Pond are classified as mucky peats. The mucky peats are poorly drained and found in tidal areas, usually home to salt marsh grasses. Dune soils are classified as Udipsamments and are typical sand dune soils (excessively drained coarse sands). Beach sand is also excessively drained yet are more dynamic. Tides, storms, and erosion are constantly altering the shape of beaches.19

1.3.1 Beach geological dynamics

Over time, barrier beaches change shape and move along the coast. This is due to constructive and destructive waves, storms, sea level rise, and the effects of wind. Waves continually move sand along the shore, to bars of sand offshore, or out to sea as the seasons and predominant winds change. Accretion occurs from low flat waves fanning over a larger area on a beach adding sand material to the beach, typically occurring in the calmer summer months. Erosion occurs from breaking waves that pick up and move sand or sediment. High crashing waves carry sand from the beach offshore or out to sea as the backwash spills back down the beach. Continued sustained winds with high crashing waves can cause overwash and breaching of barrier beaches. The south shore of Martha's Vineyard and Chappaquiddick contain the most dynamic beaches and indicate a consistent long-term erosion trend, particularly along the barrier of Norton Point Beach and Wasque.²⁰

Norton Point beach that connects to the Wasque barrier beach on Chappaquiddick is one of the most dynamic areas on Martha's Vineyard with cyclical breaches. Historic records show that this spit has breached several times and shifted locations over the years. Some of the most significant breaches, typically caused after a major storm, occurred in 1856, 1886, 1938, 1954, and 2007 and lasted on average 15 years. There were also lesser breaches in the 1970s and 1991 after Hurricane Bob. In April 2007, the breach (caused when waters from Katama Bay broke the Norton Point barrier beach) created

¹⁸ Oldale, Robert N. 1992. Cape Cod and the Islands: the Geologic Story. Parnassus Imprints, East Orleans, Massachusetts.

¹⁹ Oldale, Robert N. 1992. Cape Cod and the Islands: the Geologic Story. Parnassus Imprints, East Orleans, Massachusetts.

²⁰ Woods Hole Group. 2022. Assessment and Analysis of Adaptive Interventions for Coastal Martha's Vineyard Properties. P.2

an initial opening more than 300 feet wide. The 2007 breach remained open for eight years causing severe erosion at Wasque Point.²¹



Figure 3. Breach at Wasque as viewed from the coastal bank at Wasque at the end of Trustees Lane. Erosion of the coastal bank caused significant loss of forest. Photo from February 2023.

²¹ Woods Hole Group. 2022. Assessment and Analysis of Adaptive Interventions for Coastal Martha's Vineyard Properties. Pp. 3-5

The Christmas Storm of 2022 caused the latest breach on The Trustees' Wasque beach (Figure 3). The breach caused significant erosion of the coastal bank and loss of approximately a quarter acre of pitch pine/scrub oak forest. The breach has migrated approximately 200 meters east by the Swimming Lot at Wasque and is projected to continue to migrate east. Its migration will continue to accelerate erosion along the dunes and coastal banks of Wasque. Simultaneously, the beach spit to the west of the breach is migrating east and will reconnect to Wasque Point eventually.

Similarly, the barrier beach spit that projects northerly from Chappaquiddick towards Cape Poge has been breached and reconnected by large storm events in the past.

1.3.2 Climate Change Impacts

Natural storm disturbances (nor'easters and hurricanes) shape the ecology of the barrier beach, and cycles of erosion, and gradual recovery characterize the barrier beach environment. Allowing for these natural cycles to occur unimpeded is integral to the beach's ecological function. A healthy barrier beach system includes a mix of habitats in various stages of recovery from storm events. This pattern is most evident along the front beach where the beach strand, primary dune, and overwash communities are altered by storms.

Climate change, however, is altering this natural pattern of erosion and deposition. More intense storm events are causing erosion that is often outpacing adjacent accretion or accretion on the back side of the barrier beach system. And sea level rise exacerbates that erosion and narrows the beach. Between 1935 and 2008, seas at the nearby Woods Hole NOAA gauge rose by nine inches. In the future, rates of sea level rise are projected to increase with more than two feet by 2050 and more than four feet by 2070 under the "high" sea level rise scenario (17% chance of underpredicting).²²

Erosion rates vary along this beach system, with the highest rates experienced along the Vineyard's south shore including at Wasque Beach (Figure 4). The breach in December of 2022 along Norton point beach continues to cause significant erosion at Wasque as described above. The long-term erosion rate at the Wasque swim beach is 10.6 ft/year (1887-2014) yet this rate is highly variable, and it has become more common to see 25-50 ft of erosion in a single year. Erosion also outpaces deposition at the elbow at the northern end of the Cape Poge Wildlife Refuge (Figure 4). Over the last 150 years, the beach has eroded 300 ft, making it necessary to move the lighthouse back from the retreating bluff's edge.

²² DeConto, R.M. and R.E. Kopp. 2017. Massachusetts sea level rise assessment and projections: technical memorandum.



Figure 4. Erosion rates along measured transects are shown on the left panel from 1897-2013 when this analysis was completed for the Massachusetts Coastal Zone Management Shoreline Change Project. Red transects indicate areas with significant erosion, yellow indicates areas that are classified as stable, and green indicates areas of accretion. On the right panel, the actual location of historic shorelines is shown. Note, this analysis is only updated through 2013 and significant erosion has occurred on Wasque since.

Sea level rise is also causing shifts in habitat types with significant impacts projected for salt marsh habitat. Across Martha's Vineyard, approximately 50% of the salt marsh is projected to be lost by 2050 (455 acres).²³ The marsh behind Leland Beach and surrounding Poucha Pond, for example, is currently classified as "high marsh" and floods irregularly with the monthly high tides. By 2050, under the "high" sea level rise scenario, much of this marsh is projected to be lost as it transitions to tidal flats (Figure 5).

²³ The Trustees, 2021. State of the Coast: future climate-driven risks and their solutions on Martha's Vineyard, Nantucket and Gosnold. Data from MA CZM SLAMM models.



Figure 5. Projections for salt marsh transition and loss by 2050 behind Leland Beach and surrounding Poucha Pond is shown using data from the Sea Level Affecting Marshes Model (MA Coastal Zone Management data). Most of the irregularly flooded marsh, shown in green on the left panel, is projected to transition to tidal flats by the year 2050 under the "high" sea level rise scenario.

This data presents a very real threat to the ecological integrity, landform integrity, and current and future access to these exceptional beaches. The Trustees considers these threats very seriously and careful management, restoration, and resilience are critical to ensure these places may be enjoyed by the public for generations to come.

1.4.0 Natural Resources

1.4.1 Ecological Systems

Cape Poge Wildlife Refuge, Leland Beach, and Wasque Reservation contain many delicate and important ecological systems.²⁴ Some of these are globally rare, most are regulated under the Massachusetts Wetlands Protection Act, and all of the area subject to this plan is designated as Priority Habitat for rare species by the Massachusetts Natural Heritage Endangered Species Program (MNHESP).

Table 1 summarizes the land cover types within the regulated area governed by the Wetlands Protection Act. The following section describes each of these systems.

Table 1. The 2016 National Land Cover Database data (the most recent geospatial land cover data available) spatial area analysis of all the land cover categories including forest and grassland cover on Wasque that are outside of the wetland regulated area.

All Landcover Type - Area Acres	Wasque	Leland Beach	Cape Poge	Total Acres Trustees- managed	Total Square Feet Trustees- managed
Bare Land/Beach	11.5	69.2	135.4	274.8	11,969,180.9
Deciduous Forest	5.7		0.6	6.4	277,257.7
Developed Open Space	0.3			0.3	11,120.3
Estuarine Emergent Wetland	2.8	22.3	41.8	67.5	2,940,358.6
Estuarine Scrub/Shrub Wetland			4.9	4.9	215,454.5
Evergreen Forest	29.8		17.3	47.1	2,051,472.2
Grass / Grassland	86.0	1.4	62.4	164.9	7,181,018.2
Impervious	3.7			3.7	160,565.1
Palustrine Scrub/Shrub Wetland			1.2	1.2	51,557.6
Scrub/Shrub	9.2		52.3	61.6	2,682,209.0
Unconsolidated Shore	28.0	24.6	35.9	131.0	5,705,174.3
Water	0.0	1.3	5.6	6.9	300,158.9
Total by Property	177.1	118.8	357.6	770.1	33,545,527.3

²⁴ Foster, D. R., and G. Motzkin. 1999. Historical Influences on the Landscape of Martha's Vineyard: Perspectives on the Management of the Manuel F. Correllus State Forest. Harvard Forest Paper No. 23. 7 Megan Griffiths, personal communication.

Sandplain Grasslands and Heathlands (Grass / Grassland)

The sandplain grasslands and heathlands at Wasque and other upland community types are a result of thousands of years of land-use, salt spray, sandy nutrient-poor soils, and other factors. Although defined as sandplain grasslands and heathlands, grasslands and heathlands also occur on morainal sites with poor soils and high levels of disturbance. Sandplain grasslands and heathlands often occur in a mosaic pattern and species diversity within this mosaic is high. Many rare species such as Purple Tiger Beetle, New England Blazing Star, and Chain-dotted Geometer are found in these habitats. Other rare species such as the Short-eared Owl (breeding) and Eastern Silvery Aster have disappeared from Wasque and Cape Poge's grasslands and heathlands.



Figure 6. Coastal bank, coastal dune, and coastal beach at Wasque.

Dune Complexes (Bare Land / Beach)

Along the length of Cape Poge, Leland and Wasque shores are sand dune complexes. Highly shifting, dynamic dune complexes create habitats for an assortment of species (Figure 6). Beach heather, seaside goldenrod, beach grass, beach rose, beach pea, beach plum, and Northern bayberry commonly represent this community type, which can range from highly scrubby to very sparse vegetation. State-listed Seabeach knotweed thrive in these environments and birds like the savannah sparrow and state-listed northern harrier feed and nest in these dune habitats.

Maritime Eastern Red Cedar Woodland (Evergreen Forest)

Commonly known as "The Cedars," this stretch of maritime Eastern Red Cedar woodland on Cape Poge contains thickets of Blackberry, Bristly Dewberry, Black Huckleberry, Greenbrier, and Groundsel Tree interspersed between a canopy of Eastern red cedar. This community type is home to insects such as the Juniper Hairstreak and is a regular feeding area for Northern Harrier.



Figure 7. Eastern Red Cedar woodland forest along the bayside trail at Cape Poge Wildlife Refuge.

Barrier Beach (Bare Land / Beach)

The barrier beach strand community includes habitat between the high-tide line and the beginning of the dune systems, including the berm and any overwash. It is, therefore, often quite narrow. This is a state priority natural community that is defined by annual plant species. Between the beach strand community and low water, the beach is often steep and free of vegetation. Storm events and oceanic processes create habitat for many beach species. Tides push seaweed onto the berm, creating a wrack line, home to many invertebrate species dependent on diurnal flooding to filter food from the water. Piping plover, oystercatchers, sanderling, and tiger beetles, just to name a few, feed upon these invertebrate animals. Overwash fans created during storm events also provide breeding habitat for Piping Plover and Least Tern. Gray and Harbor Seals periodically haul themselves out at Cape Poge and Wasque. Harp and Hooded Seals also occasionally visit Cape Poge and Wasque.

Maritime Shrublands (Scrub / Shrub)

Maritime shrublands at Wasque, Little Neck, and Cape Poge proper are upland habitats composed of Black huckleberry, Northern bayberry, smooth shadbush, roses, catbrier, scrub oak, and a wide assortment of other shrubs. These shrublands are often dense and thicket-like and include pitch pine. They are home to White-tailed Deer and large populations of White-footed Mouse and Meadow Vole. Northern Harriers often select this habitat for nesting. These shrublands are important resting and feeding areas for migrating birds as many of the shrubs have fruit and they are the first land areas birds reach after migrating over the ocean.

Pitch Pine and Oak Forests (Deciduous and Evergreen Forest)

The forests of Cape Poge and Wasque are composed primarily of oaks and pitch pine trees. In the understory are Black Huckleberry and other shrubs, such as Lowbush Blueberry and Scrub Oak in more open areas. Sassafras and Smooth Shadbush are other tree species occurring in these forests, which are often stunted in nature due to the coarse soils and the effects of the ocean, like high wind, salt spray, and storms. These forests are common across Martha's Vineyard and Chappaquiddick. Compared to

other upland habitats, these communities are species-poor, but support Imperial moth and other Lepidoptera.

Interdunal Swales (Palustrine Scrub/Shrub Wetland – in part)

Interdunal swales are found in small depressions in the Cedars. The swales are ephemeral and form when winds scour sand until the water table is reached. The small swales in the Cedars are home to cranberries, dwarf spike sedge, highbush blueberry, three-square sedge, marsh fern, marsh rose mallow, and water millet, for example. Some interdunal swales are shrubby whereas others are covered with sedges. Other sites with interdunal swales have rare species associated with them. These swales are rare state-wide and are designated as a Priority Natural Community by Massachusetts Natural Heritage and Endangered Species Program (MNHESP).

Salt Marsh (Estuarine Emergent Wetland, Estuarine Scrub/Shrub Wetland)

This is another designated Priority Natural Community by MNHESP. The salt marshes at Cape Poge are composed of salt marsh cordgrass, salt meadow cordgrass, black grass, salt marsh fleabane, and glassworts, with marsh elder and groundsel trees along their fringes. Salt marshes are home to saltmarsh sparrows, a state-listed rare species, are a nursery ground for fish, and are feeding grounds for several species of birds such as great blue heron and black crowned night heron.

1.4.2 Flora and Fauna

Collectively, these properties support numerous plants and animals. Some of these species are common and iconic coastal species such as beach grass and gulls that are residents year-round while others are rare seasonal visitors such as snowy owls. The waters surrounding Wasque and Cape Poge – Cape Poge Bay, Poucha Pond, Muskeget Channel, Vineyard Sound, and the Atlantic Ocean – are known for an abundance of wildlife and excellent fishing and shellfishing. Seals feed in the rips or haul-out to rest on the beaches. An abundant flotilla of winter ducks such as common eider, scoters, and long-tailed ducks feed on mussel beds in Muskeget Channel. In the summer, common and Roseate tern can be seen in the thousands foraging for fish off Cape Poge and Wasque. Striped Bass, bluefish, and bonito head to the warm waters of Cape Poge and Wasque during the summer and fall and are prized fish that attract thousands of fishermen each year. The clean waters and eelgrass beds of Cape Poge Bay support a highquality scallop population. The scallop population often provides one of the largest sources for scallops in the Commonwealth, although, in some years, the population is low. Little is known about why scallop follow such "boom and bust cycles." The salt marshes and waters in Cape Poge Bay and Poucha Pond are also productive nursery grounds for many species of fish.



Figure 8. Shellfishing in Cape Poge Bay by the Dike Bridge.

Throughout the year, deer, raccoon, and skunk can be found on these properties, often posing management challenges to rare plants and birds. The once rare gray seal is now a common site just offshore or hauled out on beaches. In the winter, snowy owl, peregrine falcon, and numerous small birds including snow buntings make the beaches, dunes, and heathlands their home. In the fall, thousands of tree swallows, followed by hunting falcons, feed on the Northern bayberry's abundant fruit while monarch butterflies congregate for their flight south, finding nectar from seaside goldenrod that powers their migration south. Shorebirds and warblers also find their way through the coastal beaches, marshes, and flats during migration to feed and rest. Unfortunately, many of these species are some of the fastest declining bird species.

A recent success story is the recovery of ospreys. The Massachusetts population was perilously close to extirpation, but with the banning of DDT and assistance of conservation-minded people the population has recovered. These birds are now common in coastal areas including Martha's Vineyard. At least four pairs utilize the properties for breeding and their large nests on poles are hard to ignore.

Rare Species

Cape Poge Wildlife Refuge, Leland, and Wasque are designated entirely as Priority Habitat by MassWildlife's Natural Heritage and Endangered Species Program (MNHESP) for several listed species including piping plover, least tern, common tern, roseate tern, Northern Harrier, saltmarsh sparrow, bristly foxtail and seabeach knotweed. Additional rare invertebrates are assumed to occur due to the presence of abundant host plants and known adjacent populations. The beaches, dunes, salt marsh and associated intertidal flats provide some of the best breeding and migratory habitat for listed shorebirds on Martha's Vineyard. The saltmarsh sparrow was listed as a Species of Special Concern by MNHESP in 2020 and is under federal listing consideration by the U.S. Fish and Wildlife Service. This sparrow is an obligate of the salt marsh and utilizes the marsh adjacent to beaches on Leland and Cape Poge Wildlife Refuge. Red knot, a migratory shorebird listed as threatened under the U.S. Endangered Species Act, utilizes the beaches and adjacent flats seasonally in small numbers.



Figure 9. Piping plover sitting on its nest (left) and three newly hatched piping plover chicks (right) on The Trustees beaches. Piping plovers are easily disturbed by people and dogs. Additionally, they are highly camouflaged in the sand making them vulnerable to taking by human activity, if not actively managed.

A long list of species designated as Species of Greatest Conservation Need in the state's Wildlife Action Plan (SWAP) breed, migrate through, or winter at and offshore of these properties. Among these are the American oystercatcher, great black-backed gull (breeding colony only), horned lark, Eastern towhee, bank swallow, prairie warbler and willet that all nest on the beaches or in the dunes. Species suspected of breeding or occurring as residents include northern black racer, eastern whip-poor-will, numerous invertebrates and likely bats. Species of Greatest Conservation Need that use the properties during migration or winter include ruddy turnstone, sanderling, semipalmated sandpiper, long-tailed duck, peregrine falcon, American kestrel, common loon, red-throated loon, short-billed dowitcher, and whimbrel. As groups, the shorebirds and bats include some of the fastest declining species and are in the greatest need for conservation. Both the gull colony at the Gut and American oystercatchers are managed and protected by the Trustees.

Currently the only rare plant documented on beach or dune habitat is the seabeach knotweed (*Polygonum glaucum*), a state Species of Special Concern with a limited range in Massachusetts and a beach obligate. The knotweed is an annual with a shifting population. The preferred habitat is infrequently flooded upper beach. In addition to protecting bird habitat from OSV incursion, populations of rare plants will be fenced to prevent them being driven on or trampled. Many such plant populations will be protected fortuitously by shorebird and OSV trail fencing.

Part II. Management Practices

2.1.0 Beach Management Staff

The Trustees employs year-round and seasonal staff for the management, safety, and protection of the beaches, as well as engagement and education staff for nature-based education and enjoyment of visitors, children, and islanders alike. Additionally, there are many staff who provide support in marketing and communications, ecology, personnel and human resources, community relations, infrastructure improvements, finance, development, and beyond.

2.1.1 Year-Round Trustees Staff on Martha's Vineyard related to this Beach Management Plan:

- <u>Islands Portfolio Director</u> Leads and oversees all operations related to engagement, education, stewardship, community, personnel for the eight Trustees properties located on Martha's Vineyard and Nantucket.
- <u>Down Island Steward</u> Oversees the property management, stewardship, hiring and management of seasonal rangers and gatehouse staff for Wasque, Leland Beach, and Cape Poge Wildlife Refuge.
- <u>Coastal Ecologist</u> Oversees shorebird protection program, ecology-related projects, and the hiring and management of seasonal shorebird technicians.
- <u>Island Steward</u> provides additional stewardship and property management support, as well as seasonal staff management as needed.
- <u>Education Manager</u> Leads the Saltonstall Education Program for The Trustees, providing nature-based experiential education to Island students and non-profit partners such as the Boys and Girls Club, Camp Jabberwocky, Island Autism, and others. Leads The Trustees Environmental Internship program.
- <u>Education Assistant</u> Supports the Engagement Manager in the execution of the Saltonstall Education program, Youth Coastal Ambassadors, and Environmental Interns.
- <u>Engagement Manager</u> Leads The Trustees' nature-based, experiential, education programs for visitors and Islanders, and hires and manages seasonal tour guides.

2.1.2 Seasonal Staffing

In addition to the staffing described above, The Trustees significantly increases its staff from May to late October. Seasonal staffing generally includes the following for Wasque, Leland, and Cape Poge Wildlife Refuge:

- Chief Ranger
- Lead Ranger
- Ranger Night (2)
- Ranger Patrol (3-4)
- Ranger Maintenance
- Ranger Gatehouse (6)
- Shorebird Technician (2)
- Tour Guide (1-2)
- Seasonal Education Assistant (0.5)

Chief and Lead Rangers supervise patrol rangers and perform patrol, visitor experience, safety and enforcement of the beach rules and regulations (e.g., speed limits, dogs off leash). Gatehouse Rangers are generally located in the Wasque, Mytoi, and/or Dike Bridge gatehouses and provide overall customer service, education on OSV travel trails and restrictions, education on The Trustees shorebird protection program, enforce tire pressure checks for 15 psi, and check for permits. Night rangers patrol beaches typically from 5PM to 10PM or, in some instances, to 12AM.

Shorebird technicians collect data and monitor for our shorebird protection program, educate visitors, implement protection measures for nests and chicks, help enforce shorebird related regulations, and communicate access restrictions to rangers and beach management staff as needed.

Tour Guides implement The Trustees nature-based educational programming such as Poucha Pond Discovery Tours, Cape Poge Wildlife Refuge Discovery Tours, Ecology Walks, and early childhood education nature programs such as Wee Trustee. The Seasonal Education Assistant assists with the Environmental Internship program.

2.2.0 Beach Infrastructure

2.2.1 Parking Areas

Primary parking areas that allow pedestrian access include:

- Dike Bridge A 20-car parking area (Town Lot) is located on the west side of the Dike Bridge on land owned by the town of Edgartown. Overflow parking is at the Mytoi parking lot.
- Wasque Reservation There are two parking areas at the Wasque Reservation: The Fisherman's Lot and the Swim Beach Lot (Figure 10). These lots can accommodate up to 40 cars total including three handicap accessible spaces. Visitors can then access the beach via stairs and designated pathways to protect vegetation and shorebird nesting areas.





Figure 10. Beach entrances and parking areas at Wasque. Fisherman's Lot (top) and Swim Beach Lot (bottom). Portable toilets are located more than 200 feet from the edge of the coastal bank, shielded by the tree vegetation, and are available from May through October only.

2.2.2 Structures

Several structures exist on the beaches that support access and public use.

Boardwalks

One boardwalk is maintained near the Dike Bridge on the Cape Poge Wildlife Refuge and provides access through the dunes for visitors parking or accessing the beach at the Dike Bridge (Figure 11). This boardwalk provides access to pedestrians visiting East Beach. It was constructed to minimize conflicts between pedestrians and OSVs (i.e., for visitor safety) and to reduce impacts to dune vegetation. This boardwalk is approximately 400 feet long and made of Trex (recycled synthetic material) and little maintenance is needed.



Figure 11. Boardwalk to Swimming Beach on Cape Poge Wildlife Refuge

Stairs

There are aluminum stairs at Wasque that can be accessed along a pedestrian trail west of the Fishermen's lot providing access to the beach and Wasque Point, a popular fishing area (Figure 12). The aluminum stairs replaced a set of wooden stairs that were compromised during the 2006 Norton Point Beach breach. This boardwalk and many acres of upland were eroded away because of the breach. After the beach site closed in 2015, the Trustees replaced the wooden stairs with modular and removable aluminum stairs.



Figure 12. Modular stairs at Wasque Reservation

At this time, sand has accreted approximately four feet above the base and removal or adjustment of the stairs would detrimentally affect the stability of the coastal bank. The Trustees will extend the top of

the stairs with an aluminum stair attachment that will ensure continued use of the stairs. Planting native dune grass and beach plum may also improve the stability of the coastal bank under the stairs. However, with the 2022 Wasque breach migrating east, The Trustees may need to temporarily remove the stairs to prevent storm damage or loss and re-install when the migration is complete.

Gatehouse

The Trustees maintains a gatehouse on the beach side of the Dike Bridge (Figure 13) that is staffed seasonally from early May to mid-October. The Dike Bridge gatehouse is constructed of wood and can be moved with heavy equipment. It also includes a small storage locker.



Figure 13. The Trustees Dike Bridge Gatehouse and portable toilets.

Portable Toilets

The Trustees provides portable bathrooms at three locations. Each location includes a handicap accessible portable bathroom. The portable bathrooms are installed for seasonal use only from Memorial Day in May to Indigenous Peoples Day in October. When present, contractors pump the bathrooms once a week and staff clean them daily. The Dike Bridge gatehouse has two portable bathrooms, including one with universal access, and a small storage locker. The Trustees also installs portable toilets at the Swimming Beach and at the Fishermen's Lot at Wasque. Both are located approximately 200 feet or more from the edge of the coastal bank and within forested areas to minimize disruption to the viewshed (Figure 14).



Figure 14. Portable toilets at Wasque Fishermen's Lot (top photo) and Wasque Swimming Lot portable toilets from the beach entrance (middle and bottom) and from the edge of the coastal bank. All portable toilets are located more than 200 feet from the edge of the coastal bank.

Cape Poge Lighthouse

At the northernmost tip of the Cape Poge Wildlife Refuge stands the Cape Poge Lighthouse. The U.S. Coast Guard owns and maintains structural improvements and lighthouse function and leases the land under the lighthouse from The Trustees. Maintenance of this structure is needed periodically and improvements may be needed soon. Access inside the lighthouse is through Coast Guard permission only. While the lighthouse and small parking area (three to four vehicles) occur in an upland area, it is being included in the plan as it is a popular destination for visitors to Cape Poge Wildlife Refuge.



Figure 15. Cape Poge Lighthouse (Photo: B. Bransfield/Trustees)

2.2.3 Signage

Clear informational and regulatory signage is an essential component to beach management and is often the first thing people encounter when visiting the beaches. Due to high visitation and a sprawling landscape, signage is an effective tool for messaging. Signs are strategically placed throughout the beach, especially at access points, and erected as needed for varying situations.

Sign construction consists of metal (T- and U-posts) or wooden posts, with attached plastic, laminate or metal signs fastened with bolts, wire, plastic ties, or rope. Signposts are pounded into the sand or placed in hand-dug holes. The Trustees will avoid placing signs directly in sensitive areas or within vegetated areas, when possible, to avoid habitat disturbance or destruction.

Signage is used to alert visitors to:

- Beach regulations such as "Dogs on Leash"
- Restricted access areas such as Trustees boundary signs at private residences
- Wildlife restrictions such as protected shorebird nesting areas
- General area closures such as "Trail closed to OSVs"
- Wayfinding such as one-way signs or directional arrows or "Mytoi Deflation Area"
- Safety considerations such as "Deflate your Tires to 15 PSI"

- Ecological restoration or erosion control such as "Erosion Control" or "Dune Restoration Area"
- Education and interpretation such as interpretive panels at Wasque (coming late summer 2023)
- Speed limits

The Trustees may also post additional signage restricting OSVs from certain areas due to unsafe driving conditions. Additionally, speed limit signs are used throughout the property. Wayfinding signs may include "Trail Closed" or arrow signs delineating open trails.

Other wayfinding signage includes but not limited to:

- Perpendicular symbolic fencing with signs to close sections of beach corridors to OSVs due to flooding or other erosion events
- One-way OSV trails are indicated with one-way signs or directional arrows as necessary
- Pedestrian signs indicate walking areas such as at the swimming beach boardwalk entrance
- Private property or Trustees boundary signs at private residences at Elbow and on Wasque
- Trails closed for ecological restoration state "Wildlife Management Area," "Dune Restoration Area" or "Erosion Control Area."

For signs regarding the protected shorebird program, The Trustees follows the *1993 Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and their Habitats* and as described in Section 2.6.0. The Trustees posts shorebird specific restricted area signs on all symbolic shorebird fencing. Pictorial "no pedestrian" signs are also used to discourage people from entering symbolic fencing, sensitive habitat areas such as dunes or closed trails. Specifically, we hang one sign approximately every third or fourth post.

2.2.4. Trash Receptacles

The Trustees does not maintain trash receptacles along the beachfront and instead requires visitors to carry their trash out to limit the attraction of shorebird predators.

2.3.0 Non OSV Beach Use and Management

The most common recreational uses of the beach system are by pedestrians, oversand vehicles (OSV), or by boat during summer months. These beaches collectively receive thousands of visitors each year. Pedestrians are present during all months of the year, but peak usage occurs between May and September. While most of the use is limited to the beachfront, visitors have access to bayside areas where waters are calmer. While pedestrian impacts are relatively minor, management is necessary to prevent dune erosion, trampling of vegetation and disturbance of wildlife.

2.3.1 Pedestrian Trails and Non-Motorized Access

Pedestrians can walk designated OSV trails and beach corridors as well as all beach areas not protected by symbolic fencing or restricted access signage. Pedestrian-only pathways are maintained on Wasque using seasonal fencing and a single boardwalk at the Swimming Beach and on Cape Poge Wildlife Refuge (e.g., pedestrian only beach, Figure 16) The Trustees welcomes biking to these beaches. Visitors with bikes are required to park their bikes at the bike racks on the Dike Bridge bulkhead for Cape Poge Wildlife Refuge and Leland Beach or at the bike racks at the Swimming and Fishermen's parking lots at Wasque.

Trustees staff use OSV corridors and pedestrian trails to patrol the back beach using ATVs or UTVs for upholding visitor safety, enforcing regulations and implementing shorebird and rare species management. The Trustees, law enforcement, and emergency response also use trails for emergency access.



Figure 16. Swimming Beach pedestrian access only at Cape Poge Wildlife Refuge

- In some areas, trails are defined by fencing on both sides to prevent widening.
- Trails for essential ATV/UTV are approximately 4ft wide to minimize disturbance to surrounding dune habitat as well as to prevent full sized OSVs from using the paths.
- Signs prohibiting non-essential OSVs are posted at entrances.
- Trail locations are temporary due to dynamic beach conditions (e.g., storm wash over, beach erosion and rare species use) but may be usable for multiple years.
- Trail locations will avoid sensitive wildlife and plant areas where possible.
- Locations will target areas of low dunes with little to no vegetation.
- When trails need to be relocated, The Trustees will notify the Edgartown Conservation Commission for approval.
- Signs are posted along fencing or access points indicating resource protection goals and to encourage the public to avoid entering these sensitive areas.



Figure 17. Example of fencing designating pedestrian and vehicle trails.

2.3.2 Pets and Horses

Many visitors bring their pets, usually dogs, to recreate with them on the beaches. In addition, some horseback riding occurs during summer months.

- 1. Dogs on leash are allowed year-round only on Leland Beach.
- 2. Dogs are prohibited on Cape Poge Wildlife Refuge and on the beach at Wasque Reservation from April 1 through September 30.
- 3. Dogs are permitted on leash from October 1-March 30 at Cape Poge Wildlife Refuge and the beach at Wasque Reservation.
- 4. Dogs on leash are permitted on the upland trails and roads at Wasque Reservation all year.

Dogs are required to be on-leash always and under control of their caretaker where and when allowed. Trustees staff patrol the beachfront (ATV, UTV or truck) to enforce pet regulations. Clear violation of dogs off leash will result in OSV permits being struck (first violation) or revoked (after two violations). Signs are erected communicating dog regulations. Pets are not permitted in the dunes or within restricted areas. Visitors are required to pick up pet waste and dispose in proper trash receptacles or carry out.

Horses are allowed on these beaches but must follow existing roads including OSV trails and corridors and remain outside of fenced protected shorebird habitat. Equestrians must abide with OSV trail restrictions due to flooding, erosion, and protected shorebirds. All equestrians are required to manage and dispose of waste properly to prevent contamination of the beach ecology and uphold the visitor experience. Cleaning out of horse trailers in parking areas is strictly prohibited.

2.3.3 Watercraft and Kiteboarding

Watercraft, including motorboats, sailing vessels and kayaks, are popular forms of recreation. While most beach access occurs via OSV or through the parking areas, some visitors choose to access the beach by boat. The Trustees do not have jurisdiction over on-water use but do regulate the activities of boats and pedestrians above the mean high-water mark once they are on land. The Trustees' staff

monitor boat visitor activities to ensure compliance with beach regulations and natural resource protection and educate these visitors to the rules and regulations of the beach. This is done through fencing, signs, in-person conversations with Trustees Rangers, and social media. Both Cape Poge and Katama Bays are popular areas for kiteboarders, especially during summer months and they often use the surrounding beaches including those at Cape Poge Wildlife Refuge and Wasque to land and relaunch. For visitor safety and protection of wildlife (e.g., piping plovers and terns), launching and landing of kite boards, including sail boards, between April 1 and September 30 is prohibited. Between October 1 and March 31 kiteboarders may land and relaunch from Trustees beaches as long as they follow resource protection and visitor regulations.

Additionally, The Trustees provides kayak nature tours for visitors at Pocha Pond. The launch site for these boats is on the east side of the Dike Bridge. The kayaks are stored at the Dike Bridge gatehouse (Figure 18).



Figure 18. Seasonal storage of kayaks when not in use on the sandy parking area at the Dike bridge gatehouse.

2.3.4 Drones

Drones are prohibited except with prior written approval from The Trustees or in emergency situations. Drone use is almost always restricted during the protected shorebird season from April 1 to September 30, unless for emergency or research purposes. Both require prior written approval form The Trustees and Natural Heritage and Endangered Species Program, as necessary.

2.3.5 Shellfishing and Fin Fishing

Commercial and recreational shellfishing occurs on the beaches and surrounding tidal flats. Limited harvest of surf clams occurs along the ocean-side beaches. On bay sides, shellfishing is limited to the tidal flats and often occurs off Trustees managed beaches, below mean low water. While the Trustees maintains no public boat launch, the Trustees allows licensed shellfishermen to access shellfish areas

from the beach if they have an OSV permit and a license in accordance with the Town of Edgartown Regulations for the Taking and Culture of Shellfish²⁵ and Town of Edgartown shellfish restrictions for bay scallop harvest at Cape Poge Bay.²⁶ When bayside trails are closed for nesting shorebirds or safety, parking is limited to designated OSV parking areas.



Figure 19. Map of popular shellfishing destinations accessed from Cape Poge Wildlife Refuge and Leland Beach.

Fin fishing (i.e., surf casting) is allowed on all beaches and is subject to temporary restrictions due to shorebird or safety restrictions. All shellfishing and fin fishing that occurs on Trustees owned and managed property is subject to town, state, and federal regulations.

²⁵ Edg. Shell Regs 2017 Final (edgartown-ma.us)

²⁶ 637404257135330000 (edgartown-ma.us)


Figure 20. Surfcasting at Wasque Reservation beach.

2.3.6 Education and Research

It is natural that such spectacular examples of coastal ecosystems found at the beaches on Martha's Vineyard would serve as outdoor classrooms and living laboratories through which youth, families, and the public can gain knowledge of natural history, coastal ecology, and climate change. Examples of this educational and public programming include curriculum-based programs designed for school groups (grades K-12), oversand vehicle tours (Snowy Owl Prowls during the winter months and Explore the Shore Tours year-round), and volunteer beach clean-ups. These groups are all under the supervision of Trustees' employees while participating in a program. Groups or volunteers not under the supervision of Trustees staff or trained experts, limited off-trail and sensitive resource area use is acceptable (i.e., school groups guided by teachers or Trustees staff in the salt marsh).

The Trustees provide educational programming at Chappaquiddick Beaches through the Claire Saltonstall Education Program (CSEP). The CSEP was founded in 1991 to provide place-based education to Martha's Vineyard students. Each year, up to 1,600 students partake in programming on these specific beaches. Students (grades K-12) study coastal and marine topics through hands-on activities, including, but not limited to, beach profiling, landform and waterbody mapping, species identification, vegetation monitoring, and erosion and weathering activities. In addition, trained volunteers may engage in monitoring of dunes, collecting beach profile data and monitor wildlife at various points within this beach system. Students and volunteers access Wasque Beach by foot and Leland and Cape Poge Wildlife Refuge beaches are accessed by foot and over-sand vehicle. Researchers interested in conducting research on the beaches must complete and submit a Trustees research application for approval.

- The Trustees allows school groups, or groups whose purpose is intended to conduct coastal education and passive recreation activities, access to resource areas. Groups intending to access areas normally designated as off-limits must secure Trustees permission to do so prior to arrival.
- The Trustees designs its own coastal programs and events within the resource areas governed by current regulations. The Trustees may occasionally engage small groups in sensitive areas for the purposes of education and training.
- Signage may be erected to protect sensitive resource areas and for general interpretation.
- The Trustees, staff, and volunteers will engage in opportunities to educate visitors in formal and informal ways, both by guided experiences as well as through interpretive signage and other media.

Those seeking to conduct research on Trustees properties must submit research applications that are vetted by ecology and property staff. The Trustees will only allow research that poses no threat to the resource. Typically, research is very benign, involving accessing remote areas, assessing plants and wildlife, and installing instruments or materials necessary for ecological monitoring (e.g., salinity wells, wildlife cameras). Any research proposing the collection of rare plants or animals must obtain proper permits from the state and USFWS and provide documentation to the Trustees in their application. In addition, any research which could adversely impact regulated resource areas will have to seek Conservation Commission approval in addition to approval by the Trustees.

- All researchers must complete a Trustees research permit application to conduct their work, in addition to any local, state, or federal permits.
- The Trustees may install markers establishing permanent locations for monitoring. Posts will be small, established by hand, and constructed with plastic material within wet areas.
- Trustees will attach remote wildlife acoustics and photo monitoring equipment to posts or to flora.
- The Trustees will use OSVs for various monitoring and research needs.
- The Trustees will permit limited collection of flora and fauna for the purposes of conservation and research if proper state and federal permits have been acquired.
- The Trustees will allow research off-trail and in other sensitive areas if those conducting the work can demonstrate its importance to the Trustees and its management and the value to conservation and natural resources.
- Researchers are not permitted to enter restricted shorebird areas unless guided by ecology staff.

2.3.7 Special Events and Commercial Activities

Special events occur infrequently within the resource area. These events bring in small to large groups of people for recreation purposes. Some examples include the MV Fishing Derby, movie/commercial filming, community athletic events, fundraisers, beach clean-ups, guided walks, and tours in the resource area. Generally, these events pose no more impact than typical recreational uses. However, events can impact the resource if not properly vetted and regulated. If any special events propose activities which may impact or alter resource areas, and/or deviate from activities listed in this plan, additional wetland filings will be submitted prior to allowing the activity to occur. In addition, Massachusetts Endangered Species Act filing may be required for certain events in priority habitat.

- The Trustees will review event proposals for ecological impact prior to allowing special events to occur, especially during the shorebird breeding season.
- Special events will follow normal regulations outlined in this Management Plan.

- Small, removable, temporary structures (i.e., tents, pole pavilions, chairs, and tables) may be allowed, provided they do not alter the resource, vegetation, or impact wildlife. Structures will only be allowed on areas of open sand. Structures must be removed following the end of the event.
- During movie/commercial filming, the Trustees will deploy supervisory staff throughout the duration of the production to ensure no impacts to the natural resources occur.
- During beach clean-ups, trash removal is allowed off-trail provided it does not impact rare species.
- Those wishing to hold special events must contact Trustees staff prior to holding the event.
- Special events will occur during normal operating hours, unless otherwise authorized by Trustees staff.
- A permit from The Trustees is required for events that include more than 20 people.
- Commercial activities, those provided by a for-profit organization or business for goods, services, food, material, or experiences require prior approval and permit from The Trustees.

2.4.0 Restoration and Resilience

A great threat to these beaches is the significant pace of erosion and beach loss that occurs both naturally on Martha's Vineyard and accelerated loss with the impacts of sea level rise and more frequent and severe storms. To protect these exceptional places, The Trustees considers the impact of management decisions today for the enjoyment and protection of these exceptional beaches tomorrow. Restoration of the delicate ecosystems and natural resilience can minimize the impacts of climate change and erosion while enhancing wildlife, its habitat, and the public's use and enjoyment.

Restoration activities including plantings, fencing, and sand nourishment will be in accordance with local, state, and federal regulations and designed to enhance wildlife such as shorebirds and maintaining access to the beaches.

2.4.1 Dune Protection and Restoration

Symbolic fencing is our most widely used method of dune protection. Fencing serves a variety of purposes depending on the time of year. During the spring and summer months, symbolic fencing primarily delineates restricted areas for shorebird nesting habitat and creates a clear OSV corridor (Section 2.5.1 OSV Corridors). Additionally, this fencing protects the dunes and delicate beach strand community (both Priority Natural Community Types in Massachusetts) from the harmful effects from pet, pedestrian, and vehicle traffic. Without disruption, dune grass will spread rapidly during the growing season creating an extensive rhizome network and farther-reaching shoots. During the fall, winter, and early spring, symbolic fencing is adjusted to function as a barrier, preventing OSV operators from driving over sensitive vegetation, in the dunes, and through closed areas deemed unsuitable for driving. In areas with high erosion rates, traditional metal posts and rope may be replaced with inexpensive wooden posts. Alternatively, where beaches are too narrow to support off-season fencing and insufficient space to delineate the OSV corridor according to the conditions (described in Section 2.5.1), corridors will have OSV restrictions. Dune protection fencing may be temporarily removed ahead of severe weather events to prevent materials loss but will be replaced once conditions improve.

No matter the time of year, this fencing is particularly important for protecting dune building and beach resiliency. It protects existing dunes, vegetation critical to future dune building, rare species, and delineates OSV corridors.

Current dune protection policies and regulations include the following:

- Walking and playing on dunes are prohibited except on designated trails.
- Disturbing, removing, defacing, cutting or otherwise causing damage to natural feature or fencing s is prohibited.
- Entering fenced areas designed to protect fragile sand dunes and associated vegetation is prohibited.
- Patrolling rangers enforce dune protection regulations and will ask visitors to leave protected areas or issue a strike on OSV permits.
- Maintaining restricted area fencing (post and rope) in high traffic areas year-round to alert OSV visitors of restricted areas, especially where dunes are at greatest risk of disturbance.
- Installing signage alerting visitors to remain out of sensitive areas. (See 2.2.3 Signage.)

The Trustees may install sand and/or snow fencing along vulnerable portions of the barrier beach system to encourage accumulation of sand and reduce the potential for blowouts, overwash, or breach. This fencing would be installed in accordance with local, state, and federal regulations to reduce the risk of negative impacts to wildlife such as shorebirds.

Plantings

In particularly vulnerable or degraded areas (e.g., closed OSV trails or unstable coastal banks), The Trustees may perform plantings of native species to enhance dune habitat and stabilization. This would occur on or before April 15, outside of nesting sites as determined by Ecology staff, and with all required approvals, including that of the Edgartown Conservation Commission.²⁷

Beach and Dune Nourishment

Beach nourishment can build a more resilient buffer from the impacts of wind and waves, particularly during storms, and protect the secondary dunes from further erosion. This is an expensive approach, with limited long-term effectiveness, but can improve OSV access and limited resilience of the beachdune complex. Nourishment projects will include compatible sand material of comparable size. As available, and in partnership with the Town of Edgartown, The Trustees may work to secure dredge material from Cape Poge Bay or other local sites to provide dune and beach nourishment. Dredge material may also be used to maintain OSV trail conditions, especially trail elevation, to prevent groundwater puddling and flooding from extreme tides. Nourishment activities will occur outside of the shorebird nesting season and occur from October 1 to March 31.²⁸

2.4.2 Coastal Bank Restoration

Coastal banks are subjected to significant wind and wave action that accelerates erosion and bank instability. Where coastal bank erosion is excessive and intervention is deemed necessary, The Trustees may perform coastal bank restoration/stabilization. For example, the breach from the Christmas storm of 2022 eroded nearly 0.25 acre of coastal bank where whole mature trees toppled into Katama Bay. The loss of roots further destabilizes the coastal bank. Intervention that enhances the accretion processes at the base of the bank will help minimize further bank instability and post-breach migration. While intervention may take several forms, installation of snow or sand fencing at the base of the

²⁷ Massachusetts Division Fisheries and Wildlife. 2022. Developing a Beach Management Plan that Protects Piping Plovers and Terns in Massachusetts. P. 4

²⁸ Guidelines for Barrier Beach Management in Massachusetts. A Report of the Massachusetts Barrier Beach Task Force.1994. p. 104

coastal bank to rebuild a protective dune buffer in conjunction with native plantings would be a costeffective, preferred strategy. The installation of both fencing and plantings would follow all local, state, and federal regulations as well as best management practices defined by the Massachusetts Coastal Zone Management office.

2.4.3 Beach Raking

The Trustees does not implement mechanical beach raking to remove wrack and other debris encouraging natural processes and reducing disturbance to habitat and wildlife. Wrack provides important feeding habitat for birds and other wildlife while also aiding in beach building.

2.5.0 Oversand Vehicles (OSVs)

OSV use is a longstanding privilege on these beaches and one highly valued by local and visitor communities. There are less than 2,000 permit holders at Cape Poge and Leland Beach annually. Some utilizing the beach year-round, some seasonally, and some for a brief time. Trustees staff also use OSV corridors and pedestrian trails to patrol beaches using ATVs, UTVs or 4x4 trucks for upholding visitor safety, enforcing regulations and management including that for visitors and resource protection. Emergency response vehicles also use OSV trails for emergency access.

If not effectively managed, OSV travel on beaches can damage or destroy vegetation that lends strength and resilience to both beaches and dune. OSV travel may also detrimentally affect habitat and species dependent on these beaches such as rare shorebirds. For example, vehicles may degrade, bury, or hinder the wrack line (e.g., shells, seaweed, and other organic marine material) critical for piping plover





Figure 21. Map of existing OSV trails on Wasque Reservation, Leland Beach, and Cape Poge Wildlife Refuge subject to this beach management plan.

foraging, through crushing and burying the material.²⁹ OSV access is, therefore, managed using a set of municipal, state, and federal regulations and guidelines that aim to protect barrier beaches and the many values they provide while providing for responsible access.

2.5.1 OSV Corridors

Established and historic OSV corridors that visitors have enjoyed for decades are depicted in Figure 21 and Appendix D Maps of Beach Parcels and OSV Trails. Honoring the history, process of the beach management stakeholder group, and the public feedback, The Trustees will uphold the established OSV corridors as conditions allow. OSV travel along these corridors is permitted when the trail conditions comply with the 1994 *Guidelines for Barrier Beach Management in Massachusetts*.

The 1994 Guidelines state that OSV travel is allowed above the berm crest and above the mean hightide line to avoid tidal flats. Tidal flats include any level part of coastal beach that extends from the mean low water line landward to the berm crest at the mean high tide line. Wetlands performance standards state "any project on land containing shellfish must not adversely affect such land or marine fisheries by a change in the productivity of the land caused by the compacting of sediment by vehicular traffic." ³⁰ Per the Guidelines above, beach OSV corridors is maintained at a minimum of approximately 10 feet from the dune vegetation (stated as 10 feet seaward of the spring high tide) to the mean daily high tide wrack line or berm crest (Figure 22). On the bayside, the OSV corridor is maintained as far as possible from the toe of the dune or vegetation and above the mean daily high tide, if there is sufficient space for OSV travel without travel below the mean high-tide line, wrack line, or other intertidal habitat.



Figure 22. Beach terminology diagram from the 1994 Guidelines for Managing Barrier Beaches in Massachusetts. This diagram references how to delineate an OSV Corridor (p.88)

²⁹ Guidelines for Barrier Beach Management in Massachusetts. 1994. P. 2

 ³⁰ Guidelines for Barrier Beach Management in Massachusetts. 1994. Massachusetts Barrier Beach Task Force. P.
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Beaches are dynamic systems in constant flux from erosion and accretion processes and The Trustees will take an adaptive management approach to OSV travel in response to these constantly changing conditions. If there is not sufficient space to delineate the OSV corridor in accordance with the 1994 Guidelines as illustrated in Figure 22 (i.e., if criteria for allowing OSV access can't be met), The Trustees will impose OSV restrictions. As beaches change and accrete, and both space and access (e.g., crossover roads exist) to these areas allows, The Trustees will lift OSV restrictions and OSV travel will resume.

Given the significant level of erosion over the last several decades and sea level rise narrowing beaches, there are likely regular OSV restrictions on trails that (i) flood at astronomical high tides, (ii) have endured significant erosion over the last decades that has eliminated sufficient space to delineate an OSV, (iii) temporarily erode rapidly during storms, (iv) have narrowed due to sea level rise, and/or (v) pool during excessive precipitation events. All beach OSV trails are subject to OSV restrictions during the winter season where destructive waves pull sand offshore and erode the beach reducing the space to delineate the OSV corridor. Figure 23 illustrates trails that are subject to frequent OSV restrictions for these reasons. As conditions change, and/or restoration activities increase the space available to delineate a corridor based upon the Guidelines above, The Trustees will adapt to those changes and permit OSV travel.

In addition, for existing and potential rerouted OSV corridors, The Trustees also follows the subsequent procedures for delineating OSV corridors:

- OSV corridors are established to avoid wildlife habitat (particularly of rare species), wrack lines, salt marsh, vegetated areas on coastal beaches, tidal flats, overwash areas, and coastal dunes.³¹
- Significant or suitable nesting, feeding, resting, and staging areas for migratory and protected shorebirds may be closed to OSV use with posting and fencing and/or altering OSV trail corridors following the 1993 shorebird guidelines (Section 2.6.0).
- OSV corridors will not be in an unstable dune area such as a blow out or in a location that reduces foredune height, volume, or function. If this occurs, The Trustees will relocate the OSV corridor.
- OSV corridors are marked on their landward side with symbolic fencing or along the Inside Trail where topography, vegetation, or protection of the dune warrants clearer delineation of the corridor.
- In the event OSVs are driving outside of corridor and edging into the dune, The Trustees will close OSV access immediately until additional fence or wood posts are added to aid drivers in complying with the established OSV corridor. If there is repeated OSV encroachment into the dune, The Trustees may install security cameras to monitor activities or close the corridor.
- In instances where OSV corridors are closed to comply with environmental laws, The Trustees will collaborate with local officials, stakeholders, the public, and state and federal officials to investigate and provide reasonable alternative access as available.
- If a wrack line is consistently present, measures will be taken to prevent OSVs from driving on it (wrack is an important ecological feature of beaches and in particular an important foraging resource for plovers and other shorebirds).

 ³¹ Guidelines for Barrier Beach Management in Massachusetts. 1994. Massachusetts Barrier Beach Task Force. P.
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Figure 23. Trails identified in yellow are subject to frequent OSV restrictions due to astronomical high tides, excessive erosion, sea level rise and/or pooling during excessive precipitation events. Trails identified in purple will experience less restrictions.

Existing OSV Corridors

There are approximately 16 miles of OSV corridors along approximately 10 miles of beach from the boundary of Wasque with Leland Beach to the tip of Cape Poge at the Gut (Table 2). OSV trails run through the interior of dune systems on Leland Beach and Cape Poge Wildlife Refuge and are generally fenced to indicate pull-outs and keep OSVs from driving over dune vegetation and widening trails (in some cases topography or vegetation sufficiently delineates the corridor, negating the need for fencing).

Table 2 Breakdown by area and length of OSV corridors at Wasque, Leland, and Cape Poge Wildlife Refuge

PROPERTY	LENGTH FEET	SQUARE FEET	MILES
Wasque	3,908	35,172	0.7
Cape Poge Wildlife Refuge	56,950	512,550	10.8
Leland Beach	14,652	131,868	2.8
Total	75,510	679,590	14

The Cape Poge Wildlife Refuge bayside trail begins at Tom's Neck and goes to Shear Pen Pond, minus Simon's Point (Simon's Point has an active stream entering the bay). Portions of the bayside trail flood with astronomical high tides and during storms and is subject to periodic or frequent OSV restrictions. Due to salt marsh migration into the trail and The Trustees Order of Conditions SE 020-162 dated May 4, 2023, the Leland Beach bayside trail was retired in 2023. Bayside access to Poucha Pond is available through the Leland inside trail.

As of August 2023, there is no OSV access to Wasque due to the Christmas Breach. From the Swimming and Fishermen's Lots, there is only pedestrian access only to protect the integrity of the coastal banks and dunes. The only OSV entrance at Wasque is via an OSV corridor from Norton Point Beach, compromised due to a breach between Norton Point and Wasque during the 2022 Christmas Storm.

Historically, OSV access traversed Wasque Point with direct access to Leland, but significant erosion over the last decade has made travel around Wasque Point steep and unsafe. Any future OSV access around Wasque Point is dependent upon significant changes to beach morphology. Future OSV access from Norton Point Beach will require a mutually satisfactory management agreement between Dukes County and The Trustees when beach conditions rebuild. Historically, this OSV corridor traversed Wasque Point with direct access to Leland, but significant erosion over the last decade has made travel around Wasque Point steep and unsafe.

Beach Parking

In areas popular with beach visitors, a continuous parking area may be created by establishing an OSV corridor wide enough to accommodate both moving and parked vehicles. Wide beaches may accommodate perpendicular parking while narrow beaches may require parallel parking. Beach parking is limited to the areas adjacent to the beach corridors where the beach is wide enough.

Crossovers

Crossovers connect bayside trails and dune trails with the outer beach corridor. This layout allows flexibility in adapting the trail system to flooding, erosion, the presence of rare species, or other factors that may render road sections unusable for periods of time. Using crossovers, traffic can be routed around closed sections. However, crossover roads often represent weakened points in the barrier beach, vulnerable to overwash and even breaching. Additionally, since they often cut across vegetated

sections of dune, crossover roads can represent loss or fragmentation of dune integrity and habitat. For these reasons, crossover roads are limited in number, designed with resilience in mind, relocated as infrequently as possible, and managed to reduce unnecessary impacts (e.g., widening). There is currently one crossover on Leland Beach and four on the Cape Poge Wildlife Refuge including the access road at the Dike Bridge, at Arudas, at the Town of Edgartown's parcel at The Jetties, at Shear Pen, and near the Lighthouse.

Changes in beach configuration may render these crossovers unusable (i.e., they may cross over onto a section of beach that is impassable, inaccessible, or simply absent due to erosion or beach recession). In such situations, the affected crossover may be retired, and a similar crossover constructed in the same general area, but in a more useful location. The Leland Beach crossover has remained stable for many years and relocation is not anticipated in the next few years. The Trustees will relocate crossover roads to maintain safe OSV access that respects resource protection by following the below guidelines:

- There will be no net increase in the number of crossovers.
- Crossovers will be designed at angles or with S curves to minimize risks from storm flooding and erosion.
- Locations will avoid known or primary rare species habitat including nesting shorebirds.
- Proposed locations will be vetted with and approved by the Edgartown Conservation Commission and MNHESP.
- Old crossovers will be closed and allowed to revegetate and sequester sand.
- Upon request by the Conservation Commission or MNHESP, crossovers may be restored by adding sand and/or planting beach grass to facilitate restoration of old crossovers following standard planting densities and time of year.

Since erosion or other changes affecting crossover trails can happen quickly and with no warning, this management plan represents *pre-approval for limited relocation of existing crossover trails*, subject to the guidelines above, the Edgartown Conservation Commission and MNHESP.

Turnouts

Dune trails will make use of turnouts to keep trails as narrow as possible. Turnouts can be less frequent where visibility is good, since drivers can see traffic coming from the opposite direction. In winding sections of dune trails, turn-outs should be frequent enough to avoid drivers having to back up long distances for opposing traffic to pass. Signage will be used to remind drivers not to park in turnouts. Generally, turnouts will not be larger than necessary to allow vehicles to pass each other and marked at both ends with posts or poles to prevent widening and for clear communication to drives on where turnouts are located.

2.5.2 Communications on OSV Restrictions

The Trustees provides multiple avenues to communicate beach conditions, OSV restrictions, and OSV trail access. Most of these communications include an updated map indicating open OSV corridors in green and OSV restrictions in red. Communication protocols are listed on the front of the OSV Vehicle Driving Guide (Figure 25) and visitors are informed at the time of permit pick up.

Road conditions and closures will be communicated:

• At the Mytoi and Dike Bridge gatehouses with maps updated as necessary and information provided by gatehouse staff.

- Via social media posts @TheTrusteesMV on Instagram, Facebook, and Twitter as needed.
- On our webpage https://thetrustees.org/program/mv-osv-permits/ which connects to our Twitter feed.
- Via our beach hotline, updated as needed: 508-627-8390.
- Via text alerts. Permit holders can opt into our text alert system. The Trustees uses this system for urgent alerts or major updates to beach conditions.
- Through signage. During peak summer season, The Trustees places "Beach Closed" sandwich signs in downtown Edgartown at the ferry waiting line, at the Edgartown side of the Chappy Ferry and at the intersection of Dike Road and Chappaquiddick Road. During the off-season, The Trustees places signs at the entrance of the Dike Bridge. On the beach, closed or restricted areas are marked with appropriate signage.

Communication protocols are subject to change based on visitor preference, technological advances, or other criteria. The Trustees will always regularly communicate to its visitors and the public on OSV trail conditions and OSV restrictions frequently and regularly.

2.5.3 OSV Corridor Maintenance

The Trustees goal is to minimize OSV impacts to beach integrity and habitat by maintaining OSV corridors. Trail maintenance is based on the following:

- Corridors should be wide enough to allow OSV passage, approximately nine feet in width for single vehicle passage.
- Two-way corridors should have clearly marked turnouts spaced to provide drivers with clear visibility to oncoming traffic and turnout location.
- Posts delineating turnouts will be maintained at both ends to prevent trail widening and to increase visibility for drivers.
- Fencing will be used to prevent trail widening unless topography prevents adding fencing or corridors are clearly defined by vegetation and do not exceed the <u>maximum</u> width of approximately 11 feet.
- Trails elevations should be maintained so that puddles do not form, or, if they do form, last no more than 24 hours. Puddles lasting days or weeks may indicate the need for additional sand to raise the trail elevation.
- Areas subject to short-term puddling will be fenced on both sides to prevent OSVs from widening trails to avoid puddles.
- Trail conditions should be assessed annually by Trustees staff for major repairs at the end of the summer season so repairs can be made prior to the next summer and shorebird season.
- Trails should be assessed after storms or periods of prolonged precipitation to identify vulnerable areas.

Corridors and trails will be graded as needed to minimize deep holes, deep ruts and "washboards." The Trustees uses towed landscape rakes for grading, and maintenance occurs exclusively within the defined OSV corridor and outside of the shorebird protection areas. Staff grade trails approximately every two weeks during the peak season and after it rains. Grading may be delayed during extended periods without rain or drought. Grading trails after rain provides more effective maintenance and trail restoration. Grading generally accommodates a 1V:10H slope. If steeper slope grading is required, The Trustees will pursue appropriate site-specific authorizations.³²

- If there is significant erosion, flooding, pooling, storm surge or other unsafe environmental conditions, staff will close either the entire beach or the affected OSV corridors, depending on the severity.
- Trails and turnouts will be properly signed to aid OSV operators with navigation and adherence to rules to maintain resource protection and visitor safety goals.
- Trail signs will be based on Trustees sign standards and clearly readable by OSV operators.
- Signs will include speed limits, property boundaries, changes with major regulations (e.g., dogs) and closures (when in place).
- Closed trails and detours will include sandwich board signs placed in the center of the trail in addition to a rope or chain placed across the trail between two posts.
- Flagging should only be used on closures or fencing temporally until proper materials are secured and installed. Rope for fencing should be a large enough gauge and color to avoid the need for flagging.
- Fence posts should be wood or galvanized steel T-posts.

2.5.4 Beach and OSV Operating Rules

The Trustees has established a set of rules in conjunction with our partners for beach usage by the public to protect beach resources and promote visitor safety and enjoyment. These rules and regulations are provided in paper form to permit holders at the time of permit pick up. The rules and regulations are also found on The Trustees website, <u>https://thetrustees.org/program/mv-osv-permits/</u>. The Trustees rangers and staff regularly patrol the beaches to ensure a safe and enjoyable visitor experience as well as uphold the rules and regulations. Violations of the rules and regulations result in a warning (indicated with a line through the permit) and/or revocation of permit after a second violation. Trustees beach rangers or gatehouse staff are authorized to enforce violations of policies and rules witnessed or reported to them.

The following is a comprehensive list of these rules as they are currently provided to visitors and enforced by The Trustees at these beaches.

- OSVs must have and display a valid Trustees permit (i.e., sticker).
- OSV Permits are required year-round and are valid from April 1 to March 31. Permits can be purchased online at https://thetrustees.org/program/mv-osv-permits/ and picked up at the Mytoi gatehouse from Memorial Day weekend through Indigenous Peoples' Day weekend.
- All OSV permit holders must watch The Trustees OSV Training Video prior to purchasing and picking up permit (Figure 24). The video is found on The Trustees webpage for purchasing OSV permits at https://thetrustees.org/program/mv-osv-permits/. Gatehouse staff inquire and test knowledge of the video at the time of pick up and provide tablets (e.g., iPads) to visitors who haven't watched the video before they can continue purchase of their permit.
- The Trustees require safety equipment including a jack, a base board for jack, a shovel, tow rope, full size spare, and tire pressure gauge while on the beach at all times. Staff inspect

³² Massachusetts Division of Fisheries and Wildlife.2021. Developing a Beach Management Plan that Protects Piping plovers and Terns in Massachusetts. P.4

vehicles at the time of permit pick up. Visitors are not allowed to pick up their permit without indicating proper equipment. Portable ramps are highly recommended.



Figure 24. The Trustees OSV Training Video at <u>thetrustees.org/program/mv-osv-permits</u>. Permit holders are required to watch the video prior to purchase and permit pick up. Staff quiz visitors on video content and offer an iPad to watch the video before continuing pick up of permit.

- Permit holders are required to keep *The Trustees OSV Driving Guide* (Figure 25) in their vehicle while on the beach.
- All OSV operators must agree to and adhere to the Rules and Regulations delineated in the *Trustees OSV Driving Guide* (Figure 25) at all times on the beach.
- Visitors who violate the rules and regulations are subject to permit strike warning (slash through permit) and/or permit revocation on second offense.
- Egregious, abusive, or hostile behaviors are subject to immediate permit revocation and loss of privilege to access the beach.
- All vehicles are required to use designated OSV vehicle corridors or trails.
- OSV operators must reduce the pressure in all four tires to 15 pounds per square inch (PSI) or lower before entering the beach. This requirement reduces impacts to the road system and reduces the chances of vehicles getting stuck.
- Vehicles are directed to the Mytoi ranger station for deflation and inflation.
- Dike gatehouse staff visually and/or physically check tire pressure upon entrance to the beach. If vehicle tires are not deflated sufficiently drivers are redirected to deflate at the Mytoi ranger station to avoid congestion at the beach entrance and Dike Bridge area.
- The Trustees will impose towing fees up to \$300 for vehicles in need of assistance by winch truck.
- OSV speed must never exceed 15 MPH. Exceptions should only occur in cases of medical or safety emergencies. See Section 2.6.0 for additional speed limits when rare shorebird chicks are present.
- Speeding vehicles will be stopped and warned with strike through permit (warning) and permit revocation for second offense.

- OSV operators must avoid driving on debris and vegetation, especially the wrack line. •
- OSV operators must remain alert and avoid wildlife.
- OSVs operators must avoid driving below the berm (i.e., mean high water line).
- The Trustees will maintain air stations at Mytoi Ranger Station, to facilitate tire drawdown and reinflation.
- OSVs must be four-wheel or all-wheel drive (AWD). AWD vehicles must have at least eight-inch clearance.
- Stickers may be revoked for violations of the rules and regulations by The Trustees staff without • refund of permit fees. Serious violations such as harassment, unruly and violent behavior, underage and excessive drinking are also subject to court citation. Violating or disregarding the rules and regulations can result in expulsion from the premises, and/or a fine and imprisonment, as allowed by law.
- All vehicles must travel in designated vehicle corridors or trails. •
- OSVs are prohibited from towing water-skiers, dune skiers, hang gliders, para gliders, or the like. •
- The Trustees reserves the right to impose limitations on the number of vehicles permitted at the property on a given day.
- OSV access is prohibited from beaches during weather alerts including warnings and advisories.



TRUSTEES PLACES ARE CLOSED BETWEEN **10PM AND 5AM, EXCEPT FOR SURFCASTING.**



508.627.8390 Beach Access Hotline Mytoi Ranger Station/Tours 508.627.3599 Martha's Vineyard Regional Office 508.693.7662



ISLANDS REGIONAL OFFICE 860 State Road Vineyard Haven, MA 02568

508.693.7662 | thetrustees.org

RULES AND REGULATIONS VIOLATIONS WILL INCUR A WARNING AND/OR PERMIT REOVCATION.

- I. The beaches provide important habitat for many rare and protected plants and wildlife. Entering fenced or posted areas intended to protect nesting birds or fragile coastal plants is prohibited.
- 2. Keep a safe distance from wildlife, including seals.
- 3. Speed limit is 15 MPH and 5 MPH at shorebird nesting areas. Speed limits are strictly enforced.
- 4. Choose kindness! Abusive behaviors to staff or visitors will cause OSV permit revocation. Tire must be deflated to 15 PSI. Deflate tires ONLY at MYTOI Parking.
- 5. Dogs must be leashed at all times and are prohibited from all posted shorebird habitat.
- 6. Keep the beaches clean! Please take trash with you.
- 7. Vehicles must have shovel, tow strap, full-size spare tire, board, tire pressure gauge, and OSV Driving Guide while on the beach.
- 8. Respect our neighbors and their property by enjoying the beach within The Trustees' boundaries.
- 9. Removing, altering, or damaging any natural or historic feature or infrastructure is prohibited.
- 10. Overnight camping is prohibited.
- II. Kite flying allowed only more than 200 yards away from protected shorebird areas.
- 12. Parties greater than 20 require a permit from Trustees management.
- 13. Commercial activities-providing any service, product or activity for a fee-require a permit with The Trustees management.
- 12. The Trustees reserve the right to restrict alcoholic beverages on their properties.

DRIVING GUIDE CAPE POGE WILDLIFE REFUGE AND LELAND BEACH

BEACHES SUBJECT TO CLOSURES DUE TO PROTECTED SHOREBIRDS AND ENVIRONMENTAL CONDITIONS. Before you go, check beach updates at:

@TheTrustees MV 600 Online at: thetrustees.org/programs/mv-OSV-permits Beach Hotline: 508.627.8390

IN CASE OF EMERGENCY Call 911 or 508.693.1212



Figure 25. The Trustees 2023 OSV Driving Guide. This brochure is presented to each permit holder at the time of permit pick up and is required to remain in the vehicle while on the beach. The OSV Driving Guide is subject to annual updates.

- Trustees' properties are closed between 10 PM and 5 AM. Active surfcasting is permitted 24 hours.
- Wildlife viewing from a safe distance is required and encouraged. The Trustees enforce visitors viewing wildlife at a responsible distance of greater than 10 feet to keep wildlife from being disturbed.
- Vegetation, whether living or dead, helps stabilize shorelines, dunes, tidal flats and bluffs and its protection ensures a healthy and pristine beach for all. Walking and driving on vegetation are prohibited.
- The Trustees reminds visitors to respect our neighbors and their private property by enjoying only The Trustees beach properties and staying within the boundaries of our properties.
- Gas or charcoal contained grills are allowed at open beaches during staffed hours only (9AM to 5 PM). Charcoal must be buried deeply to protect walkers. All other fires are prohibited.
- Our properties are carry-in and carry-out. Trash receptacles are not provided on site.

- Hunting requires prior written permission from Trustees management, who determines hunting areas. All hunting requires proper licenses and compliance with Massachusetts hunting laws and regulations.
- All commercial activities (those providing service, product, or activity for a fee) and events require a permit from the Trustees' management.
- Disturbing, removing, defacing, cutting or otherwise causing damage to a natural feature, sign, poster, barrier, building, or other property is prohibited.
- Behavior that disturbs the peace of Trustees' properties or its enjoyment by visitors is not allowed. This includes unruly, harassing and/or aggressive behavior toward staff and visitors.
- Trustees staff reserves the right to prohibit the use of alcoholic beverages on their properties.
- Kites are prohibited during the protected shorebird nesting season, April 1- September 30.
- Parties greater than 20 people require a permit from The Trustees' management.
- Vehicles exceeding a gross weight of 6,800 pounds are prohibited from Trustees OSV trails and will not be eligible for permits. Dune buggies, motorcycles, mopeds, trailers, snowmobiles, all-terrain vehicles, and jet skis are also prohibited.
- Permit stickers must be applied to front and rear bumpers of the driver side of the vehicle. Vehicles not displaying both stickers will be denied entrance. Replacements for lost or misplaced stickers will not be provided. Stickers will be reissued for sold or damaged vehicles if original stickers are surrendered at time of reissue.
- Permit fees are subject to change and are used for the protection and restoration of the natural environment, and to help meet annual property management expenses.
- The Trustees of Reservations reserve the right to impose limitations on the number of vehicles permitted on the OSV corridor (see section 2.5.8).
- By purchasing this permit the purchaser and their guests acknowledge and agree to abide by Trustees' rules and regulations are for the health and safety of themselves, others, and the protection of natural resources.
- The Trustees of Reservations reserve the right to impose limitations on the number of vehicles permitted on the OSV corridor (see Section 2.5.8).

2.5.6 Essential Vehicles

When all or a portion of the beach is closed to OSVs due to threatened shorebirds, essential vehicles may traverse through these otherwise restricted areas. OSV use is considered essential when it is necessary for public safety, law enforcement, minimal maintenance of public property, access to private dwellings not otherwise accessible, rare species monitoring and management, and some research.³³

The Trustees utilize OSV trails to effectively complete a wide variety of beach management tasks including emergency response, regulation enforcement, general maintenance, and natural resource management. This is especially important for enforcing regulations in remote areas frequented by visitors arriving by boat and enforcing dog regulations during shorebird breeding season. In the event of medical emergencies, vehicles provide the quickest means to respond. Trustees use OSVs throughout the year to establish restricted area fencing, post regulatory and safety signage, repair boardwalks, remove and replace stairs, collect trash, and conduct other maintenance activities. Occasionally, vehicles are needed to retrieve or dispose of whale or other carcasses that wash up that may pose a health problem or attractive nuisance.

Natural resource management is an ongoing activity and often requires the use of OSVs. ATVs and UTVs are critical to the daily monitoring and management for rare shorebirds, specifically the deployment and maintenance of restricted area fencing and predator management (e.g., exclosures). In addition, OSVs are used to establish remote ecological monitoring equipment and conduct research, monitoring, and protection for a variety of flora and fauna.

When beach closures for rare shorebirds are in place, The Trustees limits access through these areas to ecology staff conducting shorebird management and monitoring, rangers trained in driving through active shorebird areas for public safety and enforcement (section 2.5.7), and some limited property maintenance. Access through closed areas for research is rare and only occurs if Trustees staff have evaluated the research as critical. In such scenarios, Trustees staff trained in driving through closed shorebird habitat accompany or escort researchers through closed areas. Access to and through closed areas is important for Trustees rangers for enforcing regulations in remote areas frequented by visitors arriving by boat (e.g., the Gut) and enforcing dog regulations during shorebird breeding season. In the event of medical emergencies, vehicles responding to these emergencies would be allowed access.

OSVs are also used by Cape Poge residents needing access to their private property. Only when private residents at Cape Poge are travelling to and from their homes or property are they considered essential vehicles. Per the guidelines, these residents are provided with a logbook at closed areas for recording their travel through closed areas on the Refuge. Residents are also informed regularly by The Trustees on the status of closures and their locations (Section 2.6.2).

2.5.7 Trustees Staff OSV Operator Requirements

All staff operating essential OSVs on the beaches are approved by beach managers and ecology staff who train vehicle users in proper methods of operation and the rules and regulations for OSV driving. During the shorebird breeding season, only trained staff meeting the essential vehicle definition above can drive in restricted OSV areas.

• OSV operators must be employees or volunteers of the Trustees.

 ³³ Guidelines for Barrier Beach Management in Massachusetts. 1994. Massachusetts Barrier Beach Task Force. P.
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- OSV operators must be trained in driving techniques and undergo a detailed orientation by a designated staff person.
- Essential vehicle operators driving OSVs in shorebird restricted areas must be trained by Trustees Ecology staff and demonstrate an understanding of shorebird guidelines and ecology.
- OSV operators must demonstrate an understanding of barrier beach ecology and appreciate the sensitivity associated with the site.
- OSV operators must pass the Trustees' drivers check/qualification.
- Essential vehicles may access back beach areas, closed trails and pedestrian crossovers for enforcement, safety, emergency response, and resource protection only.
- When possible, operators should enforce regulations and perform maintenance tasks by stopping their vehicle and proceeding on foot.

2.5.8 Beach Capacity

To maintain a high-quality visitor experience for all beach users and avoid undue ecological or resilience impacts from OSV use, The Trustees will limit the number of vehicles accommodated on each section of beach based on existing conditions. Patrol Rangers regularly monitor beaches to identify whether beaches have reached visitor capacity given existing conditions. If visitor capacity is reached, staff will initiate the communication protocol outline in Section 2.5.2 Communications on OSV Restrictions as well as inform visitors at gatehouses.

Beach capacity is determined by space available for beach parking due to the following factors:

- Erosion Parts of the beach are not safe to access due to beach erosion, storm surge, and/or spring high-tides (2021, The Trustees Policy: Oversand Vehicles on Beaches).
- Beach conditions If conditions no longer, or temporarily, do not meet conditions to permit a safe OSV corridor defined in 2.5.1 OSV Corridors
- Dune Restoration Dune restoration projects improving dune resilience and public access may result in impacts to OSV parking.
- Vegetation and wildlife Presence of protected and/or rare wildlife and plants may necessitate closures.
- Visitor experience- Visitors enjoy the Chappaquiddick beaches as a respite from the Island's summer crowds and remote experience. Excessive vehicles on the beach diminish the visitor experience and are factored into the beach capacity limitations.

While sight assessment of the existing conditions, ecological impacts, and visitor experience will dictate beach capacity, The Trustees will not exceed 300 vehicles total for Cape Poge and Leland beaches combined, a number well below the maximum physical capacities calculated in *Table 3*. Visitor data from traffic counters at the Dike bridge from 2020-2023 (Table 4) indicates that vehicular visitation is significantly less than the total physical capacity of the beach. For example, the greatest number of vehicles entering the Dike bridge during the years of 2020-2021 was 317 in September 2020. This occurred during the COVID-19 pandemic when visitation was unusually high due to social distancing requirements and travel restrictions. Further, with the data collected for 2020-2021, there were 27 days in 2020 and seven days in 2021 where visitation exceeded 200 vehicles (Table 4).³⁴

³⁴ There is incomplete data for June, September, and October of 2021 so there are likely days during those months when visitation exceeded 200 though overall, visitation over 200 in 2021 was less than 2020, a pandemic year. Data for 2023 was collected monthly, so calculations for visitation by day is not available.

The 1994 Guidelines recommend using an allocation of square feet per vehicle to determine the number of vehicles allowed on a barrier beach and provides a guide for determining vehicle quotas with the following equation:

Available Area/Number of Vehicles = Area per Vehicle (square feet)³⁵

The beach quota has been calculated using the linear amount of beach accessible to OSVs and an allotment of 20x30 feet per vehicle. The use of perpendicular and parallel parking is dependent upon daily beach conditions and all of which must be above the berm. These parking dimensions account for the size of a typical OSV plus any extensions including trailer hitches, carriers for coolers or bikes, and enough space for OSV doors to open on either side of a vehicle.

Table 3. Parking Calculations for Beach Sections. The number of potential spaces is given for parallel or perpendicular parking depending on what the width of the corridor allows and includes the beach trails only. The bayside trails were not included in this calculation. These numbers provide an approximation of the maximum physical capacity of the beach based off the formula provided above from the 1994 Guidelines. The Trustees will limit capacity on all beaches to 300 vehicles at any one time, a number well below the maximum capacity of 889.

		Parking available - current conditions as of spring 2022		
Beach Zone	Total Length of beach (ft)	Length of parking (ft)	Spaces available (max.)	Orientation to water
Wasque	4,676	3,168	158	parallel and perpendicular
Leland Beach South	4,102	4,102	205	perpendicular
Leland Beach North	3,786	3,786	190	perpendicular
Swimming Beach	3,513	0	0	
Swim Beach to Jetties	7,951	7,900	263	parallel
Jetties to Lighthouse crossover	4,458	2200	73	parallel
Cape Poge Pt.	1,525	0	limited	
Cape Poge Elbow	2,795	0	limited	
Cape Poge Gut	9,896	0	limited	
Totals		21,578	889	

Based on existing conditions and the above factors, the beaches could potentially physically support an OSV capacity of 889 spaces without any OSV restrictions from environmental conditions and/or protected shorebirds. However, data indicates rarely is there over 300 vehicles crossing the Dike bridge daily during the peak season (Table 4). Therefore, sight assessment of the existing conditions, ecological impacts, and visitor experience will dictate daily capacity for vehicles but The Trustees will enforce a capacity limit of 300 vehicles combined for Cape Poge and Leland Beaches. Due to the dynamic nature of these beaches, the quota is subject to seasonal and annual change but will be assessed regularly (daily at times of peak use) to ensure safety and resource protection goals are maintained.

³⁵ Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts, MDFW, p. 92

Table 4. Traffic counts at the Dike Bridge from 2020-2022 by (a) Vehicles per day, days with the greatest number of vehicles between 2020-2023, and (c) the number of days with greater than 200 vehicles. In 2020-2021, traffic count data was collected daily. In 2022, traffic count data was collected monthly creating an average daily vehicle count. These traffic counts include all vehicles crossing the Dike bridge entering Cape Poge and Leland Beach including visitors, staff, Cape Poge residents, guests, and contractors for Cape Poge residents.

	Average vehicle per day		
Month	2020	2021	2022
June	130	*	46
July	164	146	163
August	156	145	292
September	129	*	194
October	122	*	*

Table 4 (a). Average vehicles count per day.

*Data not available

Table 4(b). The 10 greatest vehicle counts over the Dike bridge from 2020-2021. Most of the highest visitation occurred in 2020 during the COVID-19 pandemic.

Days with the highest vehicle count 2020- 2021		
Date	Year	Daily vehicle count
6/30/2020	2020	317
9/25/2020	2020	295
8/2/2020	2020	279.5
8/7/2020	2021	267.5
7/13/2020	2020	264
8/2/2021	2021	264
7/26/2020	2020	262.5
8/3/2020	2020	262
6/22/2020	2020	253
9/7/2020	2020	248

Table 4 (c). Number of days with greater than 200 vehicles over the Dike bridge.

Month	2020	2021
June	6	No Data
July	10	2
August	8	5
September	3	No Data

2.5.9 Assistance for Vehicles in Distress

The Trustees may, as resources permit, aid vehicles that become stuck or disabled on the beach. The Trustees may, at its discretion, charge reasonable fees for these services, up to \$300 during off-business hours. The ranger staff will also make reasonable provision to respond to medical emergencies on the beach to include training of staff, use of radios or other communications equipment, and acquisition of emergency devices such as portable defibrillators. Nevertheless, OSV operators will be informed that they enter the beach at their own risk.

2.6.0 Rare Species and Their Protection

2.6.1 Rare Species

Wasque Reservation, Leland Beach, and Cape Poge Wildlife Refuge support several rare species and their habitats. Among these species are piping plover (USESA and MESA), and least (MESA), common (MESA), and roseate terns (USESA and MESA). These species (and several other rare coastal water birds) utilize Cape Poge Wildlife Refuge, Leland beach, and Wasque Reservation for breeding, foraging, and migration and are covered in greater detail below in section 2.6.2.

Northern harriers also utilize these beaches and dunes for breeding and foraging year-round. Harrier breeding is reported to the Massachusetts Natural Heritage and Endangered Species Program when confirmed. Management for this ground-nesting species is essentially focused on habitat protection and minimizing disturbance.

Seabeach knotweed, an annual plant listed as Special Concern (MESA) typically grows at the edges of tidal influenced beaches. It is commonly found within the Beach Strand Community with other beach annuals and along recently formed beach areas where it is free of competition from beach grass that can shade it out. This species greatly benefits from shorebird and dune protection fencing and where it is found outside of these areas it is fenced if vulnerable to foot and OSV traffic. This species is at its northern range limit and southern Massachusetts and the island beaches support some of the largest populations in the state.

Saltmarsh sparrow, listed in 2021 by the state (MESA), is dependent on salt marsh habitat for its entire life. Massachusetts supports 10% of the global population. This species breeds in the salt marsh around Cape Poge Bay and Poucha Pond. Management that protects and restores salt marsh habitat will benefit this species.

Bristly foxtail, a grass, also has been documented on these properties. This grass utilizes damp areas and open transition areas between wetlands and uplands. It requires abundant sun and is easily shaded out by shrubs, trees, and common reed.

Many other Species of Greatest Conservation Need occur as well. (See section 1.4.3 for more information.)

Management activities implemented by The Trustees include public education, protective symbolic fencing, and enforcement of access provisions in this Plan (e.g., no dogs during breeding season or strict enforcement of leash regulations). These practices support the protection of rare and common species using these beaches. These methods are among the most recommended and widely used management strategies to benefit rare beach species. The Trustees provides monitoring data annually to MNHESP for all focal shorebird species including piping plover, roseate tern, common tern, least tern, American oystercatcher, and black skimmer as well as rare plants. Gull colonies are also monitored during periodic

statewide colonial waterbird surveys, typically every five to ten years. Additionally, The Trustees works with governing agencies protecting rare species to obtain necessary permits, share data, and implement management strategies to protect rare and species of concern.

2.6.2 Shorebird Protection Program

The Trustees' Shorebird Protection Program is based on the *1993 Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts* for managing rare shorebirds. Adhering to these guidelines ensures compliance with state and federal Endangered Species Acts. The Trustees is accountable for compliance with the 1993 Guidelines and regularly seeks clarification on implementation from Massachusetts Division of Fisheries and Wildlife. Violations of the guidelines are punishable by law. All our listed shorebird species fall under the purview of the 1993 Guidelines, including the piping plover, least tern, common tern, and roseate tern. During the breeding season (April through September), staff implement the program to include early season habitat protection, careful daily monitoring, and restrictions on certain recreational activities in areas where nesting, brooding, foraging, and staging occurs.

While these guidelines are a regulatory requirement, The Trustees conducts additional management as needed to achieve mission-related goals. Shorebird success often requires additional efforts not outlined in the guidelines, to address causes of low productivity or mortality concerns (e.g., predator control). The Trustees may use the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services³⁶ for targeted predator control to reduce nest and chick predation. The Trustees also may conduct their own, internal predator management. This limited and judicious predator control targets skunks, raccoons, rats, and crows. These species are overabundant (population densities are higher than those that would occur naturally) due to subsidized food availability from humans and a lack of natural predators. Predator control is designed to reduce predation on listed birds but not eliminate it, with the goal of allowing rare birds to reproduce at a level that allows the population to remain stable or increase. This work is completed with the necessary federal and state permits. The Trustees may also seek and maintain a Certificate of Inclusion (COI) under the Piping Plover Habitat Conservation Plan (HCP) operated by the U.S. Fish and Wildlife Service and MassWildlife for these beaches, primarily for maintaining OSV access.

³⁶ https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/sa_program_overview

Protection of N	lests and Nesting Habitat ¹ – Symbolic Fencing			
	All areas of suitable piping plover and tern nesting habitat, as determined by the DFW must be identified and delineated with posts and warning sizes or symbolic fancing on or before April 1 (for			
Beaches with	piping plovers) or May 15 (for terns) each year. No entry into delineated areas. Prior to nest			
OSVs	hatching, OSVs may pass delineated habitat areas along designated vehicle corridors as long as			
	piping plovers are not being disturbed.			
Other recreational beaches	All areas of suitable piping plover and tern nesting habitat must be identified and delineated as they are for beaches with OSVs, if in the opinion of the DFW, failure to do so could discourage plovers or terns from nesting as a result of disturbance from human use. At a minimum, a 50-yard radius area around nests and chicks above the high tide line must be delineated with posts and warning signs or symbolic fencing. Refuge areas should be expanded if the 50-yard radius is deemed inadequate to protect incubating adults or unfledged chicks from harm or disturbance. In practice, symbolic fencing is proactively deployed prior to the nesting season at the great majority of recreational beaches without OSVs. However, remote beaches or other low access sites with adequate monitoring may not need all suitable habitat to be proactively delineated as long as the 50-yard area around nests and chicks is delineated.			
Protection of C	hicks and Chick Habitat – Timing Restrictions on OSV Use			
Sections of bea	ches where unfledged piping plover or tern chicks are present must be temporarily closed to all			
vehicles not de	eemed essential. ² When unfledged piping plover chicks are present, vehicles are prohibited from all			
dune, beach, a	nd 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. ³ The resulting 200-yard wide area of protected habitat should extend			
from the ocean	n 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. ⁴ However, vehicles may be allowed to pass through portions of the protected area that			
are considered	l inaccessible to plover chicks because of steep topography, dense vegetation, or other naturally			
occurring obst	acles. ⁵ If unfledged chicks move outside the original 200-yard wide area, then the boundaries of the			
protected area	should be adjusted to provide at least a 100-yard buffer between chicks and OSVs.			
Other Protections				
Pets should at	a minimum be leashed and under control of their owners at all times from April 1 – August 31. Pets			
should be prohibited on these beaches from April 1 – August 31 if, based on observations and experience, pet				
owners rail to keep pets leashed and under control.				
Kite nying should be prohibited on beaches where plovers or terns nest from April 1 to August 31.				
rifeworks should be promoted on beaches where provers or terms next from April 10 August 51.				
 In addition, rearing or hursery areas used by unnedged or recently nedged tern chicks must be defineded with posts and signs or supplies foreign as later than lung 21 				
posts and signs or symbolic tencing to later than june 21. 2 Escential vabilities (e.g. law enforcement) are defined pursuant to the Guidelines for Parrier Beach Management in				
 Essential venicles (e.g., law enforcement) are defined pursuant to the outdefines for barrier beach management in Magazing and a second second management in the second sec				
massachuseus (massachuseus barrier beach rask roice 1994), see the duidennes for a discussion of procedures for mided use of accontrial vahiclas				
To guided use of essential ventices. 3 When unfledged least term chicks are present the 100-yard buffer is established from lines drawn through				
 when unnedged least term tinks are present the hory-and builter is established from miles drawn through outermost negative of each colony nernondicular to the long axis of the beach 				
The Federal Guidelines indicate that in most a coses valide free areas should extend at least 200 meters on each side				
of the next during the first week following harching. The width of the huffer may be adjusted based on observed				
chick mobility and frequency of monitoring, but may in no case be reduced to less than 100 meters. In some cases				
highly mobi	le broods may require protected areas up to 1.000 meters, even where they are intensively monitored.			
5 Because lea	⁵ Because least tern chicks disperse from nests shorter distances and at older ages than mining ployer chicks, under			
some circui	some circuist circuit and be possible to allow passage of vehicles through portions of protected least term			
habitat if, in the opinion of the DFW, this can occur without substantially increasing threats to least tern chicks or				

Figure 26. Summary of piping plover protection guidelines from the 1993 Guidelines that informs The Trustee's shorebird protection program. Non-compliance to the guidelines can have state and federal enforcement such as up to six months in prison or \$25,000 fine.

2.6.2 Listed Shorebird Protection Measures

their habitats.

Management for listed breeding bird species (e.g., plovers and terns) begins April 1st and lasts into September. Daily monitoring typically begins in late April and extends into August. Trustees' shorebird technicians are mainly responsible for monitoring and recording data on shorebird habitat, nests, broods, and productivity. Technicians adjust protected areas as needed to accommodate habitat changes and breeding and chick rearing activity. They also record visitor violations and help enforce regulations relating to shorebird protection. Trustees' rangers are the main enforcement bodies on the beach for both general beach regulations and shorebird protection. The Trustees also works with state and federal officials and law enforcement to address violations under the Endangered Species Acts. At the end of each breeding season, ecology staff are responsible for reporting shorebird productivity to state officials in addition to writing an internal shorebird report that summarizes the nesting season.



Figure 27. Example of fencing materials used to protect shorebirds from pedestrians and OSVs.

Nesting Habitat Protection:

- Trustees staff, led by the Coastal Ecologist, will delineate all suitable nesting habitat by April 1st by installing symbolic fencing. Symbolic fencing consists of posts at least 5 feet in height, strung with high visibility line. Restricted area shorebird signs will be placed every third or fourth post along the fence line.
- OSV and pedestrian travel should take place in a defined corridor outside of symbolic fencing.
- Fencing may be adjusted throughout the season to ensure all nests are protected and breeding birds have sufficient space to conduct normal reproductive activity with minimal disturbance from visitors (including OSV operators) and their pets. Symbolic shorebird fencing is maintained from April 1 until after breeding season is complete. Trustees' ecology staff will determine when symbolic shorebird fencing may be removed or adjusted. Shorebird fencing may be left in place after the breeding season to protect migratory shorebirds. It may be removed prior to severe storms to prevent loss of supplies but will be replaced once the storm passes.

Nest Protection:

- When active nests are discovered, fence lines may need to be adjusted to provide proper protection to the nest.
- A buffer of at least 50 yards should be maintained between symbolic fencing and a nest. This buffer should be expanded if it is insufficient to prevent incubating birds from being disturbed by pedestrians or vehicles as recommended in the Guidelines. Shorebird staff may find it useful to observe a nest from 100 yards or so away, to see how the birds respond to visitor activity under an initial fencing arrangement.

- Alternatively, if there is not space to achieve the minimum 50-yard buffer, a smaller buffer may be used, providing birds are not exhibiting signs of disturbance from regular beach visitor activity. Careful observation by the ecology staff will determine if a reduced buffer is possible. If a sufficient buffer cannot be provided and incubating birds are continually being disturbed, then passing foot and vehicle traffic should be prohibited past the nest within at least a 50-yard radius.
- All decisions on fence locations are guided by the governing principle that birds should be able to nest without frequent disturbance based on the expertise and approval of the Trustees' ecologists.
- Kiteboarding is not permitted within 200 yards of the shoreline during the protected nesting shorebird season from April 1 to September 30.
- Drones are not permitted during the protected shorebird season unless for emergency use, or with prior written approval from The Trustees. Airborne devices such as these are perceived by shorebirds as a threat and can cause nest or site abandonment or injury.
- Non-lethal predator management techniques may be deployed to protect nests. This consists of electric fencing, visitor refuse management, and in the case of nesting piping plovers, predator exclosures (metal fencing surrounding nests).
- Lethal in-house predator control may be conducted and can be augmented by contracted predator removal by USDA APHIS Wildlife Services. Control focuses on overabundant crows, skunks, racoons, and rats that target shorebird nests and chicks. Federal and state permits are required to conduct this work and are on file with the Trustees.

Unfledged Chick Protection:

OSV travel along sections of beach where unfledged shorebird chicks are present should be restricted to Essential Vehicles only.

Essential vehicle guidelines:

- Include vehicles operated by law enforcement, public safety officials, private property owners and their guests, and Trustees staff trained in shorebird monitoring. Approved reasons for essential travel include public safety, law enforcement, minimal maintenance of public property, access to private dwellings not otherwise accessible, rare species monitoring and management, and scientific research.³⁷
- Areas where chicks are at risk of crossing into essential vehicle travel corridors will be demarcated with signage alerting vehicle operators that there may be chicks in the areas and reminding them of the established 5mph speed limit.
- Essential vehicle travel through chick areas should only occur if absolutely necessary and should be restricted to daylight hours. Alternate routes that avoid chicks should be considered as well as alternative modes of transportation (e.g., boat or foot) that present less of an impact on unfledged chicks.
- Vehicles will travel no faster than 5mph through chick zones.
- Essential vehicle operators must record the date, name or call #, reason for travel, and time of entry/ departure through the restricted area in the Essential Vehicle Logbook located at the Dike Bridge gatehouse.
- Shorebird technicians will keep an additional log of numbers and locations of unfledged chicks for broods near or within the essential vehicle corridor. The log will be kept at the Dike Bridge

³⁷ Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program. 1993. Guidelines for Managing Recreational Use of Beaches to Protect Piping Plover, Terns, and their Habitat. Pp. B11-B12.

Gatehouse and will be accessible for viewing during business hours. All essential vehicle operators should check this log daily.

- In non-emergency situations, a qualified Trustees staff member will transport state or federal officials requiring beach access only if the visit fits the criteria of an essential visit.
- All Trustees vehicle operators must have received shorebird spotting training and review and understand the locations of all plover and tern nesting activity by weekly meetings, bulletin board at the staff only ranger headquarters, social media, maps at the Mytoi and Dike bridge gatehouses, and/or consultation with ecology staff.

Non-essential Vehicle Use and Restrictions:

- OSV access is prohibited within 100 yards of any unfledged chicks.
- In areas where beaches are narrow, foraging habitat exists on ocean and bay-side beaches, and there are no barriers preventing chicks from cross beach travel, then both beach corridors and dune trails should be closed to OSVs (Figure 28).
- If there are portions of the beach that are considered inaccessible to chicks because of steep topography, thick vegetation, or other natural barriers, then OSV travel may be routed through these areas (Figure 27).



Figure 28. Example of the potential use of an inside trail to bypass a closure for unfledged chicks on the ocean side beach. Fence lines exclude OSVs from a 200-yard section of beach centered on nest site. Dune topography and vegetation preclude chicks heading west into active trail and little or no foraging habitat exists on the bayside. Crossover trails north and south of illustrated area will allow OSVs to move from ocean side beach to interior trail where required.

- OSV restrictions will begin on or before hatching begins and continue until chicks have fledged.
- When plover nests are first located at a full clutch, making it impossible to estimate a hatch date, OSV restrictions will be implemented using one of the following scenarios:

- The nest will be monitored at least twice per day, once before 6:00AM and once after
 7:00PM by a qualified staff member. If there are no signs of hatching, OSV use may continue; or,
- Restrictions should begin on May 15 (the earliest probable hatch date in Massachusetts). If the nest is found after May 15, restrictions should start immediately.
- If a nest hatches before the predicted hatch date or chicks are found from an undiscovered nest in a non-restricted area, OSV restrictions will begin immediately.
- If ecology staff is unable to locate a brood, then OSV restrictions shall remain in place until either the brood has been found or it has been determined the brood has failed. This determination is the responsibility of the ecology staff and may take a maximum of four days.

2.6.3 Fledged Chicks and Lifting OSV Restrictions

- Chicks will be declared fledged when they meet the temporal or basic physical standards for fledging found in the Guidelines.³⁸
- Closures will be maintained until chicks meet the standards for fledging.
- Determination of fledging will be the responsibility of Trustees' ecology staff.

2.6.4 Protection of Non-Listed Species

While our rare species management is conducted in close partnership with state and federal agencies responsible for these species, The Trustees may enact additional procedures to maintain species of local, regional, or global significance. For example, while American oystercatchers are not listed under the state or federal Endangered Species Acts, this species is significantly less common than the piping plover in Massachusetts and is a vulnerable beach breeder meriting protection. American oystercatcher is recognized as a Species of Greatest Conservation Need under the Massachusetts State Wildlife Action Plan and is considered a high priority for conservation in various regional and national plans. For non-listed species, particularly declining and at-risk species, The Trustees applies protection efforts similar to that of listed species, but with greater flexibility to maintain access following *The Trustees Guidelines for Management for Non-Listed Species* (Appendix A). Ecosystems based on healthy populations (both rare and common), high-quality habitat, and natural processes that sustain biodiversity are central to The Trustees stewardship philosophy for its lands and landscapes it stewards.

Providing reasonably disturbance-free roosting, staging, and foraging habitat for migratory shorebirds is also an important element of comprehensive beach management as many of these species are declining and need protection. Migratory shorebirds have declined by 70% in recent decades and are now considered some of the most vulnerable class of bird.³⁹ The Trustees holds resource protection as an important part of our mission and will implement protection efforts that ensure the long-term viability of the delicate beach ecosystem for generations to come.

2.6.5 Marine Mammal Protection and Injured Wildlife

The Trustees have developed policies that provide internal guidance surrounding the management of marine mammals and injured wildlife. It is important the Trustees manage these occurrences for the

³⁸ <u>Guidelines for Managing Use of Beaches to Protect Piping Plovers, Terns, and their Habitats in Massachusetts,</u> <u>April 1993.</u>

³⁹ State of the Birds Report, 2017. <u>https://www.massaudubon.org/content/download/21633/304821/file/massaudubon_state-of-the-birds-2017-report.pdf</u>

safety of the animals and visitors. These policies Appendix *B Trustees Managing Marine Mammal and Sea* Turtle Strandings and *Managing Injured or Found Birds-Piping Plovers and Roseate Terns* are found in Appendices B and C.

Appendix A The Trustees Guidelines for Management for Non-Listed Species

trusteesPolicyImage: Managing Non-listed Bird Species on Coastal
Beaches

Summary

The Trustees protect and manage 26 miles of coastal beaches that provide critical habitat for a wide range of both listed and non-listed wildlife species, especially birds. Unlike listed species (e.g., piping plover and least tern), non-listed bird species with similar habitat needs do not receive the same level of regulatory protection and as a result, typically receive less on-the-ground protection and are more vulnerable to disturbance. However, non-listed species face the same threats as listed species and are often equally as rare in Massachusetts as listed species dependent on beach habitat. To ensure non-listed bird species remain part of the beach experience and maintain viable populations the Trustees has developed this policy.

Species covered under this policy include birds which nest on Trustees coastal beaches but do not receive protection under the Federal Endangered Species Act or the Massachusetts Endangered Species Act. Species include American oystercatchers, willets, great black-backed and herring gulls (breeding pairs with nests/chicks), black skimmers and migratory and staging terns and shorebirds. All these species, with the exception of black skimmer, are Species of Greatest Conservation Need for Massachusetts. The black skimmer is at its northern range with 12 or fewer pairs breeding annually. Many of these species including American oystercatchers and migratory shorebirds are included in national conservation plans due to population declines and concerns for the species future security.

in a key entrance location, The Trustees would find reasonable alternatives to protect the non-listed species and provide OSV access.

In this policy, The Trustees does not close entire beaches due to the protection of non-listed species. Though localized OSV restrictions may occur, The Trustees will find reasonable alternatives for OSV access. Whereas a single piping plover chick in a key OSV entrance location could require entire beach closures, if a non-listed species that we protect was in that location, we would find alternatives to protection and OSV access.

Protection of Nests:

- Nests will be symbolically fenced following the guidelines for listed species to limit disturbance to nesting birds and the risk of nest destruction by pedestrians or OSVs
- Signage will be placed marking the area as a nesting area and prohibiting foot and vehicle traffic from fenced area.
- If alternative routes exist, prohibit OSV use not including Trustees Essential OSVs.
- If alternative routes <u>are not</u> available, symbolic fencing placement will maximize the buffer around nests while allowing passage for OSVs and pedestrians following The Trustees OSV guidelines and Beach Management Plans.

Protection of Chicks:

- When alternative routes are available The Trustees will restrict non-essential OSVs from where unfledged chicks are present and reroute traffic away from unfledged chicks.
- When alternative routes <u>are not</u> available, and areas are not currently closed to OSVs due to listed species:
 - Signage and speed-restricting fencing should be placed in areas of unfledged chicks and maintained until chicks have fledged or moved to other areas.
 - OSV operators and permit holders will be informed via social media reminding people of the presence of unfledged chicks in specific areas.

Feeding/Staging Grounds:

- When alternative routes for OSVs are available, The Trustees will restrict non-essential OSVs from where migratory birds and newly fledged chicks congregate*.
- When alternative routes are not available, The Trustees will leave fencing up and/or expand to reduce disturbance
- Signage will be erected in these areas delineating their boundary and communicating the importance of undisturbed feeding and staging areas for increased survival during migration.

*Important feeding, loafing, and staging sites are typically well known and monitored, but bird use can vary from year to year as habitat conditions change requiring annual review and modification of protection efforts.

References

Atlantic Flyway Shorebird Initiative: Business Plan

https://atlanticflywayshorebirds.org/about/

Massachusetts State Wildlife Action Plan

https://www.mass.gov/service-details/state-wildlife-action-plan-swap

Atlantic Coast Joint Venture: Bird Conservation Region 30 (New England) Priority Species

https://www.acjv.org/BCR_30/BCR30_June_23_2008_final.pdf

Appendix B Trustees Managing Marine Mammal and Sea Turtle Strandings

RULE & PROCEDURES

NEVER approach or touch a stranded marine mammal: they can be dangerous. Seals and whales are protected under the Marine Mammal Protection Act (MMPA). It is against the law to touch, feed, or otherwise harass them. Harassment occurs when YOUR behavior changes THEIR behavior.

The public should be kept at least 150 feet from a stranded animal – the stress caused by a curious public can result in the accelerated weakening of the animal or even death. NEVER try and push the animal back into the water.

If a Whale is observed ALIVE on a beach

Call the NOAA Fisheries Stranding & Entanglement Hotline, IFAW and your regional ecology staff immediately. When calling the IFAW, be prepared to leave a message with a callback number and detailed information about the location, nature of the stranding, and any obvious injuries to the animal. It is not necessary to determine the species of whale prior to calling. Taking a few representational photos that can be sent by cell phone or email may also be helpful for IFAW staff.

Notify property director and/or OM (or other designated staff) to initiate Crisis Management Team protocols and prepare for public and media inquiries. Post a staff member at the animal to keep public away until help arrives.

If a Seal or Sea Turtle is observed ALIVE on the beach

Make a quick assessment of the animal's condition from a distance. Note any obvious injuries, poor body condition (e.g., ribs or hip bones showing), or entanglements.

If the animal is deemed healthy, keep public away from animal.

If the animal is deemed sick or injured, call your regional ecology staff immediately and the NE IFAW (for the Northeast call the Seacoast Science Center). When calling the IFAW, be prepared to leave a message with a callback number and detailed information about the location, nature of the stranding, and any obvious injuries to the animal. It is not necessary to determine the species of seal or turtle prior to calling. Taking a few representational photos that can be sent by cell phone or email may be helpful for IFAW staff. Notify property director and/or OM (or other designated staff) and post a staff member near the animal to keep public away.

If a Whale is found DEAD on the beach

Call NOAA first to report the finding. NOAA will coordinate with IFAW to assist in the management of the whale. When calling the NOAA, be prepared to leave a message with a callback number and detailed information about the location, nature of the stranding, and any obvious injuries to the animal. It is not

necessary to determine the species of whale prior to calling. Taking a few representational photos that can be sent by cell phone or email may be helpful for IFAW staff.

Notify property superintendent and/or OM (or other designated staff) to initiate Crisis Management Team protocols and prepare for public and media inquiries. Feel free to rope off the carcass to keep the public away.

Once the IFAW has completed their evaluation, the whale should be buried on the beach. If possible, whales should be buried above the high tide line at a depth of four or more feet. Contact the Coastal Ecologist to identify a whale disposal location that will not adversely impact shorebird nesting habitat or other sensitive areas.

Follow up the event with a summary call or email to the regional ecology staff.

If a Seal or Sea Turtle is found DEAD on the beach

Call your regional ecology staff, NOAA and the IFAW. They may wish to examine the animal for cause of death. When calling the IFAW, be prepared to leave a message with a callback number and detailed information about the location, nature of the stranding, and any obvious injuries to the animal. It is not necessary to determine the species of seal or turtle prior to calling. Taking a few representational photos that can be sent by cell phone or email may be helpful for IFAW staff to determine if they need to come out.

Notify property superintendent and/or OM (or other designated staff). Feel free to rope off the carcass or obscure it with beach debris to keep the public away.

If the IFAW is not interested in sampling the animal, or when they are finished with their evaluation, no additional action is necessary. If public curiosity and/or public health are concerns, the animal may be buried near where it was found. Seals and sea turtles should be buried in the intertidal zone (between low and high tide lines) at a depth of four or more feet.

Follow up the event with a summary call or email to the regional ecology staff.

Appendix C Trustees Managing Injured or Found Birds-State or Federally Listed Species

Guidelines for handling injured piping plovers, roseate terns, and other shorebirds, which are federally and state listed (i.e., Least Terns, Red Knots): With more than 26 miles of shoreline, containing significant breeding habitat for rare shorebirds, it's possible to find wounded wildlife of this nature. Due to the status of piping plovers and tern species, it's important that specific steps are taken if an injured bird is discovered. These guidelines are meant to inform staff and managers at coastal properties on the BMPs' for handling injured wildlife of this nature.

GUIDELINES & BEST PRACTICES

- Determine the nature of the injury and assess the capabilities and behavior of the bird. Is it in distress?
- Work with beach staff to address public inquiries and keep visitors away from the injured bird.
- Contact the ecology staff in your region. If neither is available, contact Ecology Program Director. (Contact info below)
- Determine if injury is potentially treatable (e.g., a broken leg is treatable, but a missing leg is not). If you are unsure if treatment is feasible, call the Tufts Wildlife Clinic (508 839-7918).
- Determine whether capture is feasible. A highly mobile bird capable of flight is extremely difficult to catch.
- Contact DFW.
- Contact the Beach Managers.

If it is determined that the bird requires treatment and needs to be captured, try to avoid stressing the bird during the mid-day heat. Ideally, capture should be attempted early in the morning when temperatures are cooler and public visitation is low.

Contact the Animal Rescue League of Boston (617 426-9170) if you require advice on capture techniques or to request help with capture. They might be able to help with transporting the animal.

Once captured, it is important that it be delivered to the Tufts Wildlife Clinic as soon as possible (within two to four hours). A captured bird should not be subjected to any unnecessary stress or handling. The bird should be placed in a dark container (ventilated cardboard box) lined with a towel or blanket. During transport, the bird should be kept in a cool and quiet location.

Federally protected species should be transported to: Tufts Wildlife Clinic

Tufts University School of Veterinary Medicine 200 Westboro Road (Route 30) North Grafton, MA (508) 839-7918

Notify Tufts Wildlife Clinic that you are in route with a federally protected species. They can also be called ahead of time to discuss whether it is feasible to treat the injury.

Normal clinic hours are Monday –Friday, 9:00AM – 4:00PM; and Saturday – Sunday, 9:00AM – 12:00PM. If you will be arriving before or after normal clinic hours, the bird should be brought directly to the Small Mammal Emergency Room (follow signs when arrive on campus). Call the clinic number and leave a message to alert them that you will be arriving outside of normal hours.
Appendix D Maps of Beach Parcels and OSV Trails





Chappaquiddick Properties

Ownership



OSV Trails

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Cape Poge Wildlife Refuge

- Boardwalk

Gatehouse

Leland Beach

Parcel lines and ownership data from MassGIS Level-3 parcel data. Some edits to shoreline by The Trustees GIS. Parcel lines may not match most recent shore line changes.

Aerial photo from ESRI, 2022..

0.25

Map produced by The Trustees of Reservations, August 11, 2023.

0.5 Miles











Map produced by The Trustees of Reservations, August 11, 2023.

Appendix E Cooperative Management Agreement Between the Commonwealth of Massachusetts and The Trustees of Reservations MAR-22-2001 11:20

TRUSTEES OF RESERVATIONS

COOPERATIVE MANAGEMENT AGREEMENT between the Commonwealth of Massachusetts Division of Marine Fisheries and The Trustees of Reservations regarding management of Leland Beach, Chappaquiddick Island, Martha's Vineyard, Massachusetts

WHEREAS, the Commonwealth of Massachusetts, acting through its Division of Marine Fisheries (DMF) of its Department of Fisheries, Wildlife and Environmental Law Enforcement (DFWELE), owns in fee title and manages the 108-acre portion of barrier beach on Chappaquiddick Island, Martha's Vineyard, Massachusetts, commonly known as "Leland Beach"; and

WHEREAS, The Trustees of Reservations (Trustees), a non-profit Massachusetts charitable corporation, owns all or a substantial portion of the 490-acre Cape Poge Wildlife Refuge adjacent to Leland Beach on the north and the 200-acre Wasque Reservation adjacent to Leland Beach on the south; and

WHEREAS, Leland Beach, as part of this coastal barrier beach ecosystem comprised of Wasque Reservation, Leland Beach, and the Cape Poge Wildlife Refuge, has great natural resource value, including nesting habitat for the piping plover, a federally-listed threatened species; and

WHEREAS, Leland Beach also has great public recreation value, including being a very popular area for marine sportfishing and other public uses generally associated with barrier beaches; and

WHEREAS, the Commonwealth and Trustees recognize the importance of unified, coherent mangement of the complex barrier beach ecosystem represented by the lands at Wasque, Leland Beach, and Cape Poge; and

WHEREAS, the protection of the natural resources of Leland Beach while permitting such public use thereof requires the same general policies and techniques of barrier beach management as those now in use by Trustees at Cape Poge Wildlife Refuge and Wasque Reservation; and

WHEREAS, Trustees have extensive management experience at Cape Poge and Wasque with demonstrated success in preserving the fragile barrier beach ecosystem on Chappaquiddick Island while allowing broad public use of this area, have developed a barrier beach ecology program to carefully manage such barrier beach ecosystems, and have staff on hand at Cape Poge and Wasque to monitor and enforce a comprehensive management program for these areas; and

WHEREAS, the Commonwealth recognizes the substantial management and capital expenses associated with responsible beach management that endeavors to provide continued access for sportfishing and other public uses and effective management and protection of endangered species and the fragile beach resource, and further recognizes that increases in such expenses by Trustees are anticipated as a result of this Agreement which may require corresponding increases in the revenues available to Trustees for the management of Leland Beach; and

WHEREAS, Trustees are willing and desire to assist DMF in managing Leland Beach in a manner that will protect the resources thereon while allowing appropriate public use thereof.

NOW, THEREFORE, it is Agreed by and between DMF and Trustees as follows:

1. Trustees shall assist DMF in managing Leland Beach in accordance with the "Leland Beach Management Proposal", dated September 11, 1992; the Trustees' "Cape Poge and Wasque Shorebird Management Plan", dated March 8, 1993; and the "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts", dated April 5, 1993, attached as Exhibits A, B, and C, respectively, and incorporated herein by this reference. Consistent with these documents, public access for sportfishing shall be a priority use of the Leland Beach. To the extent DMF either permits or prohibits swimming at Leland Beach, it is agreed that nothing herein imposes on Trustees any lifeguarding or other responsibilities related to swimming and

2. Trustees agree to continue to permit the general public to have access to Leland Beach through the Wasque Reservation and the Cape Pogue Wildlife Refuge, in accordance with the above-described Management Plans and regulations posted by Trustees, for sportfishing and other permitted uses of the Beach. Trustees also agree to bear all costs pertaining to Trustees' activities under this Cooperative Management Agreement. In return, Trustees may apply its current vehicle access fee program to all persons entering through Wasque Reservation and/or the Cape Poge Wildlife Refuge to get to Leland Beach; a copy of this fee schedule is attached as Exhibit D.

2.1 In addition, Trustees personnel and persons with a Trustees' sticker or other appropriate authorization by Trustees may cross Leland Beach by foot or vehicle to access the Cape Pogue Wildlife Refuge and Wasque Reservation so long as these individuals fully comply with the aforedescribed Management Plans.

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2.2 Trustees agree that any increase in such fees from those charged by Trustees as of the date of this Agreement as applied to the general public desiring access to Leland Beach only a) shall not be assessed without at least 30 days prior public notice, and b) must be approved by DMF and the United States Fish & Wildlife Service (USF&WS), such approval not to be unreasonably withheld. Trustees agree that such fees as applied to such persons will not unreasonably discriminate between residents of Martha's Vineyard approve nor disapprove the proposed fees within 30 days, the proposed fees will be deemed approved and Trustees may assess such fees as if approval had been granted.

3. Representatives from Trustees, DMF, and DFWELE shall meet in October of each year to a) evaluate the implementation of the Management Plans for the Leland Beach-Wasque-Cape Poge area during the just-concluded summer tourist season, b) review the Trustees' performance hereunder, c) discuss any changes desired by either party to the above-described Management Plans and/or to this Agreement, and d) assess enforcement needs for Leland Beach to assure that visitors to the Beach comply with the aforedescribed Management Plans and with applicable environmental laws and regulations, particularly those pertaining to endangered species protection and to barrier beaches. All agreements and decisions reached shall be set forth in writing. All changes to the Management Plans and/or this Agreement must be approved in writing by USFAWS. DMF and DFWELE shall provide the enforcement personnel agreed to in these discussions and as they otherwise determine to be necessary to ensure compliance with the Management Plans and state environmental laws and regulations. Costs associated with enforcement personnel shall be the responsibility of the Commonwealth.

Should any disagreements arise over management of Leland 4. Beach and/or the rights and duties of either party to this Agreement, DMF and Trustees shall make good faith efforts to resolve said disagreements. However, if a mutually agreeable resolution cannot be reached within a reasonable time period not to exceed 30 days, DMF, in consultation with USF&WS, shall have final authority over all matters pertaining to the management of Leland Beach under this Agreement. Trustees shall have the right to appeal any such decision by DMF to the Commissioner of the Fisheries, Wildlife and Environmental Enforcement. The Commissioner shall review the position of all Law parties and issue a final decision thereon, subject to review and approval thereof by the USF&WS. This decision shall be in writing, shall state the facts and rationale relied on in making the decision, and shall be binding on all parties.

5. This Agreement shall become effective when signed by both parties hereto and shall continue in force for a five-year period. This Agreement shall be automatically renewed for additional 5-year periods unless terminated as provided in paragraph 6 below.

6. Either party may terminate this Agreement without cause by 45 days written notice thereof together with a statement of the general reasons for the decision to terminate. Both parties agree to make every effort to send such notice of termination no later than December 31 of any year in order to help the other party preclude the incurring of expenses associated with the planning and budgeting of management activities hereunder for the ensuing tourist season as well as to provide each party with adequate time to make alternate arrangements for management of their respective properties. If termination is by either party for cause because (a) in the opinion of one party, the other party has failed to fulfill its obligations and duties under this Agreement, and/or (b) continuation of this Agreement threatens DMF compliance with USF&WS federal aid program requirements, the party desiring to terminate for cause shall send written notice thereof to the other party containing a detailed and specific description of the reasons for termination. Within 21 days of receipt, the party being terminated may request a meeting to discuss the proposed termination. If DMF is the terminating party and following said meeting decides to proceed with termination, Trustees shall have the right to appeal said decision to the Commissioner of the Department of Fisheries, Wildlife & Environmental Law Enforcement. Said appeal must be made in writing to the Commissioner within 14 days of the abovedescribed meeting and shall state in detail the grounds for appeal. The Commissioner, in consultation with the USF&WS, shall arbitrate the dispute over termination. The Commissioner shall issue his/her decision in a written opinion containing a thorough elaboration of the reasons therefore, and said decision shall be final and binding on all parties.

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7. DMF recognizes the importance to Trustees of continued access across Leland Beach by employees of Trustees in order to efficiently manage the Trustees-owned Cape Poge Wildlife Refuge and Wasque Reservation portions of the Wasque to Cape Poge barrier beach system. If this Agreement is terminated, DMF and the Commissioner of DFWELE agree to meet with Trustees to discuss ways in which assured access by employees of Trustees across Leland Beach for such purposes may be continued, subject to all DMF regulations and policies applicable to users of the Beach. However, Trustees agree that, except to the extent Trustees have rights of not obligated in any manner to provide or permit the desired access and may in their sole discretion decline to do so.

8. In all matters pertaining to notice regarding this Agreement, notice shall be sent to Mr. Frederick Winthrop, Jr., Director, The Trustees of Reservations, 572 Essex Street, Beverly, MA, 01915 and to Mr. Philip Coates, Director, Division of Marine Fisheries, 100 Cambridge Street, Room 1901, Boston, MA, 02202 or such other person or address as may be designated to the other parties from time to time.

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WITNESS our hands and seals on the date opposite our signatures below.

Director

Date

The Trustees of Reservations

Director

Division of Marine Fisheries

Commissioner Department of Fisheries, Wildife & Environmental Law Enforcement

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Date 2/2/94

TOTAL P.06

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