The Trustees of Reservations
Conserving the
Massachusetts Landscape

572 Essex Street
Beverly, Massachusetts
01915

Telephone
508-921-1944

CAPE POGE WILDLIFE REFUGE/WASQUE RESERVATION

MANAGEMENT PLAN

THE TRUSTEES OF RESERVATIONS

MAY, 1990

OUTLINE

I. INTRODUCTION

II. PHYSICAL DESCRIPTION

III. BIOLOGICAL DESCRIPTION

IV. MANAGEMENT OBJECTIVES

V. RESEARCH RESULTS

- A. Visitor Use Study
- B. Human Impact Study
- C. Shorebird Research & Protection

VI. MANAGEMENT RECOMMENDATIONS

VII. VISITOR EDUCATION

VIII. PERSONNEL & ENFORCEMENT

IX. CONCLUSIONS

ACKNOWLEDGMENTS

This management plan is an outgrowth of many research projects and consultations with local organizations and committees. The Trustees of Reservations (TTOR) is indebted to Dr. Paul Godfrey and Dr. Lars Carlson, Dept. of Botany, University of Massachusetts; Dr. Maureen Donnelly and Dr. Jerry Vaske, Dept. of Leisure Science, University of New Hampshire; graduate students and interns, Michelle Babione, Ingrid Dybvik, Mary Jo Fitzgerald, Mark Godfrey, John Kanter, Mary Kripp, Robin Lowenfeld, Deborah McCartney, Amanda Moors, Dale Oberlag, Kerran Robbins, Cator Shachoy, Lori Sommer, Robin Symonds, and Tad Zybryk.

Writing and implementing such a plan would be impossible without input from Chappaquiddick residents. Eliot Surkin, Chairman of the Cape Poge/Wasque property committee, volunteered countless hours advising us and opened his Boston office and Chappy home to us for meetings. This plan would not exist without guidance from the the members of the property committee, Lindsay Allison, Leland Brown, Joseph Cressy, Jonathan Filley, Oliver Filley, Jr., Ann Floyd, John Francis, Stanley Goldstein, Dr. Joseph Murray, Edith Potter, Dr. Edward Self and Henry Tilghman.

TTOR staff who worked with researchers, committees and prepared this report include: David Belcher, Tom Chase, Davis Cherington, Dr. Robert Deblinger, Tom Foster, Chris Kennedy and David Rimmer.

INTRODUCTION

As demands for recreational access of our coastline increase, it has become clear to The Trustees of Reservations (TTOR) that owners of barrier beach systems must understand in greater detail the interactions of fragile resources and public use. The major problem is that erosion due to water and wind constantly moves sand and changes the size and shape of barrier beaches. This natural process is held in check by vegetation which covers the sand. Barrier beach vegetation is fragile and does not tolerate foot or vehicle traffic well. If areas become devoid of vegetation, erosion occurs and the rate of property loss increases. In severe cases along the Atlantic coast, entire barrier beaches have "blown away" and the salt marshes behind them have disappeared.

Additionally, the unique beauty of barrier beach systems not only attracts recreators and increases the conflict between recreators and natural resource preservation, beaches are continually being developed for private residences as well as recreational facilities such as marinas and amusement parks. In total, all demands have added to the loss of natural beach habitats and have caused the extinction of species such as the Dusky Seaside Sparrow while adding new species to the U. S. Endangered Species List such as the Piping Plover and the

Northeastern Beach Tiger Beetle. For land conservation organizations, such habitat and wildlife losses require active protection and management programs.

We feel that the solution to this problem is to thoroughly research the conflicts and resolve them by balancing recreation and preservation through innovative management programs. Therefore, TTOR developed a Barrier Beach Ecology Program in 1985 to increase the level of understanding and better manage its five fragile, barrier beaches. The Program uses basic and applied research as its foundation with the objective of providing managers with innovative natural resource management techniques.

The Barrier Beach Ecology Program was modeled after the successful Crane Memorial Reservation Dune Restoration Program. After two years of research by Dr. Paul Godfrey, Department of Botany, University of Massachusetts (who has studied Atlantic coast barrier beaches for 20 years) and Ph.D. student Lars Carlson, many innovative management techniques were recommended and implemented (Carlson and Godfrey 1984 and 1989a) and continue to be monitored (Carlson 1989b). Such techniques included: actively moving sand from the beach to build up a primary dune in urgent need of restoration, transplanting beachgrass from densely vegetated areas to sparsely vegetated areas, construction of vehicle ramps and elevated pedestrian boardwalks, designing an all terrain vehicle patrol system, using snow fence and Christmas trees to trap sand and fencing and signing primary dunes to alleviate human impact.

The Crane Beach Dune Restoration Program has been hailed as a success and labeled as the model by which other beaches should be managed. In fact, not only have the dunes grown and reverted to their natural condition, TTOR staff designed a rare shorebird research and protection program which, through the invention of predator proof fences around nests, resulted in a sevenfold increase in Piping Plover fledglings over three years. Crane Beach currently leads all other beaches in the Commonwealth in number of Piping Plover adult pairs and chicks fledged.

Many of the recommendations made by Carlson and Godfrey could be applied at other properties; however, climatic, ecological, and geological differences between properties must be known. For example, Crane Beach is located on the North Shore of Massachusetts and is buffeted by North Sea currents. Conversely, Cape Poge and Wasque is shaped by Southern Gulf currents. TTOR, therefore, developed The Barrier Beach Ecology Program and contracted with Godfrey and Carlson to conduct original, site specific research on Chappaquiddick. At the same time, TTOR contracted with Drs. Maureen Donnelly and Jerry Vaske, Department of Leisure Management and Tourism, University of New Hampshire to conduct a Visitor Use Study (Donnelly and Vaske 1989; Deblinger et al. 1989) and Robin Symonds to monitor and protect rare shorebirds (Symonds 1988 and 1989). Results and recommendations of these studies will be presented later in this Management Plan.

WASQUE RESERVATION

Wasque Reservation is located on Chappaquiddick Island, Edgartown, Massachusetts and is 200 acres in size. It was purchased with funds raised from the public (primarily on Martha's Vineyard and Chappaquiddick) in 1967. It is well known as one of the finest surf casting spots on the Atlantic coast primarily for Bluefish and Striped Bass.

CAPE POGE WILDLIFE REFUGE

Cape Poge Wildlife Refuge lies 1.5 miles to the north of Wasque Reservation, separated by private property. It is 509 acres and consists of many parcels donated or purchased between 1959 and 1983. Because Cape Poge is somewhat more remote than Wasque, its character is different. It is known more for undisturbed wildlife habitat and seclusion. Visitors are attracted for surf casting, as well.

II. PHYSICAL DESCRIPTION

A. Wasque Reservation - Totaling 200 acres, the reservation consists of a large upland which includes small trees, shrubs and open areas. The open areas are considered heathland and contain rare, native species. Heathlands are rapidly succeeding to woodlands on Martha's Vineyard since the suppression of natural

fire and abandonment of grazing. At Wasque, Pitch Pine (Pinus rigida) and Scrub Oak (Quercus ilicifolia) is encroaching and outcompeting heathland plants.

The reservation also includes a coastal barrier portion, consisting or low sand dunes, the eastern border of the Katama Bay Estuary, a pond, Cape Poge Bay and salt marsh.

Wasque Reservation is much more dynamic than Cape Poge Wildlife Refuge, eroding on average by as much as 14 feet per year. In any given month, storms can scarp large tracts of Wasque's beach and dunes from "the rip" to County Beach (i.e. Norton Point) while at other times the beach will accrete and build outward. These changes are the result of two opposite littoral drift currents colliding to cause "the rip".

Since a portion of Wasque faces east while another portion faces south, erosion or accretion depend on the direction of the storm. When hurricanes move up the Atlantic coast, the southern portion of Martha's Vineyard is usually most affected. The last time a hurricane breached the Katama/Wasque barrier was in 1976. Wasque Beach was breached and the Swan Pond and Katama Bay were opened to the ocean. There have been nine such openings since 1776, each time the breach occurring on the west side of Katama Bay near South Beach. As the littoral currents swept ashore from west to east and deposited sand, the breach slowly filled and finally closed at or near Wasque.

The shifting dunes at Wasque protect the upland behind, in this case heathland, from wave and wind energy. Although storms cause damage to dunes and sometimes breach the barrier beach, the physical properties of littoral drift and wind also help dunes to recover and build. As long as a supply of sand exists and vegetation is allowed to take hold, dunes will grow to provide protection from the next storm.

Sand dunes naturally grow by accumulating wind-blown sand. Dunes vegetated with American beachgrass are most effective at accumulating sand and growing vertically and horizontally. American beachgrass has the unique property of continuing to grow after it has been completely buried by sand. This feature and its network of underground stems and roots, sometimes six feet deep, make it a valuable dune builder.

In spite of its tough, sharp-pointed leaves and its ability to grow after burial, beachgrass is extremely fragile. When a shoot is broken by foot or vehicle traffic, it dies; it cannot regenerate. Even with light but frequent traffic, a path or roadway devoid of vegetation can be easily established. Little by little, unvegetated dunes erode until high tides and storms wash them away.

B. Cape Poge Wildlife Refuge - Totaling 501 acres, Cape Poge consists of a long, narrow barrier beach approximately three miles in length. It begins north of Wasque at the Dike bridge and stretches northward past the Cape Poge lighthouse and curves southwestward forming the Cape Poge elbow. Due to erosion of the coastal bank, today's lighthouse is the fourth structure of its kind. Beginning in 1802, new lighthouses were constructed as the cliff receded. The last construction was in 1960 and it was moved further inland by helicopter in 1985. Other features of Cape Poge include salt marsh, a brackish pond, Cape Poge Bay, cedar uplands and sand dunes.

Unlike the southern shore of Wasque, the east facing beach of Cape Poge erodes gradually (1-3 feet/year). Littoral currents gently sweep Cape Poge from north to south.

Geologically, most of Cape Poge is a relatively new land formation. Only the high headlands are a deposit of the last ice age. The remainder is composed of recent marine sediments. These latter Cape Poge soils are made up of secondary marine deposits of glacial till and outwash brought ashore by waves and wind. Cape Poge, in its present form, was probably first developed due to the protection afforded it from a sand bar to the east in Nantucket Sound. Geologists speculate that the area where the lighthouse sits was once an island, separated from the rest of Cape Poge until the 1500's.

III. BIOLOGICAL DESCRIPTION

A. Wasque Reservation - The biological characteristics of Wasque are directly related to its geological history. As recently as 18,000 years ago, Chappaquiddick did not exist. During the last ice age, a large ice lobe progressed southward over much of Cape Cod and three quarters of Martha's Vineyard. At its furthest advance, it deposited its burden of till to form the southwest portion of Chappaquiddick. Subsequent deposits from post-glacial rivers and streams formed what is now termed the outwash plain.

The Wasque upland is composed of outwash deposits overlying glacial till. These uplands are vegetated by heathland species, low-lying shrubs, and grasses.

As the heathland ecological community develops into forests (or is destroyed by development) on Martha's Vineyard and Nantucket, endemic plant species become rare. Such endangered plants at Wasque are: Nantucket Shadbush (Amelanchier nantucketensis), Sandplain Blue-eyed Grass (Sisirynchrum arenicolor) and Bushy Rockrose (Helianthemum dumosum). The dominant plants at Wasque's Heathlands are: Little Blue-stem grass (Schizychirium scopanius), Huckleberry, (Gaylusocia baccata), Bayberry (Myrica penn.) and Field Rose. Species currently outcompeting shrubs include: Red Cedar (Juniperus virginiana), Scrub Oak, other Oaks (Quercus spp.), and Pitch Pine (Pinus rigida).

As plant communities (or habitats) become rare, so do wildlife species that depend on them. The most famous case in point is the Heath Hen which once flourished on Chappaquiddick. The last Heath Hen on Chappaquiddick died in 1926 and the species became extinct in 1933 when the last individual died in West Tisbury, Martha's Vineyard.

Another such species dependent on heathland and currently declining is the Short-eared Owl. Research to determine preferred habitats is under way on Nantucket and Tuckernuck where 10 - 20 nests have been located each year for the past three years. Information concerning the abundance and preferred habitat of Northern Harriers, Barn Owls, and Grasshopper Sparrows at Wasque would be an important contribution to a Wasque habitat management plan.

The beach at Wasque is not only a productive fishing area but also provides nesting habitat for least terns and piping plovers. Least terns are considered "a species of special concern" in Massachusetts while piping plovers were added to the federal endangered species list in 1986.

B. Cape Poge Wildlife Refuge

Cape Poge Wildlife Refuge provides a diverse array of habitats including beach, dunes, cedar forest, gravel spits and fresh water ponds. Common terns, Least Terns and endangered Roseate Terns have nested on the beaches of Cape Poge and in the Little Neck area. American Oystercatchers, a bird more common in southern beach habitats, is expanding its range northward and nests along the inside shore at Cape Poge. Snowy egrets nest in the cedars or pitch pines while a colony of herring and black-backed gulls nests at the elbow. White-tailed deer, muskrats and otters are common residents. Introduced, non-native mammals include two shorebird predators, skunks and raccoons.

IV. MANAGEMENT OBJECTIVES

The mission of TTOR was stated in its most recent Long Range Plan (1988) as: "The Trustees of Reservations preserves for public use and enjoyment properties of exceptional scenic, historic and ecological value in Massachusetts and works to save open land across the state." More specifically, the goal of property management was stated, "To maintain a level of property management which balances the impact of human use with the need

to protect the natural features of the property and considers available personnel, long term financial objectives and the interests of members."

V. RESEARCH RESULTS

Beginning in 1983, four interrelated and comprehensive research efforts were supported by TTOR and conducted by university, staff or local experts. Dr. Paul Godfrey, University of Massachusetts and graduate student Deborah McCartney studied responses of mowing and burning to Wasque's heathland (McCartney 1988). Colonial waterbird and nesting shorebird inventories have been made at Cape Poge and Wasque since 1972. However, a coordinated program of research and protection began in 1988 (Symonds 1988, 1989). University of New Hampshire researchers Drs. Maureen Donnelly and Jerry Vaske conducted a visitor use study to determine recreationists' desires, requirements, demographics and attitudes (Donnelly and Vaske 1989; Deblinger et al. 1989). Finally, Drs. Godfrey and Lars Carlson, University of Massachusetts, conducted a human impact study similar to the one they conducted at Crane Beach, Ipswich designed to gather information required by beach managers to mitigate human impact to the properties and to recommend future, low impact management strategies.

In this section results pertaining to each study are summarized and presented. Copies of final reports of each study are available at the regional office. Conclusions from each study are synthesized and presented later in the Management Recommendation's section.

A. Heathland Management Study

Sample plots in Wasque's heathland were mowed, burned or left undisturbed during an experiment conducted in 1983 - 84 by Dr. Paul Godfrey and Botany Master's Degree candidate Deborah McCartney to determine plant community response and ultimately to provide direction to TTOR staff regarding management. The study focused on both individual plant species as well as the overall plant community. The null hypothesis: plant response to treatments will not differ from control was tested.

Results indicated that undisturbed sites were most likely to gradually lose species through the process of ecological competition for limited resources, especially light. Examples of such loss can be observed throughout the southern shore of Martha's Vineyard where heathlands have succeeded into pine and oak forests. Although mowing had the visual effect of keeping the land "open", the destructive forces of the tractor and mower's wheels and blades caused approximately one-third of the native heathland species to disappear. Those species intolerant

of mowing died due to the physical impact of chopping or from the secondary impact of loss of light because of increased litter. Burning had the least negative impact on individual species or the plant community as a whole. Most of the native heath species were fire tolerant and resprouted quickly afterwards. Mosses disappeared from burned plots.

Although the results from this relatively quick and small experiment were not definitive, they point toward fire as the preferred tool for heathland management, a contention now supported by Dr. Peter Dunwiddie after five years of similar heathland research on Nantucket.

B. Rare Shorebird Research and Protection

TTOR has supported at least an annual census of colonial waterbirds since 1972 (VanWart 1972 - 77; Whiting 1978 - 79; Culbert 1980 - 84; Symonds 1988 -89) with the exception of 1985 -86. In 1987, another intern conducted a census but did not write-up results. Census methods varied greatly from a one time count to a two week census. Beginning in 1987, TTOR supported an intern throughout the breeding season to conduct periodic censuses, protect birds using fences and signs and interact with the public. Copies of reports can be obtained from the regional office.

Since the early 70's and into the 80's, virtually all species of breeding waterbirds or shorebirds have declined at Cape Poge and Wasque (Table 1). Prior to 1980 breeding birds included: Herring Gulls, Great Black-backed Gulls, Common Terns, Roseate Terns (now listed as federally endangered), Least Terns, Black-crowned Night Herons, Snowy Egrets, American Oystercatchers, Glossy Ibis, and Piping Plovers (now listed as federally threatened). During the past few years, breeding birds included: Great Blacked-backed Gulls, Common Terns, Least Terns, American Oystercatchers and Piping Plovers. Snowy Egrets have attempted to nest but were unsuccessful. In terms of abundance, Herring Gull nesting has declined from 6600 in 1972 to 0 in 1989, Great Black-backed Gulls from 650 in 1972 to 80 in 1989, Common Terns from 179 in 1973 to 1 in 1989, Least Terns from 100 in 1972 (but historically fluctuate greatly ranging from 8 in 1973 to 260 in 1980) to 82 in 1989, and Piping Plovers historically from 6 to 10 to 1 in 1989.

Declining bird populations are due to a variety of causes. Several species have declined nationally due to a loss of available habitat. This is certainly true of the Piping Plover. Local causes for declines include: increased incidence of predation, primarily by skunks; decreased quantity and quality of habitat through erosion and human use; and disturbance by recreationists, primarily over-sand vehicles.

C. Visitor Use Study

The objective of the Visitor Use Study was to provide a systematic view of what visitors to Cape Poge and Wasque do, what they find acceptable, and what they know about the area. The study was designed to integrate with the Human Impact Study. A summary of major results follows:

1. Visitors to Cape Poge and Wasque were aware of the properties fragile nature (97%) and felt a strong personal obligation to protect shorebirds (89%) and the dunes (90%). Three-Fourths of the pedestrian visitors and half of the over-sand vehicle (OSV) users were willing to restrict their visitation if necessary.
2. Differences of opinion were noted with respect to the focus of property management. Although OSV users supported management efforts to protect natural resources, they were significantly more oriented toward recreational activities than pedestrians. When asked which was more important, preservation or recreation?, 76% of the pedestrians and 56% of the OSV users answered preservation.
3. Relative to specific management techniques, both groups believed there should be more fencing to protect birds and dunes (84%, 68%, respectively) and about half thought there was a need for pedestrian boardwalks. A little over half (58%) of the visitors did not want the Wasque parking lot increased.

4. Beliefs about damage OSVs cause to the environment depended on the visitor's mode of travel. Pedestrians overwhelming thought OSVs damaged dunes (92%), wildlife (87%) and the environment in general (82%) while OSV users thought less damage was caused by OSVs (48%, 60% and 34%, respectively).
5. OSV users opposed excluding their activity from the area (91%), but were more supportive of some restrictions. Almost half were willing to curtail their activities at Cape Poge when shorebirds were nesting. The idea of using a shuttle to transport fisherman rather than allowing them to use OSVs was opposed by 88% of them.
6. Less than 10% of the OSV users considered 4-wheel driving as the primary reason for their visit. The vehicle served as a means to engage in a beach related activity rather than as an activity itself. Fishing was the most popular activity.
7. The typical OSV user was experienced with the property. Half of them have been visiting the properties for more than six years while 54% of the pedestrians were first year visitors. Similarly, OSV users visited the property significantly more often per season than pedestrians.
8. As for membership, 17% of the 1986 visitors sampled were TTOR members.

Generally, the study concluded that visitors to Cape Poge and Wasque realized that the area was fragile and were willing to help preserve the property by altering their behavior. However, excluding OSV access was opposed. Pedestrians favored management

efforts geared toward preservation while OSV users were more recreation-minded. Visitors were in favor of efforts to help preserve and protect dunes and wildlife.

D. Human Impact Study

Methodology included comparisons of dune height, plant cover and diversity along transects in low use and high use areas. After three years of gathering data, the study concluded that Wasque and Cape Poge were adversely impacted by human use. Human disturbance resulted in decreased plant cover and diversity. Where OSV roads were closed between 1988 and 1989, plant cover and diversity increased. Other adverse impacts associated with human use included: suppression of dune growth, disturbance of driftlines (which contribute to dune growth), destruction of vegetation in dune and salt marsh communities, and destabilization of sand surfaces which increase erosion rates. The study offers 22 pages of management options to mitigate impacts.

The study describes the dynamic nature of the barrier beach and separates natural from human caused impact. While suggesting many management techniques, options are prioritized so that the most detrimentally impacted areas can be restored first.

In a discussion of human carrying capacity from an ecological point of view, the researchers stated that severe impact results from very few OSV or pedestrian passes over vegetated sand. Therefore carrying capacity for barrier beaches is extremely low. If access avenues are created using vehicle ramps or pedestrian boardwalks, however, carrying capacity can be greatly expanded. The researchers cautioned that carrying capacity can also be based on human tolerance for other visitors which is currently unknown. Therefore, they suggested closing areas that were extremely sensitive or included rare or endangered species from public use but not limiting the numbers of visitors allowed on the properties provided that stabilization techniques were in place to protect dunes.

Four basic rules or principles for barrier beach management were stated:

1. Build boardwalks or ramps to move people from parking areas to the beach.
2. Channel people through dunes by the route likely to cause the least possible damage using fences, boardwalks, signs and thick vegetation to create pathways.
3. Keep vehicles off dunes and dune vegetation (especially the toe of the dune), salt marsh vegetation and high tide drift lines.
4. Once human disturbance is removed, natural vegetation will recover quite rapidly.

The study includes a detailed map with specific locations for future restoration. Areas recommended for closure are described and potential OSV and pedestrian routes are discussed. Specific management techniques recommended include: fencing and signage, pedestrian boardwalks, vehicle ramps, snow fence and beachgrass transplantation.

VI. MANAGEMENT RECOMMENDATIONS

A. Wasque Heathlands

Heathlands on Martha's Vineyard have gradually disappeared because the primary agents responsible for their maintenance, fire and grazing, have disappeared. Since heathlands are an intermediate or sub-climax ecological community, they are naturally replaced by species which compete more efficiently for limited resources. Such disappearance on a regional basis cause many of the plants to be listed as rare, threatened or endangered. Because certain wildlife species use heathland as habitat, such as the short-eared owl, they too become rare. Therefore, it is recognized by TTOR that heathlands are unique and important ecosystems and must be preserved.

Since very little is known about heathland management, we must proceed by understanding that everything we do is an experiment. Therefore, careful documentation of any management

prescription is necessary. Based on research using prescribed burning on heathlands from Cape Cod and Nantucket to Block Island, Wasque heathlands should be restored using carefully prescribed burns. Even less is known about mowing heathlands, however, McCartney (1988) discovered that current mowing practices at Wasque cause significant declines in heathland species. Therefore mowing should be used as a stop gap measure until areas can be burned. The possibility that mowing can be accomplished less destructively by changing blade height should be investigated.

B. Pedestrian Access and Management

1. Wasque Parking Lot: Pedestrians arriving on bicycles or in vehicles will park in the existing Wasque parking lot. The size of the lot will <u>not</u> be increased and currently holds 55 vehicles (fig. 1, no. 1). The small tire deflation lot west of the Wasque lot can hold an additional 7 vehicles (fig. 1, no. 2). A temporary, pedestrian ramp will be constructed from the parking lot, along an old pathway, over the primary dune to the beach (fig. 1, no. 3 & 4). This ramp will reduce the number of existing pedestrian pathways to one and eliminate pedestrian caused erosion from the Wasque parking lot, over the primary dune to the beach. The

toe of the primary dune at the Wasque swimming beach will be fenced with 3-strand, smooth wire fencing to prevent pedestrian trespass on the primary dune.

2. Fishermen Parking Lot: (Fig. 1, No. 5): Pedestrian access from the existing fishermen parking lot will be routed along a pedestrian walkway, down the scarp, cliff face above the swan pond, north of the phragmites wetland to the beach. The parking lot will be expanded from 17 to 20 vehicles (fig. 1, no. 6). The least tern, piping plover nesting area at Wasque point and the toe of the dune will be fenced with 3-strand, wire fencing.

3. East Beach/Dike Bridge: Pedestrians cannot legally access the property across the dike because the Dike bridge is closed. Therefore, East Beach pedestrian traffic will come from vehicles which travel north from Wasque and park at the new entrance to Cape Poge Wildlife Refuge. Vehicles will be parked in low impact designated spaces near the entrance to Cape Poge. A pedestrian boardwalk, similar to the one described for Wasque beach access, will be constructed to access East Beach (fig. 2, no.1). The toe of the dune along east beach will be fenced with 3-strand, wire fencing. Snow fence, wire fencing and beachgrass planting will be used to restore the blow-outs in the Dike bridge area.

C. OSV Access and Management

1. Norton Point/County Beach: OSVs exiting the County Beach at the County Beach/Wasque Beach boundary must enter Wasque behind the primary dune and over the existing vehicle ramp. The roadway along the eastern shore of Katama Bay to the tire deflation parking lot will be closed. The "Wasque swimming beach" will be closed to OSVs year-round (fig. 1, no. 7). OSVs can also exit the county beach over our existing roadways to Chappaquiddick proper. A 3-strand, wire fence will be constructed across the Wasque swimming beach perpendicular to the ocean to prevent vehicular access.
2. Wasque Point: OSV traffic traveling through Wasque to Wasque Point and northward will do so behind the primary dune along existing roads and enter the front beach over a new vehicle ramp near the closed, least tern nesting area (fig. 1, no. 8). The existing road in front of the swan pond has become too wide and blow-out areas are appearing. Therefore, a limited amount of 3-strand, wire fencing will be necessary to restore blow-outs and keep vehicles within designated vehicle tracks.
3. Cape Poge Wildlife Refuge Entrance: The most dramatic changes in property management, the appearance of the property and the way in which visitors use the property will occur at Cape Poge Wildlife Refuge.

The entrance to Cape Poge will be restricted to one pathway near the Dike Bridge (fig. 2, no. 2). Visitors will proceed through a steel pipe gate to access points north. The gate will remain open 24 hours per day throughout the non-winter months. During winter, when rangers visit the property infrequently, the refuge may be closed. A fence barrier connected to the pipe gate from Cape Poge Bay to the ocean will be constructed. Cape Poge residents will be issued keys to the pipe gate lock for access to personal property.

4. Cape Poge Wildlife Refuge: OSVs will choose one of two north-south pathways throughout Cape Poge Wildlife Refuge. The existing pathway near the primary dune will remain open but be will be re-positioned westward where it intersects the crest of the dune. These new spurs will be created through beachgrass and old roads closed with wire fencing. Additionally, cut-over roads from the dune road to the beach will be closed with wire fencing. The existing pathway from the Dyke Bridge north, parallel to the channel which connects Cape Poge Bay to Pocha Pond, but east of the salt marsh wetland will remain open. The inner beach road along Pocha Pond between Tom's Neck and the jetties will remain open. The outer beach, except from Aruda's Point to the jetties, will be closed. Likewise the

road through the Cedars will be closed. OSVs will be prohibited from parking alongside the road except in designated parking areas. Parking areas will be located in low impact areas with temporary boardwalks for pedestrian access to the beach or bay. Parking areas will be located approximately one-quarter miles apart.

Fishermen will be allowed to access the beach with OSVs from Aruda's Point (Fig. 3, No. 1) to the jetties. Otherwise the outer beach will be closed to OSVs. Wherever OSVs cross the primary dune, a vehicle ramp will be used to reduce erosion which cause dune "blow-outs". Three-strand, wire fencing will be used to close existing, restricted roadways and access paths to the beach. Beachgrass will be planted within vehicle tracks to restore old pathways.

OSVs will be permitted to travel the rocky beach around the lighthouse or the main road to Cape Poge elbow (fig. 3, nos. 2 & 3). Driving on the inner beach will be permitted at Cape Poge elbow (fig. 3, no. 4).

Little Neck will be closed to vehicles and pedestrians to eliminate impact to nesting shorebirds and colonial waterbirds and their habitat (fig. 3, no. 6).

5. In an effort to maintain a balance between recreation and preservation, the superintendent will have the authority to limit the number of vehicles at Cape Poge or Wasque.

D. Rare Shorebird Management

1. Population Enhancement:

The gradual decline and in some cases loss of nesting birds on the properties has caused great concern by various groups. The original citizen's advocacy group which originated the District of Critical Planning Concern concept grew out of concern for bird population decline at Cape Poge. Over the past several years, The National Park Service and The U.S. Fish and Wildlife Service have implemented management plans which include recreational restrictions to protect piping plovers and enhance habitat.

The objective of this management plan is to achieve a balance between human use and natural resource protection. Therefore, we will strive to find compromise management techniques which provide recreational use of the property as well as endangered species protection.

Research at Crane Beach, Ipswich resulted in the development of predator proof fencing. Such fencing combined with symbolic fencing to prevent trespass by pedestrians resulted in a sevenfold increase in piping plovers fledglings over three years. Over-sand vehicles are prohibited at Crane Beach.

Fencing protects piping plover nests, not chicks, from predators, OSVs and pedestrians. Since chicks frequently travel in OSV tracks, they become extremely vulnerable to direct and indirect disturbance. In areas where OSVs are permitted to travel on the beach, such as Wasque Point, additional protection for shorebird chicks should be implemented. The period from hatching to fledging is 25-30 days. During that time the following protection strategies should be considered:

a. Beach closure to OSVs during critical periods
b. Reduced speed limit coupled with OSV user education
c. Staff interpreter and/or volunteers on site to enforce speed limit and educate OSV user.

2. Habitat Enhancement:

Shorebirds have adapted to the dynamic nature of barrier beaches and prefer somewhat open areas just behind the driftline. Areas where dense beachgrass occurs are generally not preferred by shorebirds. Therefore, protecting historical nesting sites year-round with (snow) fencing could reduce nesting habitat. Similarly, stabilizing dunes by planting beachgrass could effect piping plover or least tern habitat.

Rare and endangered wildlife habitat should be considered before management technique implementation. Since no adequate model exists which allows the beach manager to predict where shorebirds will nest from year to year, such management planning is problematic. However, predictive habitat models are being investigated and expert coastal ecologists should be contacted to review management plans before implementation.

Research conducted in 1989 to improve shorebird habitat and attract nesting birds using least tern decoys appeared successful. Definitive results can only be obtained by repeating experiments using standardized methods.

E. Visitor Education:

1. Overview: Education is necessary to insure broad community support for TTOR's conservation efforts, as well as to instill a sense of stewardship among visitors. Support and stewardship in this sense encompasses all aspects from financial assistance (especially endowments), to physical help (volunteers), to cooperation among both small and large user groups. Especially, a solid reputation of intelligent care is required in times when local, state and federal levels of government may all be in a position to affect TTOR's creativity and flexibility in managing a highly dynamic ecosystem.

Education is the combination of inspiration and information. That is, those who may already be concerned about ecological issues must have readily available the information necessary to help TTOR achieve its goals. Those who are ambivalent must be exposed to rationale for concern, and the consequences of weak support. While probably most visitors' knowledge and interest varies among all TTOR's ecological concerns, almost everyone takes notice when the land managers' care is apparent, their reasons

clear, and their results popularized. And, above all, the most committed stewards are those who become intimately involved with a property's welfare.

2. Objectives: Assuming increased protection and research of the various habitats and species, our goals are to:

a. inform the ambivalent;

b. inspire the curious; and

c. involve the already inspired.

3. Methods:

Inform the ambivalent:

A map of the property should be made available, free of cost, which (on reverse side) gives simply-written regulations and precautionary information (e.g., keep 10' away from beach grass, or, lower pressure in tires). The map should display international or similarly styled symbols indicating permitted or restricted activities for precise locations (i.e., where swimming and fishing allowed, or nest areas to avoid, etc.). The map should also show jeep and foot trails, and locations of geographic details so that visitors can orient themselves, or report unusual sightings (see "visitor report cards", below).

Inspire the Curious:

The current brochure should be completely revised to reference numbered markers on property. General narratives may be kept on history, topo/geography, and some broad dynamics such as seasonal cycles; but numbered stations should be used to refer to examples of biological and short term geological changes. There can be more than one of any station (e.g. all "number 5's" might refer to tern colonies), and the numbered stations can be moved to suit the examples if they change annually. Information should be included on interesting management practices (e.g., predator exclosures) and success of results. This kind of brochure obviates "park-like" display panels; however, station numbers should be large enough to see from vehicles, where appropriate. Annual changes in station locations will invite a broader understanding of the habitat and dynamics, and will promote a feeling of exploration (whereas people habituate to panel displays). There should be a fee for this interpretive brochure.

With the map, there should be available a list of "most commonly asked questions" about Chappaquiddick, stressing ecological concerns and management. It should be free.

Bird walks and other natural history programs should be conducted as often as possible, and covering the broadest possible range of topics. They may be led by staff interns or naturalists; however, programs from other agencies should also be encouraged, with a modest fee if absolutely necessary, but always requiring recognition of TTOR's work.

Reporters from the local papers should be regularly invited to the property to observe notable successes or events (predator exclosures and hatching success, recovery or reintroduction of a rare wildflower, prescribed burns, etc.).

There should be regular reports of bird sightings to the "Bird Column" in the Vineyard Gazette, and the Superintendent or Island Ecologist should receive records of sightings weekly - from interns, and qualified visitors - to report to the columnist.

Involve the Inspired:

Standardized "visitor report cards" should be made available to encourage and record visitor observations. Attention should be drawn to location of feeding areas by chicks, nest locations, violations to protected areas, evidence of predation, etc. These should accompany trail maps for locational data. Also needed

is such information as time of day, date, observer name and phone number, etc., and a note insuring confidentiality if reporting on vandalism. All user groups may provide information useful to management, such as location of unusual fish caught, or sighting of sharks in Cape Poge Bay, etc..

Qualified volunteer "tern Wardens" should be recruited to "adopt-a-colony" and monitor behavior, record status daily, check predator traps, or any number of duties - generally tailored to the experience and aptitude of the volunteer.

Qualified volunteers should be rewarded with special privileges, e.g. limited off-hours access to get to monitoring blinds, or free OSV stickers, or use of "official" equipment for research (traps, binoculars, etc.), or accompany TTOR personnel to tern conferences, etc..

F. Personnel & Enforcement

PERSONNEL

Staffing at Cape Poge Wildlife Refuge and Wasque Reservation is seasonally oriented. At present, the property management staff consists of a full-time Superintendent along with three forty hour per week seasonal positions (Assistant Superintendent-24 weeks, and two Rangers-12 weeks each). Additionally, a seasonal shorebird naturalist is hired to monitor, assess and make management recommendations to TTOR regarding the nesting populations of shorebirds of Wasque and Cape Poge. The seasonal positions are employed during the peak months of June, July and August (the Assistant Superintendent is additionally employed for April, May and September; the shorebird naturalist is employed May-July). Approximately 95% of the visitation takes place April through September, each year, which allows TTOR to place the Superintendent on a flexible work schedule to provide additional coverage during the peak season and less during the off-season.

Cape Poge Wildlife Refuge Staffing

The implementation of the management plan with its special emphasis on separate missions for each of the two properties will also require additional staffing resources to

meet the goals. TTOR estimates that 75-80% of property visitation is directed towards Wasque Reservation, therefore the existing property management staff resources should be directed towards Wasque Reservation and the entrance gatehouse on Wasque. New staff resources in the form of an additional seasonal ranger (12 weeks-40 hours/week) and additional hours for the Assistant Superintendent (8 additional weeks of coverage) will allow TTOR to place a ranger at Cape Poge Wildlife Refuge, full-time, during the peak months of June-August.

TTOR has planned on a new seasonal naturalist position commencing with the 1990 Summer season to conduct guided walks at Wasque, Cape Poge and Long Point Wildlife Refuge. This naturalist as well as the shorebird naturalist will report to the regional Islands Naturalist who will review their work and direct their activities. These three naturalists will add an important new emphasis on public education of our barrier beach natural resources. Members of TTOR as well as the public will be encouraged to take advantage of the new interpretive/educational programs conducted by TTOR. Outside natural resource speakers will also be brought in to conduct workshops and lectures on a periodic basis.

ENFORCEMENT

The rangers assigned to patrol Cape Poge Wildlife Refuge will be provided with an All Terrain Vehicle (ATV). The ATV will be utilized to patrol approved trails, as well as closed trails and beaches. The ATV will provide the rangers with a vehicle which can gain access to areas where the use of a 4 wheel drive truck would be inappropriate.

The property management staff (assisted by the naturalist staff) will be responsible for posting shorebird nesting areas as needed to protect terns, plovers, and oystercatchers. Signage will be used as needed to explain property rules and regulations as well as to mark various trails. Property areas containing rare and/or endangered plant and animal species may be marked with signage depending upon the appropriateness of doing so.

Strict enforcement of property speed limits and entry into closed areas will be emphasized, especially in areas of nesting shorebirds.

The use of Massachusetts Environmental Police Officers on a paid police detail basis will be continued on both properties. In the past, officers of the Division of Law Enforcement have been hired, on details, to provide additional property protection during holiday weekends and during the

hunting season. The officers also provide routine patrol coverage during their normal patrols on the Island. The Superintendent and Assistant Regional Supervisor may retain paid police details on an as-needed basis.

Enforcement of the property rules and regulations as they pertain to hunting should continue to rigorously be enforced with greater emphasis placed on the requirement that written authorization from the property superintendent must be in the possession of waterfowl hunters while hunting at Cape Poge Wildlife Refuge.

The superintendent is empowered to close the property with the approval of the Regional Supervisor when conditions on the property may prove hazardous to visitors. The Superintendent will reopen the property when he/she is assured of the safety and protection of all visitors and staff.

LITERATURE CITED

Carlson, L. H. and P. J. Godfrey. 1989. Human impact management in a coastal recreation and natural area. Biol. Conser. 49: 141-156.

Carlson, L. H and P. J. Godfrey. 1990. Ecological evaluation of human impacts at Wasque Reservation and Cape Poge Wildlife Refuge, Martha's Vineyard, MA. The Trustees of Reservations, Final Report.

Deblinger, R. D., M. Donnelly and J. Vaske. 1989. Integrating ecological and social impacts into barrier beach management. Proc. N.E. Recreation Research Symp., N.E. For. Exper. Sta. Rept. NE-132:49-56.

Donnelly, M. and J. Vaske. 1989. Visitor behaviors and beliefs about impact management at Cape Poge and Wasque. The Trustees of Reservations, Final Report. 69pp.

McCartney, D. 1988. A comparison of responses of a Martha's Vineyard heath-shrub community to controlled burning and mowing. M.S. Thesis, Univ. Mass., Amherst, MA. 52pp.

Symonds, R. 1988 and 1989. Least tern and piping plover research and protection program at Cape Poge Wildlife Refuge and Wasque Reservation, Edgartown, MA. The Trustees of Reservations, Final Report.

The Trustees of Reservations
Wasque/Cape Poge Management Plan Budget, 1990-1991

Cost Center 5201

Expense Item	FY-90-91	FY-91-92
50219		
Signage	$3,000.	$5,000.
50232		
Property Survey		$10,000.
50260		
All Terrain Vehicle	$4,000.	
51010		
Pedestrian Walkway:		
Wasque Bathing Beach	$10,000.	
Fisherman's Lot		$15,000.
Vehicle Ramps 100ft. @ $35/ft.	$ 3,500.	$ 5,000.
Entrance Barriers		
Cape Poge		$10,000.
Wasque		$10,000.
Maps and Printed Interpretive Material	$ 2,000.	
Portable Bathroom	$ 1,500.	
Well Installation	$ 1,000.	
Air Compressor/Shed & Electric Hook-up	$ 5,000.	
51030		
Fencing	$ 5,000.	$5,000.
52020		
Seasonal Ranger 10 Weeks @ $300.	$ 3,000.	$3,000.
Ass't. Superintendent 8 Add'l. Weeks @ $350.	$ 2,100.	$2,100.
Contractual EPO Support	$ 1,000.	$1,000.
TOTALS	$41,100.	$66,100.
GRAND TOTAL TWO YEAR COST:	$107,200.	

AN ADDENDUM TO THE CAPE POGE/WASQUE MANAGEMENT PLAN

ACCESS MANAGEMENT
Cape Poge Wildlife Refuge, Chappaquiddick Island

The Trustees of Reservations
Islands Regional Office
Wakeman Conservation Center
RFD Box 319-X,
Lamberts Cove Road
Vineyard Haven, MA 02568

Approved: 8/10/91 Chappaquiddick Committee

An Addendum to the Cape Poge/Wasque Management Plan

Access Management
Cape Poge Wildlife Refuge, Chappaquiddick Island

Purpose

The Trustees of Reservations (TTOR) has determined after extensive research that off road vehicles (ORV's) have a significant adverse impact on barrier beaches. Increased use of four wheel drive vehicles over recent years has made it clear that TTOR must take additional steps to manage access into the wildlife refuge to mitigate adverse impacts resulting from increased vehicle access. The possibility of the restoration or replacement of the Dyke Bridge with a structure (e.g. bridge, causeway, etc.) providing direct off road vehicle access into the wildlife refuge dramatically upsets the balance between acceptable levels of off road vehicle useage and the need to protect this fragile barrier beach property. Increased vehicle accessibility makes it imperative that management steps be implemented immediately to limit the number of vehicles on the property to existing levels of ORV useage. The Cape Poge/Wasque Management Plan emphasizes the need to mitigate adverse ORV impacts by redirecting traffic away from fragile areas. Therefore, TTOR in conjunction with the Chappaquiddick Committee, have adopted the following management plan addendum to further manage access into Cape Poge Wildlife Refuge.

Introduction

The Trustees of Reservations (TTOR) has owned and managed Cape Poge Wildlife Refuge since 1959. The Town of Edgartown owns the Dyke Bridge and a small portion of land at either end of the bridge.

In 1981, the Commonwealth determined that the Dyke Bridge was unsafe for vehicle passage and ordered the Town to close the bridge to vehicles. Pedestrians were allowed to cross the bridge until 1988 when it was determined that the rate of deterioration made pedestrian crossing unsafe. Only four wheel drive vehicles can negotiate the soft sand of the barrier beach and these off road vehicles must obtain a permit from TTOR. In 1980 (the last full year that ORV's were allowed over the bridge) a total of 924 permits were issued. In 1990, TTOR issued over 1800 ORV permits--even though the bridge was closed to ORV's.

Cape Poge Wildlife Refuge stretches for 5.9 miles in length from Cape Poge Gut to a point south of the Dyke Bridge on East Beach and encompasses 509 acres of barrier beach, salt marsh, fresh water pools and cedar/pitch pine uplands. Throughout the length of the Refuge there are

several inholdings not owned by TTOR. These parcel are held by other private landowners, the Town of Edgartown (2 acres at The Jetties) and the US Government (less than 2 acres at the former site of the Cape Poge Lighthouse).

This management plan provides for access to private lands within the boundaries of Cape Poge Wildlife Refuge for Cape Poge landowners via both Wasque Reservation and the proposed replacement Dyke Bridge. Access to The Jetties and Cape Poge Lighthouse are provided for the general public via ORV access from Wasque Reservation.

The terrain, wildlife and plant life of Cape Poge Wildlife Refuge is unique, valuable and extremely fragile. Although TTOR's purposes include providing human access to this extraordinary property, both pedestrian and vehicular access affect the property and must be managed.

East Beach, Cape Poge and Wasque provide critical nesting habitat for federally endangered Piping plovers (only 900 nesting pairs may be found along the entire Atlantic coast; 140 nest in Massachusetts) and State-listed Least terns. This summer, East Beach has hosted 4 pairs of nesting plovers, resulting in 15 eggs. Of these 15 eggs, 3 eggs were destroyed by rock-throwing children, 7 eggs were destroyed by skunks, and 5 eggs hatched. Of the 5 chicks, 4 were run over and killed by ORV's. Only one chick is believed to have survived.

In 1980, Piping plovers were considered uncommon, but even barrier beach managers did not fully realize the extent to which their habitat had been destroyed by pedestrians and ORV's. In 1986, the US Fish and Wildlife Service realized the Piping plover was in danger of imminent extinction and gave this species federal protection. Likewise, State Fisheries and Wildlife biologists noted the sharp decline in Least tern populations and the Division of Fisheries and Wildlife listed these terns as being a species of special concern.

Current Management Situation

The Massachusetts DPW has announced their intention to grant the Town of Edgartown $193,000 to replace the old Dyke Bridge with a replacement structure. This new structure will be constructed to transport ORV's onto the barrier beach, where the vehicles will have easy access into the nesting habitat of the Island's largest critical habitat area for Piping plovers and Least terns. Vehicles affect this habitat all year by accelerating the rate of beach erosion which alters the shape, sand composition and sand deposition patterns of the nesting beach. In 1986 The Trustees commissioned a three year human impact study undertaken by researchers from the University of Massachusetts. At the completion of the study in 1989, it was found that significant adverse impacts to the barrier

beach are associated with ORV useage. TTOR currently manages pedestrians and ORV's under the terms of the Cape Poge/Wasque Management Plan which was adopted by the organization in 1990. The plan calls for minimizing ORV impacts by detouring vehicles away from critical marsh and beach areas. The plan does not provide management provisions for accommodating increased ORV use of the Cape Poge Wildlife Refuge via an access over the Dyke Bridge.

Traffic Flow

Oversand vehicles currently access Cape Poge Wildlife Refuge via Wasque Point and East Beach. Observations by staff seem to indicate that the Refuge vehicle traffic is composed of different user constituencies based on the seasons. The spring and fall traffic is composed heavily of surf fishermen and to a lesser extent by birdwatchers, sightseers, shellfishermen, etc. During the summer, there is a shift in ORV useage towards recreation, ie. swimming, sunning, picnicking, sightseeing, etc.

Research conducted by Dr. Jerry Vaske and Dr. Maureen Donnelly of the University of New Hampshire on behalf of The Trustees was released in 1989. Visitor Behaviors and Beliefs About Impact Management At Cape Poge and Wasque states that:

> "ORV users oppose excluding their activity from the area (91%), but are more supportive of some restrictions. Consistent with their general beliefs about wildlife management, 45 percent are willing to suspend their activity at Cape Poge when shorebirds are nesting. This suggests that while a total ban of ORV's at Cape Poge or Wasque would not be well received by this group, less restrictive constraints on ORV's can be implemented to protect wildlife populations."

The UNH researchers go on to conclude that the ORV users' sensitivity to environmental/wildlife concerns can be partially explained by their motivations for visiting Cape Poge and Wasque. A full 39% of the ORV users questioned listed fishing as their primary reason for accessing the property, followed by 18% who list "being near the ocean", and 12% who list "sunning" as the primary reason for their visit.

It has been observed by staff that ORV users who are visiting for purposes other than fishing tend to be less destination oriented in the beach area they use. They tend to select an area based on wind direction, surf conditions, absence of nuisance insects, lack of vehicles, privacy, etc. Fishermen, in contrast, usually tend to be destination oriented. Most do not run the beaches in search of breaking fish but tend to set out for a desired destination and will secondarily watch for the telltale sign of surface feeding fish along the route.

About half of the survey respondents accessed the properties on foot (46%) and of these visitors 34% said that "being near the ocean" and 30% said "sunning" was the primary reason for their visit. Only 2% of the pedestrian visitors list fishing as their reason for coming to the properties.

In total, 97% of the visitors to Cape Poge and Wasque stated their awareness of the fragility of these barrier beaches, and report a strong personal obligation to protect the shorebirds (89%) and the dunes (90%).

It can be surmised from these observations and data that 39% of the ORV users (fishing is the primary reason for visiting) are destination oriented whereas upwards of 30% of the ORV users (ocean seekers and sunbathers) tend not to be tied to a set destination but will roam the property in search of the "right" surf, sun and beach conditions.

This then would appear to indicate that up to 39% of ORV's utilizing the Dyke Bridge will be destination oriented (presumably towards the fishing areas located within Cape Poge Wildlife Refuge) and up to 30% would proceed equally onto the northern end of East Beach or into Cape Poge Wildlife Refuge in search of suitable beach area.

Under the current management plan these beach visitors access the barrier beach at Wasque, which is more tolerant of vehicle impacts than Cape Poge/East Beach which is more susceptible to vehicle impacts. ORV fishermen access the beach at Wasque and most will remain at Wasque Point (renown for its surf fishing). Based on staff observations made in 1988-89, fewer than 15% of the ORV fishermen bypassed Wasque in favor of Cape Poge Wildlife Refuge. Few fishermen fish along East Beach, preferring instead to bypass East Beach for the better fishing areas at Cape Poge.

Under the current traffic flow pattern, ORV-borne sunbathers, swimmers and recreational users tend to concentrate at Wasque Point, at the western end of the swimming beach and at the southern end of East Beach adjacent to Wasque Point.

Thus by introducing a new access point for ORV's via the Dyke Bridge, the existing traffic pattern which tends to concentrate general beach users onto the more vehicle tolerant beach (Wasque) will be disrupted. Additional ORV's would access the previously remote East Beach and Cape Poge Wildlife Refuge.

Enforcement and Protection

Under the provisions of the Cape Poge and Wasque Management Plan, TTOR has stationed a ranger at Cape Poge Wildlife Refuge on a seasonal basis. Additionally, the

duties and responsibilities of the Assistant Superintendent, Chappaquiddick Management Unit were increased to include added emphasis on the protection of Cape Poge Wildlife Refuge. An additional two months of protection were added by increasing ranger coverage within the management unit.

Rangers do not generally have police powers (some personnel are duly commissioned special police officers) and have been selected based primarily on their ability to inform and educate barrier beach users. The addition of increasing numbers of ORV's at Cape Poge Wildlife Refuge would necessitate increased enforcement staffing (over and above existing levels) which would in turn place an additional financial burden on the organization. As well, additional gatehouse rangers will be budgeted to assess property admission fees to pedestrians who wish to enter Cape Poge Wildlife Refuge via the Dyke Bridge.

TTOR Policy Position

TTOR supports replacement of the Dyke Bridge but emphasizes that much has changed since 1980 which profoundly affects the environmental integrity of this fragile barrier beach.

It is The Trustees of Reservations' position that a replacement bridge should be constructed at the site of the Dyke Bridge but that this bridge should be limited to providing pedestrian access, emergency vehicle access and vehicle access for Cape Poge landowners, only. All other vehicles may still access Cape Poge via Wasque Point. It is important to note that under the current management plan, ORV's are required to make a lengthy trip to East Beach and Cape Poge from Wasque. Thus their numbers are reduced considerably before they reach the primary habitat areas located directly south and north of the Dyke Bridge on East Beach. Therefore, TTOR's position is that controlled vehicle access onto the barrier beach is already provided via Wasque; pedestrian access via the bridge is desirable.

Cape Poge Access Management Plan

It is recommended that The Trustees of Reservations immediately adopt the following provisions to adequately protect the barrier beaches and saltmarsh of Cape Poge Wildlife Refuge. Steps will be taken, whether or not a bridge is built, to limit ORV use at Cape Poge Wildlife Refuge to the current levels of ORV useage:

Off Road Vehicle Access

1. Due to the fragility of Cape Poge Wildlife Refuge's (CPWR) barrier beach, only emergency vehicles and Cape Poge resident vehicles will be allowed to enter Cape Poge Wildlife Refuge via the Dyke Bridge. TTOR strongly recommends that

the Town and Commonwealth incorporate a locking gate system in the design of the bridge which would be located on the Dyke Road end of the bridge. If this recommendation is not followed, TTOR will request authorization under the provisions of the Cape Poge District of Critical Planning Concern (DCPC) to erect a vehicle gate on TTOR property at the end of the Dyke Bridge causeway. Until such approval is given, TTOR will place a fence at the end of the causeway to prevent ORV's from accessing the refuge via the bridge. This fence will not restrict pedestrian access into the refuge.

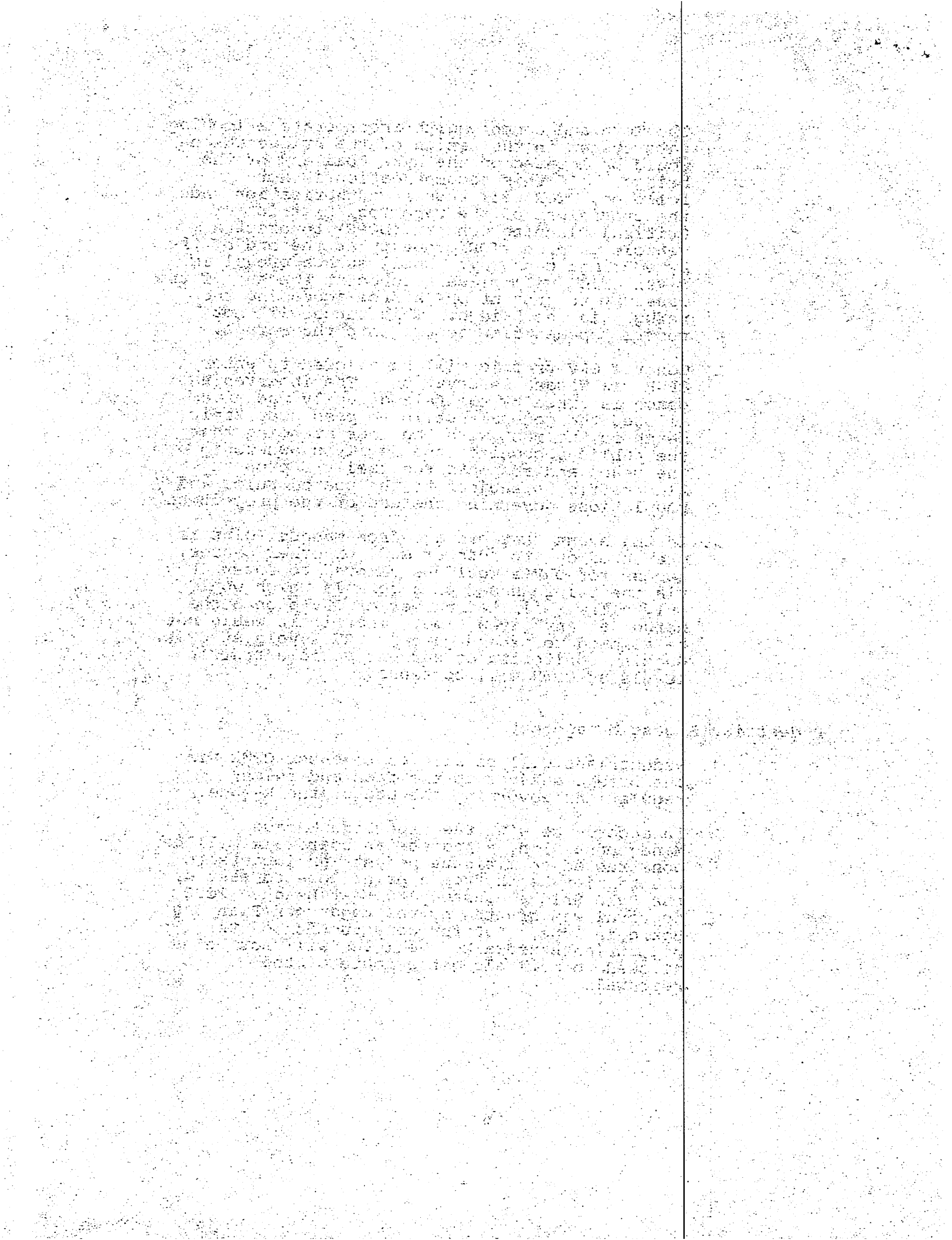
2. General ORV traffic will be allowed to enter CPWR via Wasque Reservation. The intervening beach is owned by the Leland family who have allowed the general public to pass over their beach in the past with the understanding that the public recognizes the family's ownership of the beach and respects the family's property. All traffic is subject to the posted rules and regulations governing the use of the properties.

3. In the event that passage from Wasque Point is prevented due to Acts of God, or other causes, access for ORV's would be allowed to enter CPWR via the bridge based on a formula which would only allow a limited number of ORV's onto the Refuge at any given time. That limit would not be allowed to exceed current ORV levels at CPWR. Ongoing monitoring of current vehicle traffic levels at CPWR will continue.

Pedestrian Access Management

1. Pedestrians will be allowed to enter CPWR via the bridge subject to the fees and rules/ regulations governing the use of the Refuge.

2. In accordance with the Cape Poge Wasque Management Plan, a pedestrian boardwalk will be constructed to mitigate pedestrian impacts to the barrier beach from a point located east of the Dyke Bridge Causeway to East Beach. DCPC approval was granted by the Edgartown Planning Board in June, 1990 for construction of the pedestrian boardwalk. Vehicles will not be allowed to park along the route of the boardwalk.



3. Lifesaving equipment will be provided on East Beach adjacent to the end of the pedestrian boardwalk. This equipment is provided for use by experienced swimmers for lifesaving purposes, only.

4. From June 1 - Labor Day, ORV traffic will be detoured for a distance of 300 feet away from the principal swimming area adjacent to the boardwalk at East Beach.

Recommendations

The reopening of the Dyke Bridge will once again create parking issues along Dyke Road. The Trustees of Reservations should work with the Town to attempt to resolve these issues which may hinder emergency vehicle access to the barrier beach. It is also recommended that The Trustees of Reservations and the Edgartown Board of Selectmen meet on a periodic basis to discuss issues of mutual concern regarding access to The Trustees of Reservations properties, habitat protection efforts as well as other related issues of conservation and natural resource protection.

The Trustees of Reservations
Conserving the Massachusetts Landscape

Martha's Vineyard and Nantucket Management Region

Christopher P. Kennedy
Assistant Regional Supervisor

Wakeman Conservation Center
Box 319-X, RFD
Vineyard Haven, Massachusetts
02568

Telephone
508-693-7662

August 16, 1991

Dear East Beach and Cape Poge Neighbor:

The Trustees of Reservations' Chappaquiddick Committee approved the enclosed Addendum to the Cape Poge/Wasque Management Plan on Saturday August 10, 1991. This addendum deals with the issue of management of off road vehicles (ORV's) access and pedestrian access into Cape Poge Wildlife Refuge. A copy of the most recent property map showing the Refuge area is enclosed.

This management strategy was developed in response to Edgartown's proposal to replace the Dyke Bridge and is not intended to reflect the views and opinions of any of our property neighbors on East Beach and Cape Poge.

The plan calls for limiting ORV access into the Refuge to the present ORV trail from Wasque Point with contingency provisions should access ever be prevented from Wasque Point. Access via the Bridge will be limited to pedestrians, emergency vehicles, and East Beach/Cape Poge landowners.

The Commonwealth and Town have announced their intention to fund and construct the replacement bridge once funds from the recently enacted Transportation Bond Bill become available.

Please feel free to comment on this plan amendment by contacting me at the above address.

Thank you for your consideration.

Sincerely,

Chr. Kennedy

Christopher P. Kennedy
Regional Supervisor

cc: R. Howe, Dir., Director, TTOR
E. Surkin, Chair, Chappy Committee
H. Tilghman, Pres., Chappaquiddick Island Assoc.