

Doug's Cove Preserve

Oak Bluffs

Massachusetts



Management Plan



May 2, 2019

Approved by the Oak Bluffs Town Advisory Board (February 18, 2014)

Approved by the Martha's Vineyard Land Bank Commission (February 24, 2014)

Approved by the Secretary of the Executive Office of Energy and Environmental Affairs (April 18, 2014)

Amended by Oak Bluffs TAB and MVLBC (May 2, 2019) see pages 13 and 16.

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Matthew Dix – Property Foreman

Executive Summary

Doug's Cove Preserve comprises 4.4 acres located in Oak Bluffs on Beach Road near the drawbridge and the Martha's Vineyard Hospital. The land encompassing the preserve is a well-known access point to the windward side of Lagoon Pond for traditional harvesting of seaweed and shellfish.

The preserve includes a brackish tidal pond, narrow sand beach and a mosaic of dune and maritime sandplain heath that includes a vegetated causeway and mesic dune swale. There is an access driveway to the pond and the causeway. A line of utility poles runs along the causeway.

Preliminary vegetation inventories revealed 31 species, of which none are state-listed.

This plan proposes managing the existing use of the preserve by creating a 4-vehicle trailhead with one space designated for universal access and senior use and one designated for staging use. The trailhead is proposed for the explicit use of shellfish- and seaweed-harvesting in Lagoon Pond. The plan also proposes fencing off areas that are no longer to be used by vehicles; creating a pedestrian access path by installing 7-8 steps from Beach Road to Lagoon Pond for visitors coming from the county's Eastville Point Beach parking lot across the street; working with Dukes County to install appropriate signs at the Eastville Point Beach parking area regarding the preserve; and prohibiting overnight storage of any kind. Additionally, the management plan proposes to restore the causeway to a natural and more stabilizing grassy state and maintaining it as such through annual mowing and cutting; create a universal access trail along the causeway using crushed shells; prohibit hunting; survey property boundaries and address encroachments as they come up; control exotic invasive species; allow boating and like riparian uses of the preserve; and incorporate abutting properties into the management plan as they come available to the land bank.

All planning goals, objectives and strategies are outlined in detail in the final section of this management plan. To be implemented, this plan must be presented at a public hearing and approved by the land bank's Oak Bluffs town advisory board, the Martha's Vineyard land bank commission and the secretary of the Massachusetts executive office of energy and environmental affairs (EOEEA). Additionally, a notice of intent and Massachusetts endangered species act (MESA) review will be filed with the Oak Bluffs conservation commission and Massachusetts natural heritage and endangered species program (MA-NHESP) for activity proposed in estimated and priority habitat for rare species and activities proposed in and around wetland resource areas.

About the authors

Julie Russell is the primary author and has been the land bank ecologist since August 1999. She is certified as a Wildlife Biologist by the Wildlife Society and holds a Master of Science in zoology from the Cooperative Wildlife Research Lab at Southern Illinois University, Carbondale, and a Bachelor of Science in wildlife biology from the School of Natural Resources at the University of Vermont. Property Foreman Matthew Dix has

worked on land bank properties since 1990. He attended the School of Natural Resources at the University of Vermont and has extensive knowledge of the region's agriculture, natural history and local geography. Maureen McManus-Hill has been the administrative assistant since July of 2006; she has a Bachelor of Arts in economics from Lafayette College.



Sources: Office of Geographic and Environmental Information (MassGIS) Commonwealth of Massachusetts Executive Office of Environmental Affairs :Aerial Color Ortho Imagery-2009, USGS Topographic Images -1978, NHESP Habitat Maps - 2008, roads,Martha's Vineyard Commission (MVC); parcel data- Oak Bluffs town assessors and MVC - 2011, trails, open space data, watersheds, soils (TNC and MVC), ecological communities (MVLBC,TNC, MVC). Coordinate Ref: State Plane, Mass Mainland, Feet, NAD 83

Notes: Map prepared by the Martha's Vineyard land Bank for planning purposes only. The land bank is not responsible for end-users interpretation of the map.

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I. Natural Resource Inventory

A. Physical Characteristics

1. Locus

Doug's Cove Preserve is located at roughly 41°27' 34.66 N latitude and 70°35' 2.87" W longitude. The property consists of 4.4 acres located on Beach Road. The preserve is shown on Oak Bluffs tax map 6 as parcels 14, 23, 18 and 32. A Locus Map (USGS Topo 1973 1:24,000) follows as Appendix A.

2. Survey Maps, Deeds and Preliminary Management Plan Goals

Larger copies of all surveys are on file at the land bank office and are available for inspection by appointment. Deeds (when available), preliminary management plan goals and reduced copies of surveys are included in Appendix B.

3. Geology and Soils

The **General Soils Map** (Appendix C) depicts general classes of soils across Martha's Vineyard. The property occurs in the "Outwash atop Martha's Vineyard Moraine" geologic deposits (Soil Conservation Service (SCS) 1986). The Outwash from Martha's Vineyard Moraine consists mainly of sand and gravel (SCS 1986). The reason for the layered deposits is the moraine of the late Wisconsinan period was formed first as the Buzzards Bay lobe advanced and the outwash plain was formed later by meltwater from the Cape Cod Bay lobe as the glacier began to retreat (Oldale 1992).

Doug's Cove Preserve contains four soil series: Carver loamy coarse sand with a 3-8% slope (CeB), Pompton sandy loam with a 0-3% slope (PyA), Pawcatuck and Matunuck mucky peats with a 0-1% slope (PaA) and Udipsamments with rolling slopes of 3-8% (UaC).

4. Topography

The total elevation at Doug's Cove Preserve is less than 10 feet above sea level and has a slope differential of 0 - 8%. The contours of the property are illustrated in a portion of the USGS map (Topography Map, Appendix D)

5. Hydrology

Doug's Cove Preserve is located in the Lagoon Pond watershed, which comprises approximately 4,465 acres.

The preserve comprises 343 feet of shoreline on Lagoon Pond and a 1.25

acre tidal pond that appears to have been created at some time in the middle 20th century. Late 19th-century photographs depict the area of the tidal pond as being part of a maritime dune swale that was connected by stream to the outflow stream of Brush Pond; shortly after their connection the unified stream enters Lagoon Pond roughly in the same location as it does today (Appendix C, Nautical charts from 1847 and 1889). Furthermore, aerial photographs from 1938 and nautical charts from 1917, 1928 and 1937 continue to depict the tidal pond area as a wet swale with some standing water to the northwest corner of the preserve where the dune swale exists today (Appendix C). Nautical charts from 1976 do show the pond in its current location. The 1.25-acre pond is tidally influenced through a stream that runs into Lagoon Pond.

Due to the low topography of the preserve and its proximity to sea level, the entire area of the preserve is subject to the 100 year flood zone as depicted by FEMA.

6. Ecological Processes

Ecological processes are the “dynamic biogeochemical interactions that occur among and between biotic and abiotic components of the biosphere” as described by the USGS (2012). There are six major ecological processes – disturbance, structural complexity, hydrological patterns, nutrient cycling, biotic interactions and population dynamics – occurring on the preserve.

- Disturbance –

The natural disturbance regimes include fire, wind and insect damage. Wind is the most active force of nature on the preserve. There is no evidence of recent insect damage in the form of winter and gypsy moths on the preserve and no evidence of recent fires. Due to the development of the road and houses to the west of the preserve, wind and salt spray do not have as much influence on the dune system as they once did, allowing the sand to stabilize and trees to grow. Mowing and cutting of trees on the preserve are human-induced disturbance that can be used to mimic evolved disturbance regimes. How often, long and intense an ecosystem is disturbed are factors that are considered in management actions in order to best protect the dynamic nature of natural communities (EPA 1999).

- Structural complexity –

The preserve has a relatively simple vertical structure of plant species ranging from low-growing grassland plants to isolated taller trees. Allowing dead trees to exist, creating uneven patterns of mowing and cutting of vegetation all may increase spatial complexity (EPA 1999).

- Hydrological patterns –
It is important to consider the impact of the vegetation communities on the water cycle in an ecosystem. Vegetation layers help catch water and aid in soil infiltration whereas intense large-scale timber harvest and various heterogeneous agricultural practices can result in increased overland flow, channel incision and fragmentation of wetland habitats (EPA 1999). Promoting shrubland/herbaceous-graminoid vegetative buffers around the wetland habitats on the preserve and maintaining a diverse structural ecosystem will help protect the hydrological patterns of the ecosystem.
- Nutrient cycling –
Important elements such as nitrogen, phosphorous and carbon naturally travel through ecosystems and when combined with water and sunlight determine the productivity of an ecosystem (EPA 1999). Activities that increase (use of fertilizers) or decrease (erosion) nutrients can alter the nutrient cycle and change the ecological integrity of the ecosystem. Protecting soils from erosion and keeping snags and downed logs helps maintain the nutrient richness in the ecosystem.
- Biotic interactions –
The distribution and abundance of species is heavily dependent on the interactions among organisms such as competition for resources, predation, parasitism and mutualism (EPA 1999). Disturbances such as disease, introduction of exotic species and/or over-collection of a species not only affect the “target species” but have a trickle-down effect that depends on the nature and strength of interactions that the “target species” had within its community (EPA 1999). Pollinators and exotic plants play both positive and negative roles, respectively, in biotic interactions of an ecosystem. Spraying pesticides and introducing exotic pollinators can impact other non-target pollinators sometimes resulting in a major decrease in species diversity of plants that are reproductively dependent on native pollinators. Protecting species with high community importance values; removing exotic species before they have aggressively invaded; and implementing elastic management strategies that are modified in response to monitoring are all strategies that can reduce effects on biotic interactions.
- Population dynamics –
The loss of a species can have many unseen effects on a community, depending on the interactions that the species had in

its environment. Species dispersion, recruitment, fertility and mortality compose a species' population dynamics and, along with genetic diversity, play an important role in the success of a species (EPA 1999). Small populations isolated by reduced habitat or habitat fragmentation are vulnerable to extinction, locally and globally. Other species are more widespread but occur in few numbers and are vulnerable due to low genetic diversity. Ecosystems are not static and species require genetic diversity to adapt to their ever-changing world or risk extinction. Special care must be taken to consider the effects management actions may have on the animal and plant species that occur on the preserve.

B. Biological Characteristics

1. Vegetation

Doug's Cove Preserve comprises four general habitat communities: the sandy beach of Lagoon Pond shore, tidal pond, mosaic dune/maritime sandplain heath and dune swale. They are described in detail and shown on the **Ecological Communities Maps** in Appendix E. The dominant vegetation community is the dune/maritime sandplain heath.

Preliminary vegetation inventories indicate a total of 31 plant species occur on Doug's Cove Preserve. The dune/maritime sandplain heath contributes the greatest to the floristic richness of plants occurring on the preserve (Table 1, Appendix E). Species richness is the number of species present in a community (Begon et al. 1990).

2. Wildlife Habitat

No formal wildlife surveys or inventories have been conducted at this time. Tracks of white-tailed deer and striped skunk were observed on the preserve in November 2013.

- (a) Invertebrates – No inventories or surveys were conducted
- (b) Birds – No inventories or surveys were conducted
- (c) Mammals – During one inventory of the preserve in November 2013

tracks of white-tailed deer and striped skunk were observed.

(e) Rare and Endangered Species

The Massachusetts natural heritage and endangered species program (MA NHESP) designates a narrow strip of the preserve along Beach Road as being located within both priority and estimated habitat of rare wildlife (Appendix H).

C. Cultural Characteristics

1. Land History

Doug's Cove Preserve is a relic of the barrier beach system that once formed the eastern side of the mouth to Lagoon Pond also known as the Harbor of Holmes Hole and Waketaquay Pond in the mid 1700's. The term "Lagoon" did not appear in a deed until 1743 after which time the reference "Lagoon Pond" was used with increasing frequency. Lagoon means a lake or body of water on a coast formed by a belt or reef of sand deposited by ocean action.

Nautical charts of 1847 depict the minimal development of Eastville, Brush Pond, the barrier beach and the dune swale. At this time Beach Road and the drawbridge do not exist. During the next 40 years Eastville does not appear to be more developed. However, Beach Road exists as well as a bridge over the mouth of Lagoon Pond. The preserve is depicted as dune and dune swales. In 1917 nautical charts the shoreline west of the preserve is developed with a half dozen buildings. Otherwise the map continues to depict the preserve as dune and dune swale. It is not until 1976 nautical charts that the tidal pond on the preserve is depicted.

2. Planning Concerns

(a) Massachusetts Endangered Species Act:

No management actions proposed in this management plan are within the boundaries of priority and estimated habitat for rare species (NHESP Map, Appendix H).

(b) Wetland Protection Act:

Lagoon Pond, the Atlantic Ocean, barrier beach, the tidal pond, dune swale, bordering vegetated wetland and 100-year flood zone are the "wetland resource areas" under the Massachusetts wetlands protection act. A 100-foot buffer zone around the resource areas is subject to the jurisdiction of the Oak Bluffs conservation commission. All management activities proposed

for the preserve are within the resource area and buffer zone. The land bank must file a notice of intent with the Oak Bluffs Conservation Commission for the above-mentioned proposed activities.

3. Abutters

A list of those owning land abutting or within 200 feet of the Doug's Cove Preserve appears in Appendix I, as does the Oak Bluffs Assessors Map 6.

4. Existing Use and Infrastructure

The following are existing uses:

1. Causeway Trail: There is a road along the causeway that ends at the last power pole.
2. Power Line: There is a power line along the causeway.
3. Trailhead: Existing parking for numerous vehicles exists at the entrance of the causeway, including vehicle access to Lagoon Pond shore.
4. Fence: There is short amount of fencing along Beach Road near a fire hydrant between the entrance to the causeway and the drawbridge.
5. Boats: a dozen or more boats and rafts are stored or have washed up along the Lagoon Pond shore of the preserve.

II. Inventory Analysis

In this section, problems and opportunities that may arise in the management of Short Cove Preserve are analyzed.

A. Constraints & Issues

1. Ecological Context

Doug's Cove Preserve is a part of the extensive shoreline of Lagoon Pond. The causeway and tidal pond on the preserve may serve as storm protection for the development to the northeast.

2. Natural and Cultural Resource Concerns

There are three main areas of concern at Doug's Cove Preserve, each briefly

addressed below and then addressed in more detail in the land management section of the plan:

(a) *Commonwealth/Federal-listed species as well as regionally uncommon species*

Plants: At this time no rare plants are known to occur on the preserve. Further inventories are necessary prior to the installation of any trails.

Wildlife: At this time no rare wildlife species are known to occur on the preserve. Further inventories are necessary prior to the installation of any trails.

(b) *Succession*

Succession is a natural process. Without the mechanical mowing and cutting the barrier beach/dune will continue to succeed into a more tree-dominated community as it is cut off from the ocean by Beach Road.

(c) *Invasive Species*

Several invasive plant species occur on the preserve including oriental bittersweet, phragmites, spotted knapweed and autumn olive. They occur along the causeway, in the dune/maritime sandplain heath and tidal pond shoreline. They can be controlled through annual mowing, manually uprooting and if necessary herbicide treatment. Annual monitoring and quick control and removal of invasive species are important to maintain an ecological balance and the integrity of habitats on the preserve.

3. Sociological Context

Doug's Cove Preserve is located in Oak Bluffs on Beach Road, at the entrance to Lagoon Pond.

4. Neighborhood Concerns

The land bank considers the concerns of neighbors as part of the planning process. All abutting property owners and the local conservation commission are sent written notice of a public hearing on the draft plan. All neighbors – and all members of the public – are invited to review the draft plan, attend the public hearing and make written or oral comments. The land bank's Oak Bluffs town advisory board and the Martha's Vineyard land bank commission review all

comments and can change the draft plan if desired. Anyone may also express concerns at any public meeting of the Martha's Vineyard land bank commission and Oak Bluffs town advisory board, or may simply contact land bank staff.

Planning concerns that already have been brought to the attention of the land bank by neighbors include:

- Overuse of the preserve by vehicles on the beach and indiscriminate parking of vehicles anywhere on the preserve.

B. Addressing Problems and Opportunities

1. Land Bank Mandate

In 1986, the voters of Martha's Vineyard created the land bank to acquire, hold, and manage land in a predominantly natural, scenic, or open condition. The land bank keeps open space open and allows modest public use. Its "shared-use" policy strives to provide a range of public benefits, from low-impact recreation and aesthetics to wildlife conservation and watershed protection. Protection of natural resources is the land bank's highest priority, yet "shared-use" demands balancing the public use of natural resources with protection of the same.

2. Goals at Acquisition

The acquisition of Doug's Cove Preserve meets five of the land bank's eight criteria for property acquisition: fresh and salt water marshes and other wetlands; wildlife habitats; scenic vistas; ocean and pond frontage; and sites for passive recreation. Preliminary management plans were adopted by the land bank commission and Oak Bluffs advisory board and are attached as Appendix B.

3. Opportunities

- a.) **Access:** The proposed vehicular access to Doug's Cove Preserve is via the existing 4-vehicle trailhead area and the County's Eastville Point Beach parking lot located on the west side of Beach Road.
- b.) **Vehicle staging area:** A one-vehicle staging area is proposed in the existing parking area on the preserve. Use of the staging area is proposed for individuals needing to drop off or haul out traditional harvest from Lagoon Pond.
- c.) **Trails:** Approximately 500 feet of trail exist along the causeway.

- d.) *Archaeology*: The preserve is located in an area with close proximity to freshwater with the potential for historic native American occupation or use. Educating the public through signs that create awareness regarding the importance of leaving artifacts where they are found, covering trails with woodchips and reporting any illegal digging will help protect the archaeological artifacts that may exist on the preserve

4. Universal Access (UA)

Doug's Cove Preserve is moderately suited for universal accessibility. It is possible to connect a UA trailhead to views of Lagoon Pond via a UA trail along the causeway.

The preserve's ROS ('Recreation Opportunities Spectrum') classification is "less-developed." Further details are included in Appendix I.

III. Land Management Planning

This final section of the management plan states goals for Doug's Cove Preserve and outlines strategies for achieving them. These goals and strategies are designed to fit within the social and ecological constraints defined previously. The plan addresses five areas of planning concern: nature conservation; recreation and aesthetics; natural products; community interaction; and land administration.

A. Nature Conservation

Provide long-term protection for plants, animals and natural processes occurring on Doug's Cove Preserve.

Objective 1: Protect and encourage rare and endangered species on the preserve.

Strategies:

- a. Monitor the property for rare plants and animals during regular property checks and survey for new populations.
- b. Develop and implement a strategy to protect any additional rare species observed on the property.
- c. Report new observations of rare and endangered species to the proper commonwealth authority.
- d. Restore barrier beach/dune/maritime sandplain heath and tidal pond through:

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- i. remove invasive plants;
 - ii. reduce the number of trees on the causeway;
 - iii. mow annually as necessary to promote stabilizing grasses and herbs on the causeway.
- e. Reroute or close trails in the event that the recreational use interferes with a rare species' ability to forage or reproduce.
- f. Monitor the shoreline for breeding shorebird activities when suitable habitat exists and act accordingly if they are observed.

Objective 2: Reduce and control erosion of trails and the area of the preserve along Beach Road that provides access to Lagoon Pond.

Strategies:

- a. Reroute or temporarily close any trail where necessary.
- b. Close the beach and causeway to vehicular use.
- c. Cover trail with crushed shells to provide stability to the trail.
- d. Prohibit use of motorized vehicles such as dirt bikes and all-terrain vehicles on the preserve.
- e. Install steps in the existing access trail from Beach Road to Lagoon Pond nearly opposite the Eastville Point Beach parking lot.

Objective 3: Protect the value of the preserve as migratory and breeding habitat for avian and other wildlife species

Strategies:

- a. Discourage access to the tidal pond by boats
- b. Monitor changes in vegetation cover during regular property checks and by updating ecological inventory in 2023.
- b. Permit native berry-producing shrubs to grow along the causeway providing the view of the Lagoon Pond from Beach Road is not impacted.
- c. Prohibit dogs on beach during breeding shorebird season from April – August providing habitat is available and nesting birds are observed.

Objective 4: Monitor for and control the spread of invasive species.

Strategies:

- a. Cut or uproot invasive species as they are observed.

- b. Monitor for re-growth and continue to manage invasive plants.
- c. Explore other control methods and implement with permission of the MVLBC, NHESP and Oak Bluffs conservation commission if physical control methods fail.

Objective 5: Reduce fire danger on the preserve.

Strategies:

- a. Prohibit open flame fires on the preserve.
- b. Remove or recycle abandoned structures on the preserve.
- c. ~~Prohibit overnight storage of any kind on the preserve.~~ Prohibit overnight all overnight storage, including boats, with the exception of 2 to 5 outhaul anchors for commercial shellfishing, provided that they do not interfere with beach-nesting shorebirds (amendment).
- d. Prohibit boat landings on vegetated shorelines; allow short-term boat storage during the day on unvegetated beach shorelines (amendment).

B. Recreation and Aesthetics

Allow limited, low-impact recreational use of the area for hiking, bicycling, horseback-riding and picnicking; and maintain attractive views and landscapes provided that these uses do not preclude attainment of nature conservation objectives.

Objective 1: Open the property for low-impact recreation.

Strategies:

- a. Open the property for hiking and other passive uses.
- b. Utilize existing trails and install new trail(s) where appropriate (see Site Management Map)
- c. Monitor impact of passive recreational use on the preserve annually and manage accordingly.

Objective 2: Create a 4-vehicle trailhead using the existing access to the preserve for use in activities pertaining to the traditional harvest occurring in Lagoon Pond (i.e. shellfish and seaweed harvest) and designate the existing Eastville Point Beach parking lot on the west side of the Beach Road as the alternative access to the preserve.

Strategies:

- a. Install 7-8 steps in an existing trail from Beach Road to the Lagoon Pond shore on the preserve.
- b. Install a low-visibility sign station on the preserve at the trail entrance and at the vehicle access point and staging area designating the appropriate uses and rules of the preserve.
- c. Work with Dukes County to install a sign station at the Eastville Point Beach parking area with information regarding the preserve.
- d. Screen as necessary using native vegetation.
- e. Remove one red cedar to accommodate vehicle trailhead.
- f. Harden surface of trailhead with crushed shell and modify as necessary to maintain stability.
- g. Dedicate one vehicle space for universal access/ senior use and one space for staging use only.
- h. Reevaluate the access of the preserve if safety issues crossing the road from the Eastville Point Beach parking area, or other factors, arise.
- i. Install split-rail fencing to limit vehicle use to the designated area on the preserve.

Objective 4: Create trail system as shown on the Site Management Map.

Strategies:

- a. Create trail network as shown on the Site Management Map:
 - i. Harden existing trail along causeway with crushed shell;
 - ii. make trail corridors six to eight feet wide and eight feet tall when possible, with the exception of existing old roads which may be maintained at their present width;
 - iii. free trails of rocks, roots and other obstacles where practical;
 - iv. install erosion control measures where needed;
 - v. mark trails with markers or directional signs if needed;
 - vi. site trails so that they connect, as well as possible, to other conservation land, ancient ways and trail easements.
- b. Screen views of houses as necessary from trails and viewpoints using native vegetation.
- c. Minimize need for signs by siting trails appropriately.
- d. Allow land bank staff discretion to close or relocate trails or add new trails, such as spur trails for off-property trail connections.

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- e. Allow multiple uses of trails where appropriate by passive recreational users.
- f. Prohibit visitors' use of motorized vehicles, such as but not limited to dirt bikes and all-terrain vehicles.
- g. Close causeway to vehicles with a gate and provide a key to utility company pursuant to any pre-recorded easements.
- h. Install raised and sand-ladder boardwalk where necessary to minimize erosion.
- i. Check and maintain trails monthly.

Objective 5: Improve the views of the causeway.

Strategies:

- a. Investigate the possible removal of utility poles along the causeway and remove if deemed feasible.

Objective 6: Entertain possibilities for other trail links

Strategies:

- a. Use existing trails on the preserve where possible and create new trails as necessary to connect the preserve to future conservation land and trail easements.
- b. Maintain existing links to other conserved properties
- c. Create links to other conserved land and easements

Objective 7: Require that dog owners follow the Oak Bluffs town bylaw for dogs such that "all dogs owned or kept within the limits of the town shall be restrained from running at large or shall be kept within the immediate control of their owners or keepers".

Strategies:

- a. Encourage visitors to clean up after their pets.
- b. Post the dog policy at the various sign stations and property entrances and in the land bank map.
- c. Impose, if and when necessary, a stricter dog policy in order to protect possible nesting shorebirds.

Objective 8: Prohibit overnight storage of any kind on the preserve.

Strategies:

- a. Tag any item left on the preserve overnight.
- b. Report all items left overnight on the preserve to the Oak Bluffs police

department and remove all items when deemed appropriate.

- c. Prohibit overnight all overnight storage, including boats, with the exception of 2 to 5 outhaul anchors for commercial shellfishing, provided that they do not interfere with beach-nesting shorebirds (amendment).
- d. Prohibit boat landings on vegetated shorelines; allow short-term boat storage during the day on unvegetated beach shorelines (amendment).

C. Natural Products

Prohibit hunting and camping and allow gathering.

Objective 1: Prohibit hunting on the preserve due to its close proximity to the road.;

Strategies:

- a. Notify the public of the hunting policy on the preserve, in the land bank hunting policy and on the land bank website.
- b. Post the preserve accordingly with the hunting policy.

Objective 2: Prohibit camping.

Strategies:

- a. Prohibit camping on the preserve unless special permission is granted by the land bank commission for scouting and like groups and it is in compliance with appropriate Oak Bluffs town bylaws.
- b. Monitor the preserve for squatters and remove unauthorized campers promptly

Objective 3: Allow gathering of natural products according to the land bank's Harvesting and Gathering of Natural Products policy.

Strategies:

- a. Prohibit gathering of locally rare plants and wildlife on the preserve.
- b. Prohibit gathering of invasive plants for personal use in order to minimize the spread of seeds elsewhere.

D. Community Interaction

Provide helpful and interesting information about the property for visitors; promote cultural resource conservation; and allow educational use of the property.

Objective 1: Help people find the property and avoid trespassing.

Strategies

- a. Mark the property on land bank website (www.mvlandbank.com) and map and provide directions.
- b. Install "end of land bank property" signs where appropriate
- c. Install land bank logo markers on property.
- d. Limit trespassing by closing existing trails not intended for use.
- e. Install gates or fencing as needed.
- f. Inform visitors, in the land bank map, how to access the Eastville Point Beach parking lot and the intended use of the land bank property.
- g. Post map of property and trails as well as an aerial overview of the connecting conservation land and trails on sign station and website as they are updated.
- h. Plant vegetation where residential dwellings are visible from the trail, as necessary, that blends in with the natural context of its environs in order to define and screen the boundaries.

Objective 2: Present useful and interesting information about Doug's Cove Preserve to the public.

Strategies:

- a. Provide the Oak Bluffs public library and conservation commission with copies of this management plan if so desired.
- b. Make a copy of this plan available at the land bank office and, when file size is not restrictive, on the land bank website.
- c. Post information about the cultural and natural history of the preserve at the trailheads.

E. Land Administration

Oversee and police Doug's Cove Preserve on a regular basis and develop good neighborhood relations

Objective 1: Maintain good relations with abutters and neighbors.

Strategies:

- a. Establish contact and working relations with neighbors.
- b. Maintain contact and working relations with the Oak Bluffs conservation commission; send a draft copy of the plan to the Oak Bluffs conservation commission prior to the public hearing.
- c. Post the activities allowed and prohibited on the preserve.

Objective 2: Keep property well-maintained

Strategies:

- a. Inspect property at least monthly
- b. Clean up any litter and junk which may occur
- c. Promptly respond to problems
- d. Employ adequate staff to effectively implement land management goals

Objective 3: Maintain set hours for use

Strategies:

- a. Open property every day of the year from sunrise to sunset
- b. Prohibit nighttime use unless special permission is granted by the land bank commission
- c. Post "closed at dark" signs on the sign station

Objective 4: Keep well-maintained boundaries

Strategies:

- a. Survey boundaries
- b. Locate and GPS corners
- c. Walk boundaries annually
- d. Post boundary flags where appropriate
- e. Correct encroachments as they occur

Objective 5: Keep good records of all land management activities and natural events

Strategies:

- a. Record all significant events, natural or otherwise
- b. Continue to update plant and wildlife inventories
- c. Maintain photographic record of landscape appearance

Objective 6: Comply with all applicable regulations and agreements

Strategies:

- a. Comply with Massachusetts endangered species act
- b. Comply with wetlands protection act and Oak Bluffs town wetland by-laws
- c. Request recommendations from the Massachusetts historical

commission regarding the proposed activities in the plan.

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- Historical Nautical Charts: <http://historicalcharts.noaa.gov/historical/preview/image:347-9-1928>
- Historical Nautical Charts: <http://historicalcharts.noaa.gov/historical/preview/image:4D347-37>
- Historical Nautical Charts: <http://historicalcharts.noaa.gov/historical/preview/image:13238-5-1976>

DOUG'S COVE PRESERVE MANAGEMENT PLAN

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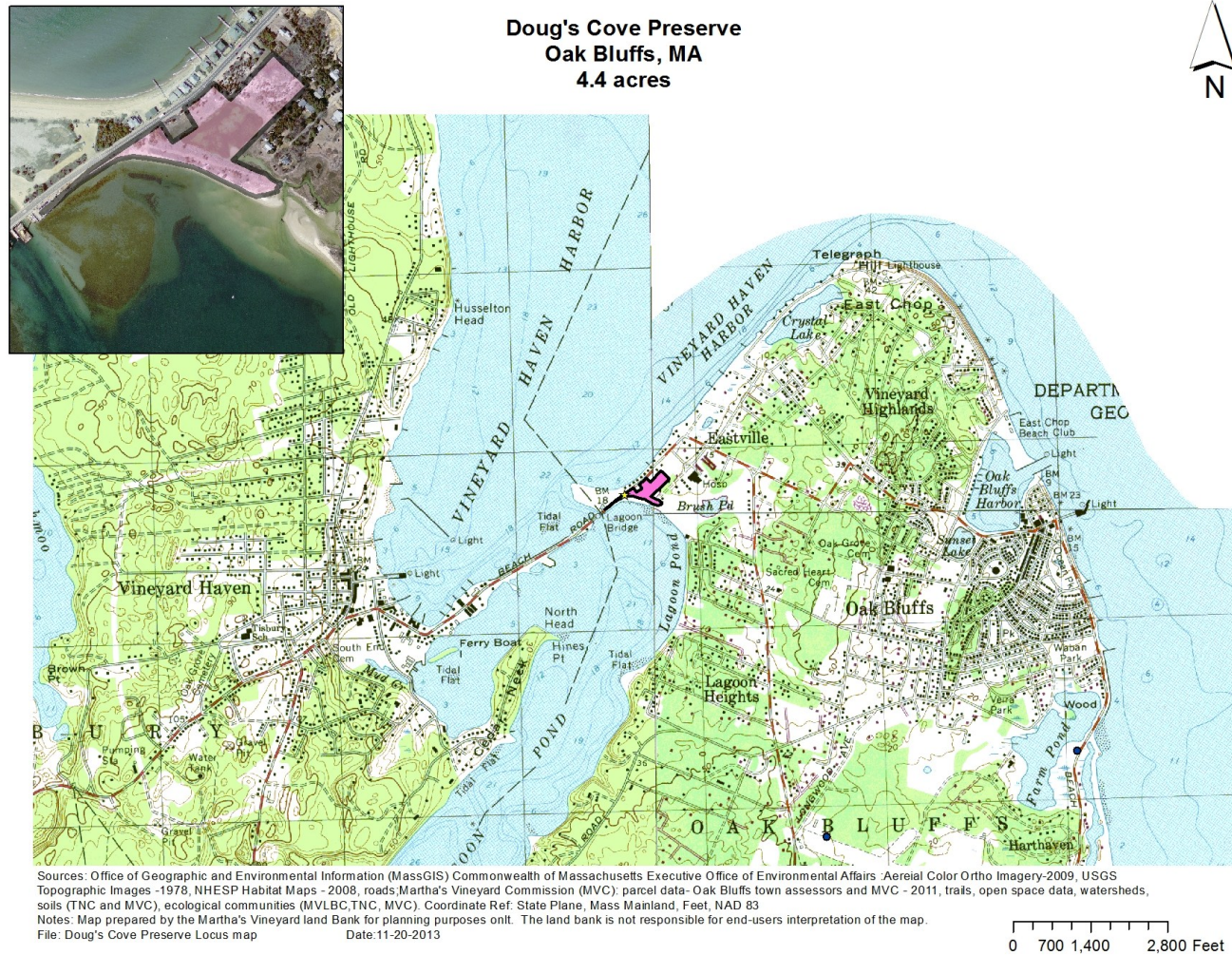
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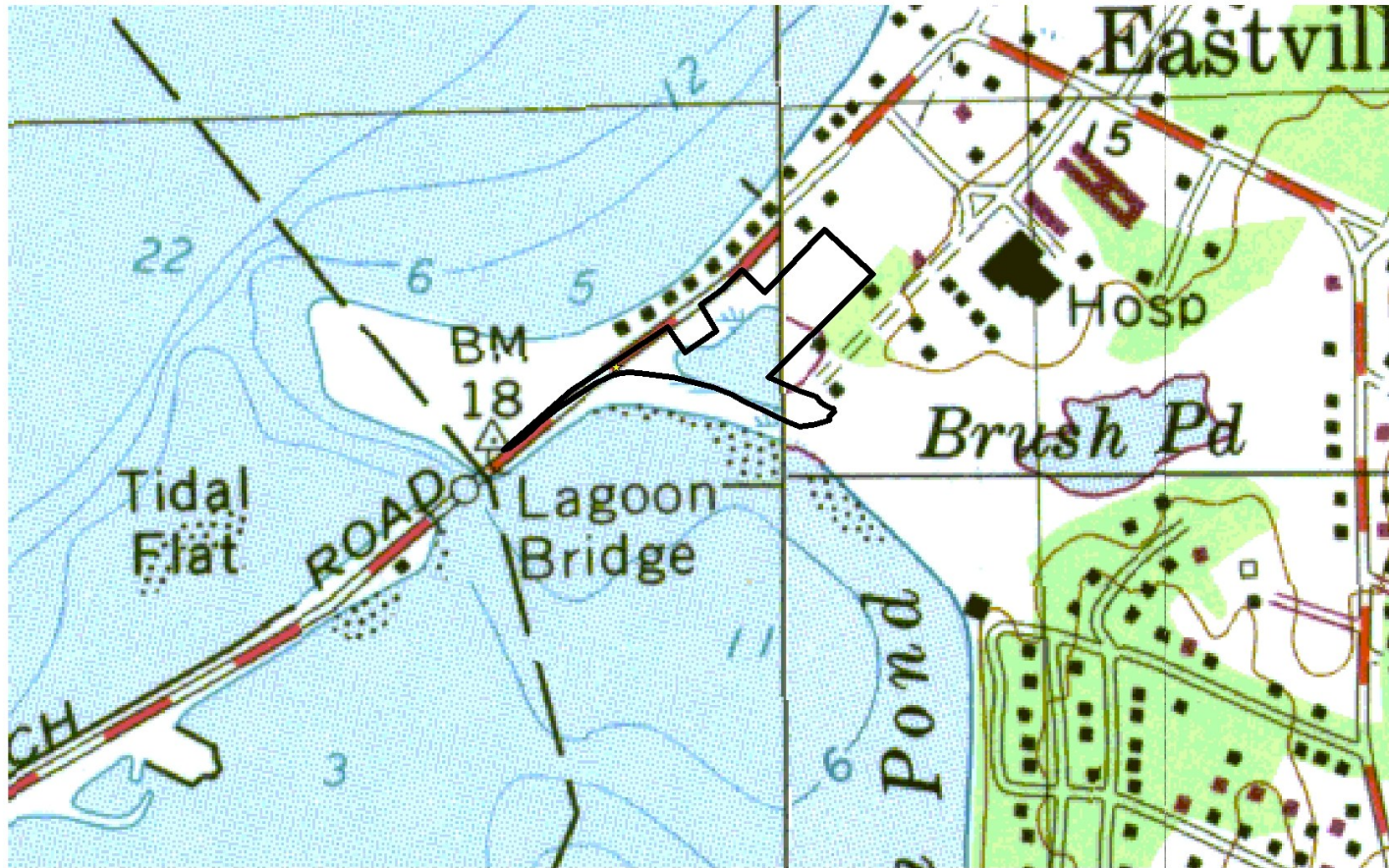
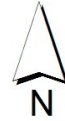
DOUG'S COVE PRESERVE MANAGEMENT PLAN

Appendix A. Locust, Topography and Site Management Maps



DOUG'S COVE PRESERVE MANAGEMENT PLAN

Doug's Cove Preserve Oak Bluffs, MA - 4.4 acres Topography Map



Sources: Office of Geographic and Environmental Information (MassGIS) Commonwealth of Massachusetts Executive Office of Environmental Affairs :Aerial Color Ortho Imagery-2009, USGS
Topographic Images -1978, NHESP Habitat Maps - 2008, roads,Martha's Vineyard Commission (MVC): parcel data- Oak Bluffs town assessors and MVC - 2011, trails, open space data, watersheds,
soils (TNC and MVC), ecological communities (MVLBC,TNC, MVC). Coordinate Ref: State Plane, Mass Mainland, Feet, NAD 83
Notes: Map prepared by the Martha's Vineyard Land Bank for planning purposes only. The land bank is not responsible for end-users interpretation of the map.
File: Doug's Cove Preserve Topo map Date:11-20-2013

0 150 300 600 Feet

DOUG'S COVE PRESERVE MANAGEMENT PLAN



Sources: Office of Geographic and Environmental Information (MassGIS) Commonwealth of Massachusetts Executive Office of Environmental Affairs :Aerial Color Ortho Imagery-2009, USGS Topographic Images -1978, NHESP Habitat Maps - 2008, roads,Martha's Vineyard Commission (MVC); parcel data- Oak Bluffs town assessors and MVC - 2011, trails, open space data, watersheds, soils (TNC and MVC), ecological communities (MVLBC,TNC, MVC). Coordinate Ref: State Plane, Mass Mainland, Feet, NAD 83
 Notes: Map prepared by the Martha's Vineyard land Bank for planning purposes only. The land bank is not responsible for end-users interpretation of the map.
 File: Doug's Cove Preserve mgt map2_12_2014 Date:2-14-2014

0 55 110 220 Feet

Appendix B. Surveys, Deeds and Preliminary Management Plan Goals

Deeds and larger copies of the surveys are on file at the land bank office. They include the following:

	name
	<i>preliminary management plan</i>
<i>acreage</i>	4.4 acres
<i>tax parcel nos.</i>	6-14, 6-18, 6-23 and 6-32
<i>nature conservation goals</i>	<ol style="list-style-type: none"> (1) conduct biological survey of property to serve as base for formulation of management objectives (2) identify rare and endangered species, if any, and create plan to protect their populations; manage any exotic and/or invasive species (3.) restore causeway to natural state (viz., where species such as beachgrass and switchgrass can flourish) by removing exotic and/or invasive species and by mowing area on a regular basis as needed
<i>natural products goals</i>	<ol style="list-style-type: none"> (1) allow traditional harvesting via on-premises trailhead accommodating approximately two vehicles, connecting to a way which leads to the beach where one vehicle at a time can back up for loading and unloading, with no vehicular access on the beach itself; seek permits to improve (and channel, via fencing or the like) the way (2) prohibit hunting, given property's proximity to the public highway
<i>recreational goals</i>	<ol style="list-style-type: none"> (1) allow swimming and boating and like riparian uses

DOUG'S COVE PRESERVE MANAGEMENT PLAN

2

- (2) prohibit overnight storage of any items, including boats, anywhere on the property, with a limited exception for beach-outhauls; work with harbormaster to devise a licensing system for a modest number of outhauls, such number to reflect the relatively short length of shore and the desire not to interfere with other beach uses
- (3) create on-premises trail system, with a possible spur to the hospital
- (4) direct recreational visitors (i.e., those not engaged in harvesting) to park in the county parking lot at the Eastville Point Beach
- (5) work to connect property with other conservation areas and neighborhoods by means of trails

scenic goals

- (1) investigate possibility of removing overhead electricity wires
- (2) study possibility of creating a view channel facing south from the Beach Road across the interior pond and causeway and out to the Lagoon Pond

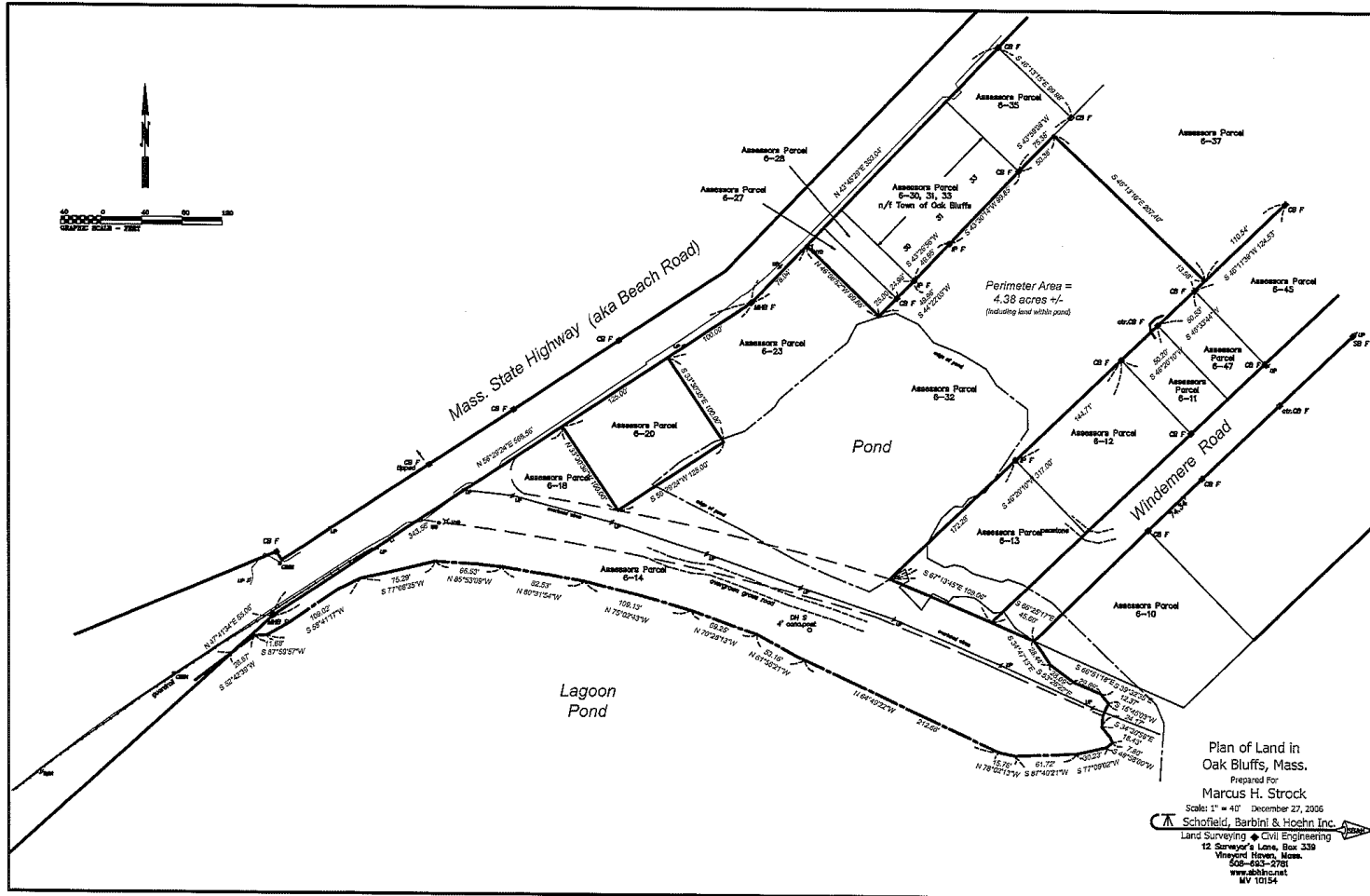
administrative goals

- (1) oversee and police land on regular basis in order to maintain property as an attractive conservation area
- (2) complete management plan when timely

approved by vote of the Oak Bluffs town advisory board: May 16, 2013

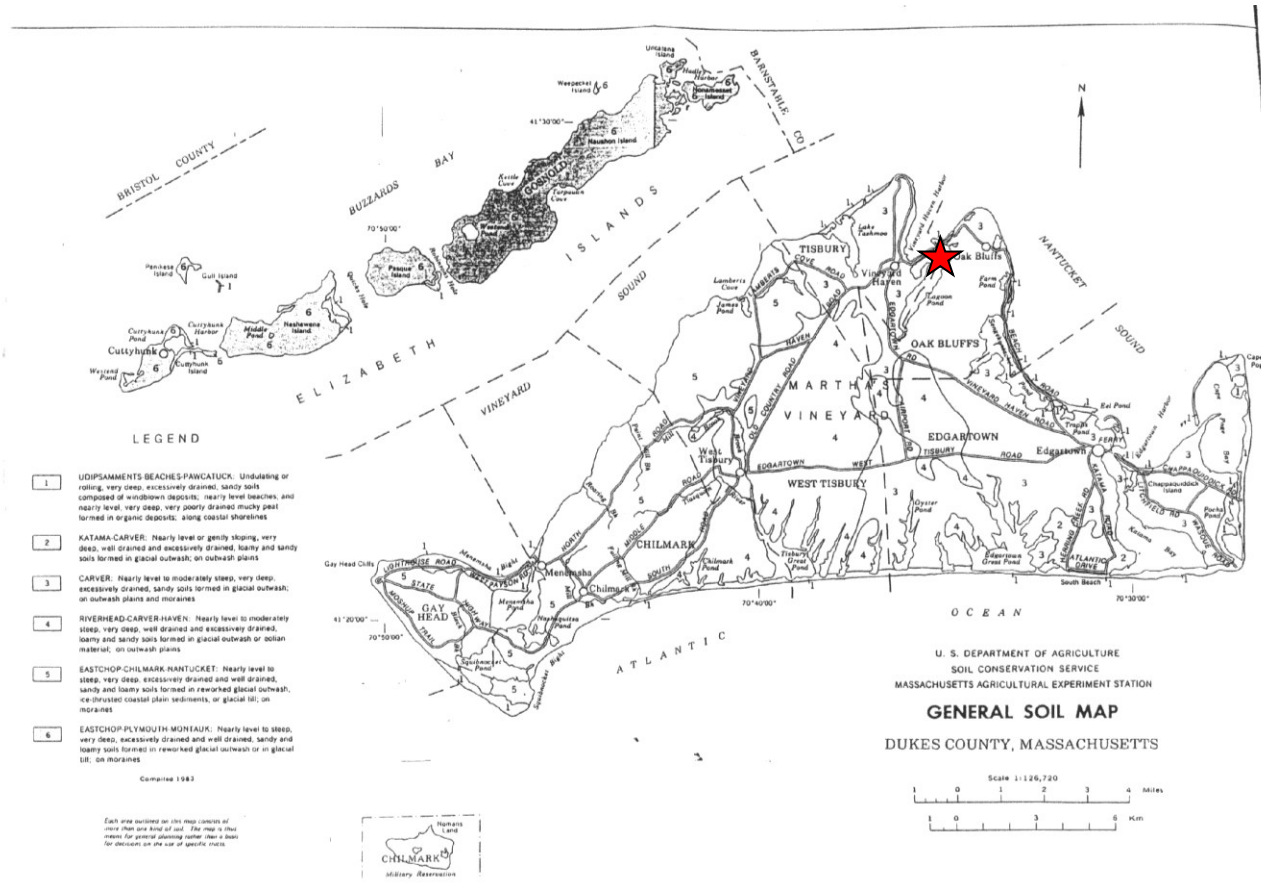
approved by vote of the land bank commission: May 16, 2013

DOUG'S COVE PRESERVE MANAGEMENT PLAN



DOUG'S COVE PRESERVE MANAGEMENT PLAN

Appendix C. Soils Maps and Descriptions



DOUG'S COVE PRESERVE MANAGEMENT PLAN



The soils on the preserve are from the Carver and Udipsamentsw-Beaches-Pawcatuck series. The following soil descriptions are derived from the SCS (1986) Dukes County Soil Surveys.

a. Carver Loamy Coarse Sand (CeB)

Cec – A very deep soil gently sloping at 3-8% that is excessively drained. This soil is poorly suited to cultivated crops, hay, pasture and woodland productivity and is generally suitable for building sites (SCS 1986).

b. Pompton Sandy Loam (PyA)

PyA – A dominant soil variety on the preserve, this soil is very deep, nearly level and can be poorly drained. It commonly occurs in closed depressions or swales as it does on the preserve. This soil can be suited to crops, is poorly suited to woodland productivity and due to the high water level is not recommended for building sites or septic systems.

c. Pawcatuck and Matunuck mucky peats (PaA)

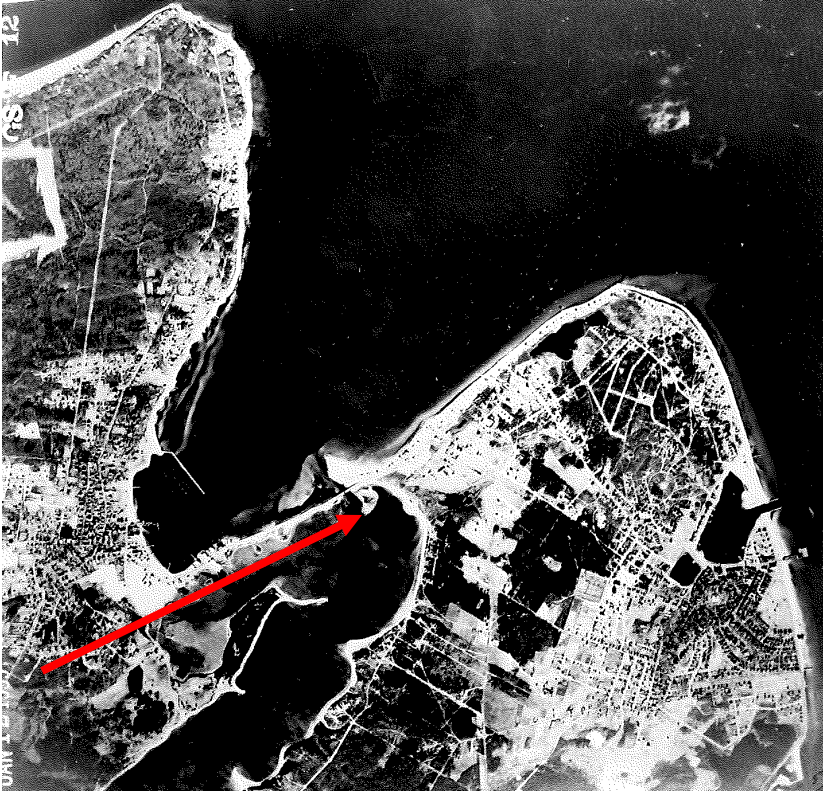
PaA – This soil occurs in tidal areas and is poorly drained, very deep and nearly level. This soil is commonly in salt tolerant grasses and due to the tidal nature of the area this soil is not suited to crops, building or woodland productivity.

d. Udipsamments (UaC)

UaC – Deep, excessively drained soils of dunes and along the coast. This soil occurs on rolling elevations typically between 3 and 15%. Vegetation if existing can be fragile and easily destroyed by pedestrian and vehicle traffic.

Appendix D: Historical Maps

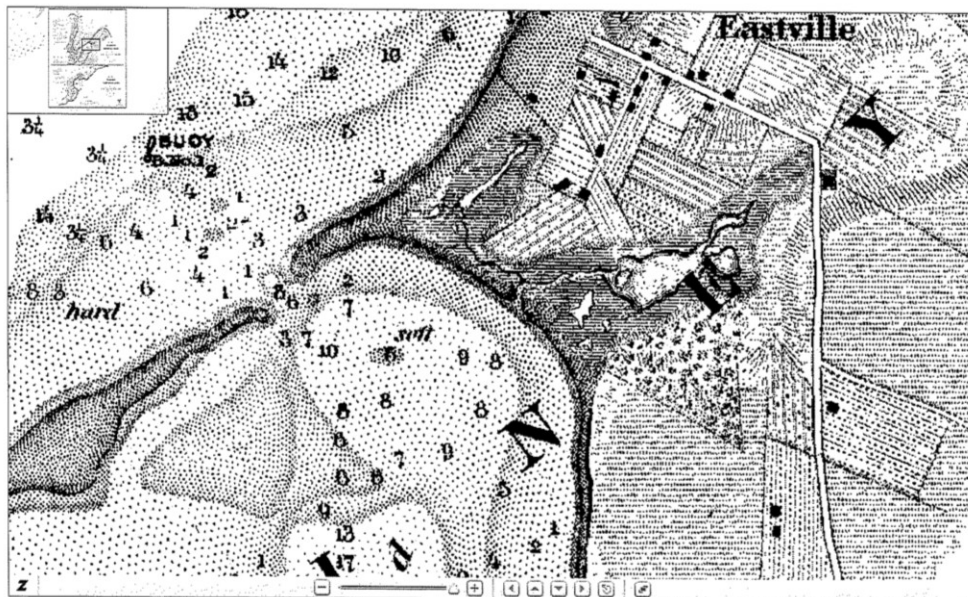
1938 Aerial Photograph



Nautical Chart No. Cp164C from 1847

view

<http://historicalcharts.noaa.gov/tiled/zoomifypreview.html?zoomifyImagePath>



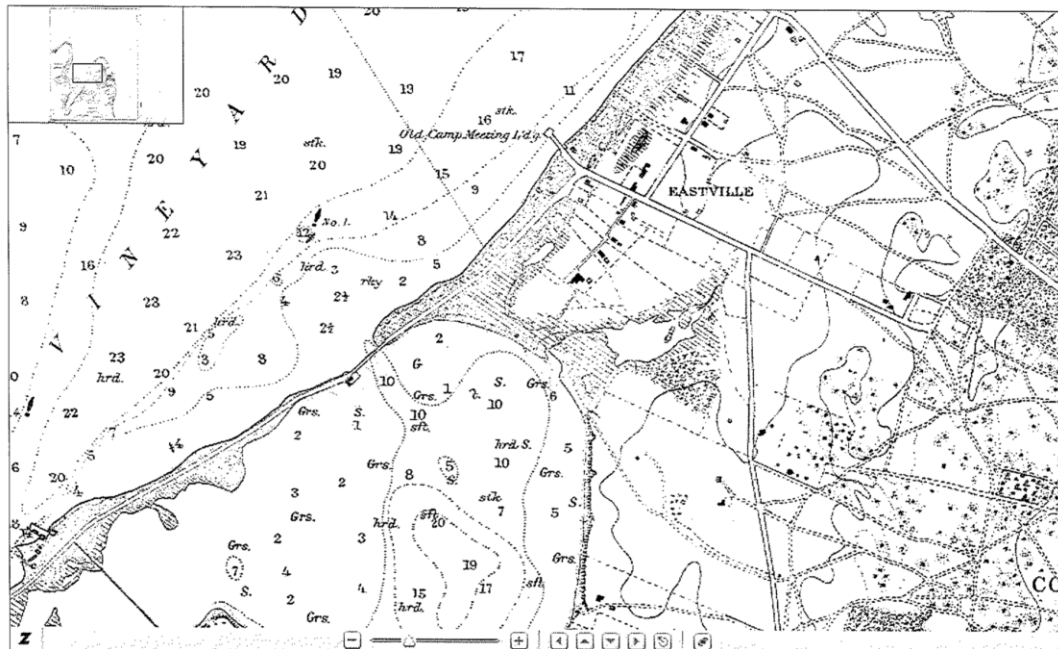
1847

DOUG'S COVE PRESERVE MANAGEMENT PLAN

Nautical Chart 347-10-1889

Image Preview

<http://historicalcharts.noaa.gov/tiled/zoomifypreview.html?zoomifyImagePath=347-10-1889>

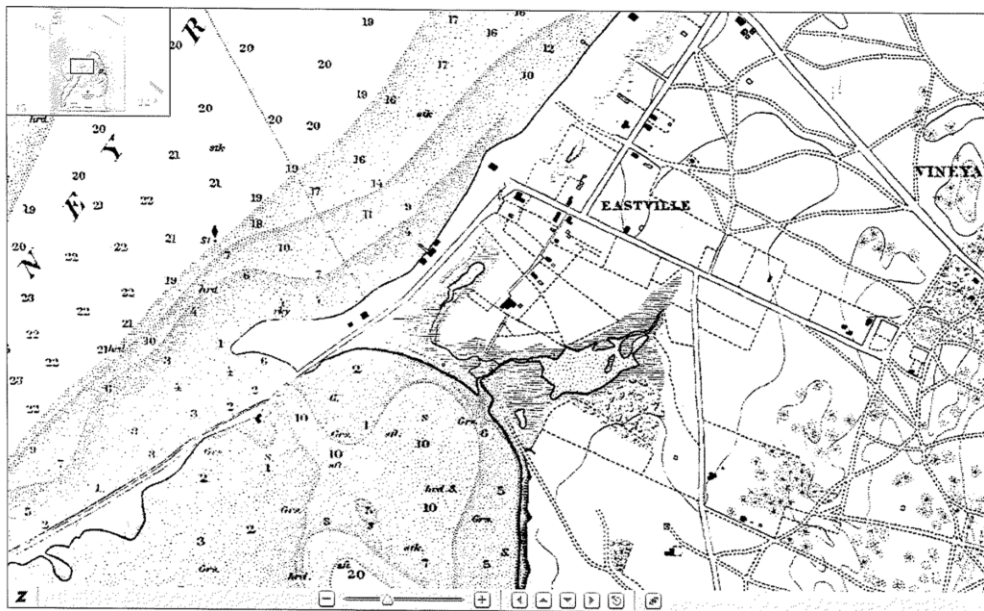


1889

Nautical Chart cp2724c from 1917

Image Preview

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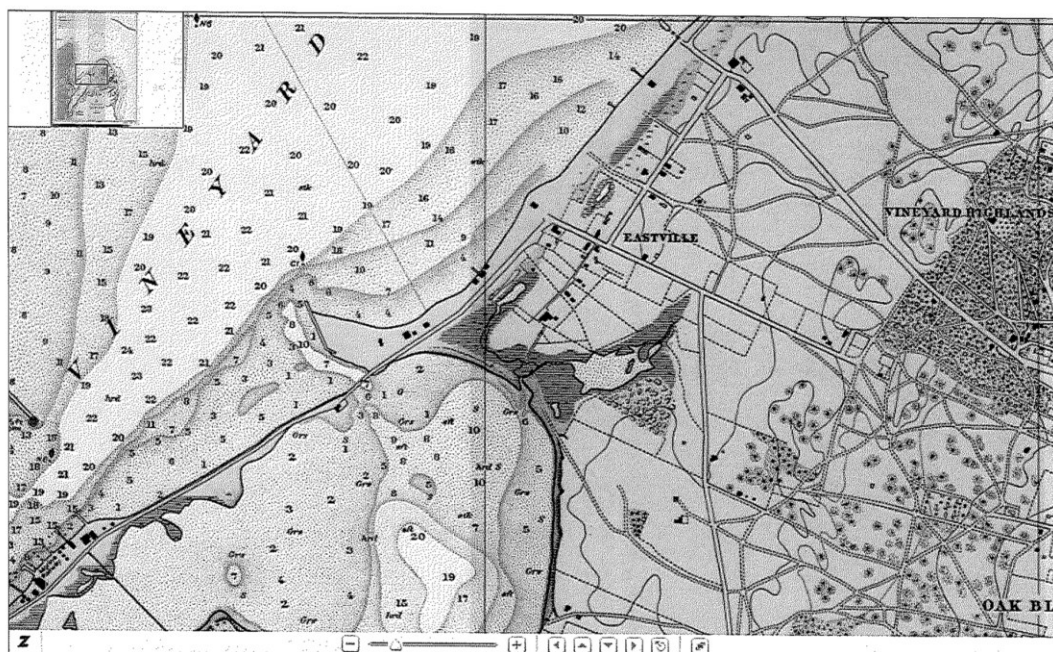
1917

Nautical Chart 4D347037, from 1937

DOUG'S COVE PRESERVE MANAGEMENT PLAN

Image Preview

<http://historicalcharts.noaa.gov/tiled/zoomifypreview.html?zoomifyImagePath=4D347-37>

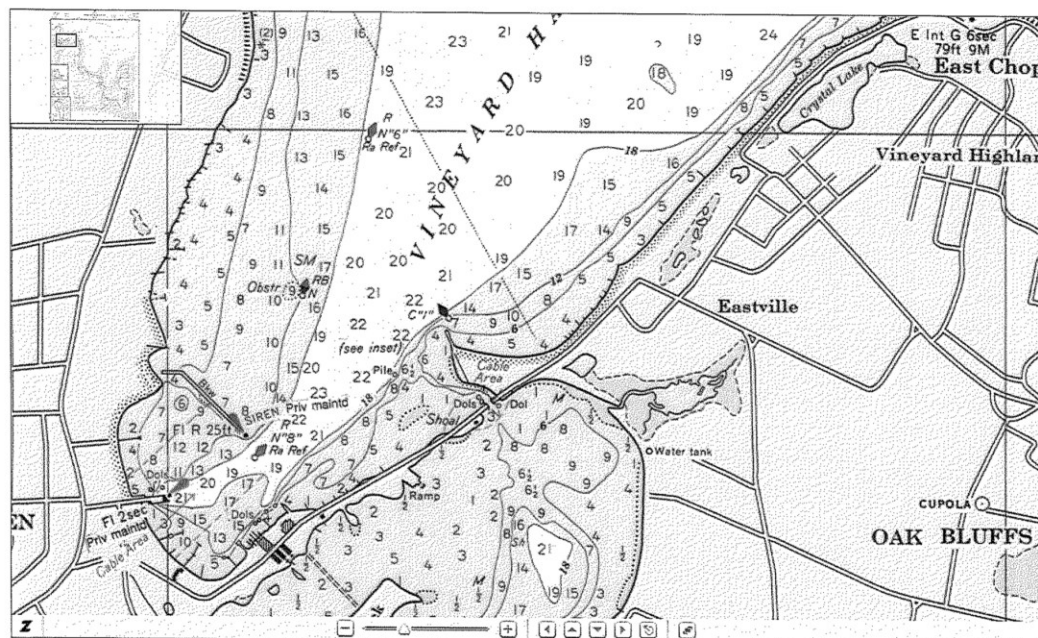


1937

Nautical Chart 13238-5-1976

Image Preview

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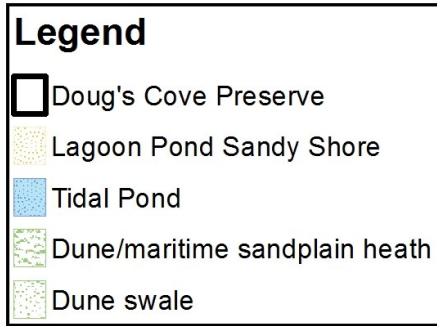


1976

Appendix E: Vegetation

A vegetation inventory was conducted in November of 2013. Flora at Doug's Cove Preserve is listed in Table 1 with proper nomenclature according to Flora Novae Angliae (Haines (2011)). A description of

each cover type and quantitative summary of surveys follows:



Doug's Cove Preserve
Oak Bluffs, MA - 4.4 acres
Ecological Communities Map



Sources: Office of Geographic and Environmental Information (MassGIS) Commonwealth of Massachusetts Executive Office of Environmental Affairs; Aerial Color Ortho Imagery-2009, USGS Topographic Images -1978, NHESP Habitat Maps - 2009, roads, Martha's Vineyard Commission (MVC); parcel data- Oak Bluffs town assessors and MVC - 2011, trails, open space data, watersheds, soils (TNC and MVC), ecological communities (MVLBC, TNC, MVC). Coordinate Ref: State Plane, Mass Mainland, Feet, NAD 83
Notes: Map prepared by the Martha's Vineyard land Bank for planning purposes only. The land bank is not responsible for end-users interpretation of the map.
File: Doug's Cove Preserve NHESP map Date: 11-20-2013

0 75 150 300 Feet

Habitat Description

a. Dune/maritime sandplain heath (2.65 acres)

The Dune/maritime sandplain heath covers 60% of the preserve and provides habitat for 77% of plants known to occur on the preserve. This area was once part of an uninterrupted barrier beach system that was in constant flux in response to wind and salt spray actions. As early as 124 years ago, a road was built that separated the back dune from the rest of the barrier beach. Following the development of the road came the building of houses. Over time the disturbance of wind and salt spray that keeps the dune in check was reduced due to the development of the shoreline and the dune was allowed to succeed into a maritime sandplain heath.

Red cedar and beach plum dominate the woody vegetation on the heathland. Little bluestem, switchgrass, seaside goldenrod, poison ivy and swamp rose occur throughout the heathland.

Areas of bare sand mixed with lichen create a mosaic effect on the preserve.

b. Dune swale (0.28 acres)

In the northwestern corner of the preserve is the beginning of a dune swale that covers 6% of the preserve. A dune swale can be graminoid- or shrub-dominated and occurs in shallow depressions between dunes. Groundsel tree occurs around the perimeter of the swale on the preserve while the interior is dominated by cordgrass, saltmarsh fleabane, seaside goldenrod and swamp smartweed.

c. Lagoon Pond Shore (0.29 acres)

The preserve boasts 343 feet of shoreline on Lagoon Pond. The shoreline is narrow and void of vegetation. The wrackline meets the vegetation of the causeway suggesting that the Lagoon Pond water covers the shoreline completely during high tide.

d. Tidal Pond and Shore (1.25 acres)

A 1.25 acre pond that is connected to Lagoon Pond via a stream occurs on the preserve. The water level in the pond is tidally controlled. The perimeter of the pond changes from cordgrass dominated closest to open water to groundsel tree dominated. A stand of phragmites occurs in the northern reaches of the pond.

Table 1. Flora at Doug's Cove Preserve, Oak Bluffs, MA

	Scientific name	Common name	Rank ^a	Family	Morphology	Dune/maritime sandplain heath ^b	Dune swale	Tidal Pond
	Non-vascular plants							
	Lichen							
1	<i>Cladonia rangiferina</i>	reindeer lichen		Cladoniaceae	lichen	X		
2	<i>Usnea sp.</i>	old Man's beard		Parmeliaceae	lichen	X		
	Moss							
3	<i>Polytrichum juniperinum</i>	haircap moss		Polytrichaceae	moss	X		
	Vascular plants							
	GRAMINOID							
	Cyperaceae							
4	<i>Cyperus strigosus</i>	straw colored flatsedge	UN	Cyperaceae	graminoid		X	
5	<i>Ammophila breviligulata</i>	American beach grass	AN	Poaceae	graminoid	X	X	
6	<i>Festuca rubra</i>	red fescue	FN	Poaceae	graminoid	X		X

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7	<i>Panicum virgatum</i>	switchgrass	FN	Poaceae	graminoid	X		
8	<i>Phragmites australis</i>	phragmites	FI	Poaceae	graminoid		X	X
9	<i>Schizachyrium scoparium</i>	little bluestem	FN	Poaceae	graminoid	X		
10	<i>Spartina patens</i>	salt meadow cordgrass	AN	Poaceae	graminoid		X	X
11	<i>Spartina pectinata</i>	prairie cordgrass	AN	Poaceae	graminoid		X	X
HERB								
Anacardiaceae								
12	<i>Toxicodendron radicans</i>	poison ivy	AN	Anacardiaceae	herb	X	X	
Asteraceae								
13	<i>Centaurea maculosa</i>	spotted knapweed	UI	Asteraceae	herb	X	X	
14	<i>Euthamia graminifolia</i>	lance-leaf goldenrod	AN	Asteraceae	herb	X		
15	<i>Gnaphalium obtusifolium</i>	sweet everlasting	AN	Asteraceae	herb	X		
16	<i>Pluchea odorata</i>	sweet-scented camphorweed	ON	Asteraceae	herb		X	
17	<i>Solidago sempervirens</i>	seaside goldenrod	AN	Asteraceae	herb	X	X	
Polygonaceae								
18	<i>Polygonum hydropiperoides</i>	swamp smartweed	UN	Polygonaceae	herb		X	
19	<i>Rumex acetosella</i>	field sorrel	AI	Polygonaceae	herb	X		
SHRUB								
Anacardiaceae								
20	<i>Rhus copallinum</i>	winged sumac	FN	Anacardiaceae	shrub	X		
Asteraceae								
21	<i>Baccharis halimifolia</i>	Groundsel tree	FN	Asteraceae	shrub	X	X	
Elaeagnaceae								
22	<i>Elaeagnus umbellata</i>	autumn olive	UI	Elaeagnus	shrub	X		X
Myricaceae								
23	<i>Myrica gale</i>	bayberry	ON	Myricaceae	shrub	X	X	
Rosaceae								
24	<i>Prunus maritima</i>	Beach plum	FN	Rosaceae	shrub	X	X	
25	<i>Rosa carolina</i>	pasture rose	FN	Rosaceae	shrub	X		
26	<i>Rosa rugosa</i>	rugosa rose	AI	Rosaceae	shrub	X		
27	<i>Rosa palustris</i>	swamp rose	ON	Rosaceae	shrub		X	
TREE								
Cupressaceae								
28	<i>Juniperus virginiana</i>	eastern red cedar	AN	Cupressaceae	tree	X		
Fagaceae								
29	<i>Quercus velutina</i>	black oak	AN	Fagaceae	tree	X		
Pinaceae								
30	<i>Pinus rigida</i>	pitch pine	AN	Pinaceae	tree	X		
VINE								
Celastraceae								
31	<i>Celastrus orbiculatus</i>	Oriental bittersweet	AI	Celastraceae	vine	X		
Present						24	14	5
TOTAL						24	14	5
% of total species						77%	45%	16%

^aRarity of plants on Martha's Vineyard: U= unknown, A=abundant (almost always occur in typical habitat), F = frequent (often occur in typical habitat), O = occasional (occur in more than 10 sites but are not expected to occur in typical habitat), R = rare (occur in 10 or fewer sites), H = historic (recorded but not sighted in past 40 years), N = native, I = introduced, WL = watch listed by MA, SC = special concern by MA, E =

DOUG'S COVE PRESERVE MANAGEMENT PLAN

endangered, T = threatened.

^b Survey results: A = abundant (percent occurrence $\geq 50\%$), C = common (percent occurrence $>21\%$ and $<50\%$), U = uncommon (percent occurrence $\leq 20\%$), X = present on the Preserve but not detected during survey;

Sources: Haines 2011, Swanson and Knapp 1999, Newcomb 1977.

Appendix F. Wildlife

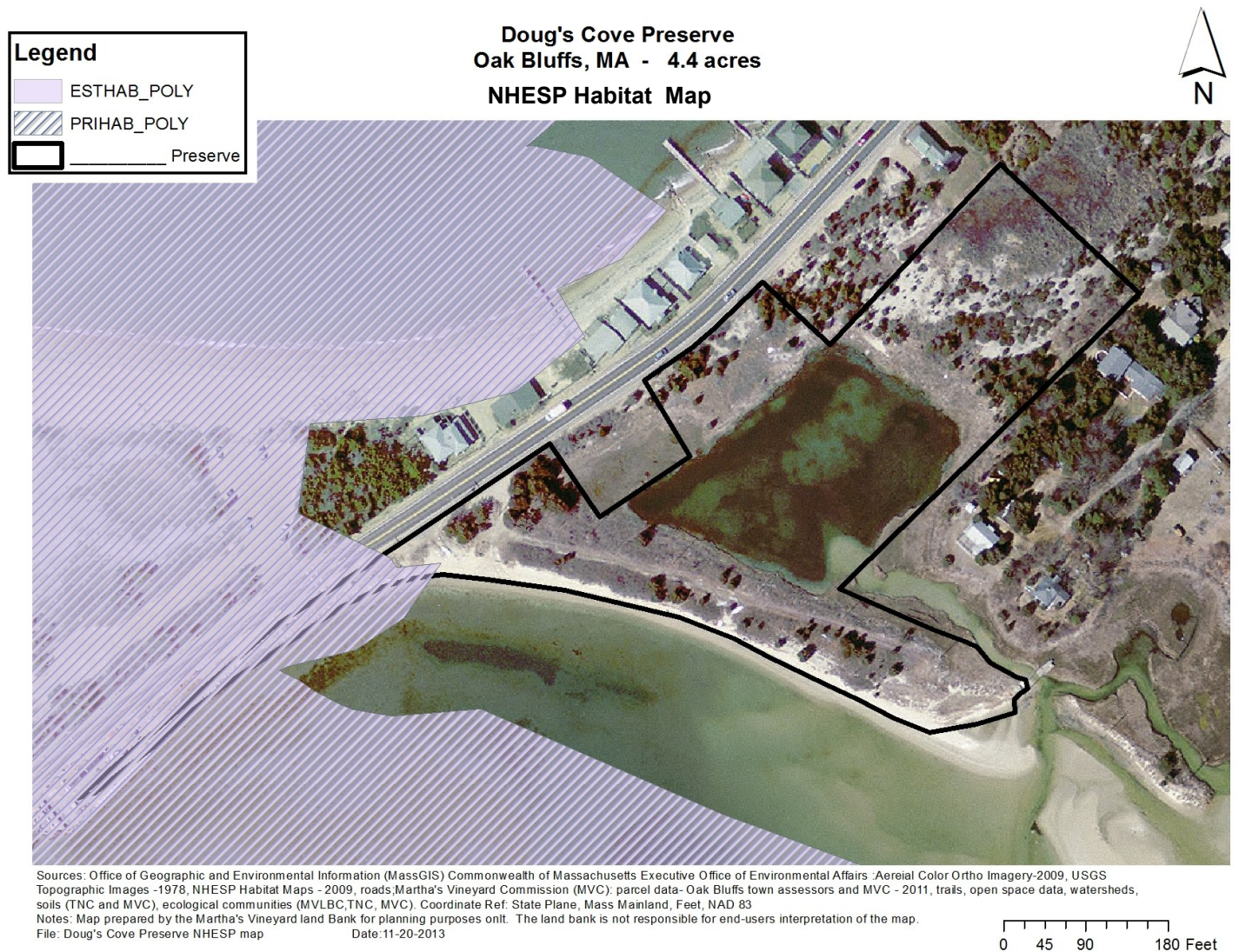
The only wildlife species observed on the preserve were, viz their tracks, white-tailed deer and striped skunk. Further studies may reveal additional species that occur on the preserve.

Appendix G. Avian Checklist and Seasonal Tables

Land bank staff has not conducted 5-minute point count surveys of birds on Doug's Cove Preserve.

Appendix H. Endangered Species

The commonwealth has designated the area along Beach Road as priority and estimated habitat.



Appendix I. Abutters

Table 7. Abutters within 200 feet of Doug's Cove Preserve as recorded in the 2013 Oak Bluffs assessors' book.

5/1 Richard Hehre, Trustee Road House Trust PO Box 561 Vineyard Haven, MA 02568	6/9,6/12, 46.1, 46.2 Patrick G. King PO Box 2256 Oak Bluffs, MA 02557	6/10 Forty Four Windmere LLC c/o Harding Construction CO 354 Pleasant Street West Bridgewater, MA 02379
6/11, 47 Victor & Judith Linn 91 Central Park West New York, NY 10023	6/13 Bernard Adelstein, Trustee Adelstein Nominee Trust c/o Marlene Adelstein 1904 Lucas Ave Cottekill, NY 12419	6/15, 6/30-33 Town of Oak Bluffs PO Box 1327 Oak Bluffs, MA 02557
6/16 Edward & Joycelin Fredkin c/o Carl Bindman 18 Railroad Ave Andover, MA 01810	6/18, 6/23 MH Strock, Trustee Debevoise & Plimpton 919 3 rd Ave 47 th Floor New York, NY 10022	6/19 Herman & Barbara Gollob 40 Frederick Street Montclair, NJ 07042
6/20 Eleanor Harz Jorden c/o Temple Jorden 165 Beacon Street, Apt 36 Somerville, MA 02143	6/21 Betsey Goldberg & Joan Burton 10512 Pohick Court Fairfax Station, VA 22039	6/22 Martin Osman 212 Plymouth Road Newton, MA 02161
6/24 Gladys Segal PO Box 2095 Vineyard Haven, MA 02568	6/25 Patricia Ann Ludwig etal c/o Wendy Ludwig 100 Centre Street Dover, MA 02030	6/26 Richard & Andrea Aughenbaugh 3 Grape Run Road Hightstown, NJ 08520-3809
6/28,38-41,43 MV Hospital, Inc PO Box 1477 Oak Bluffs, MA 02557	6/29.1 Rosalyn Toomey & Jeffrey Prebluda, Trustees Marjory Aronson Trust 109 Sewall Ave, Unit 302 Brookline, MA 02446	6/29.2 Rosalyn Toomey, Trustee 303 Columbus Ave, Unit 405 Boston, MA 02116
6/34 John & Carter Felvey 1405 Peachtree Blvd Richmond, VA 23226	6/35 Abel Mora, Trustee Oak Bluffs Realty Trust 39 Taft Ave West Newton, MA 02465-1325	6/36 Barbara W. Kudravetz, Trustee 250 Pantops Mountain Road Apt. #5228 Charlottesville, VA 22911-8694
6/37 Robert & Joan Celusak 6 Hillside Terrace Wayne, NJ 07470	6/42 Marc, Peter, & Geoffrey Jones 42 Stanley Road Belmont, MA 02478	6/44 Jean Thurston & Marcia Graham PO box 161 Franconia, NH 03580

DOUG'S COVE PRESERVE MANAGEMENT PLAN

6/17

County of Dukes County
Towns of Oak Bluffs & Tisbury
PO box 190
Edgartown, MA 02539

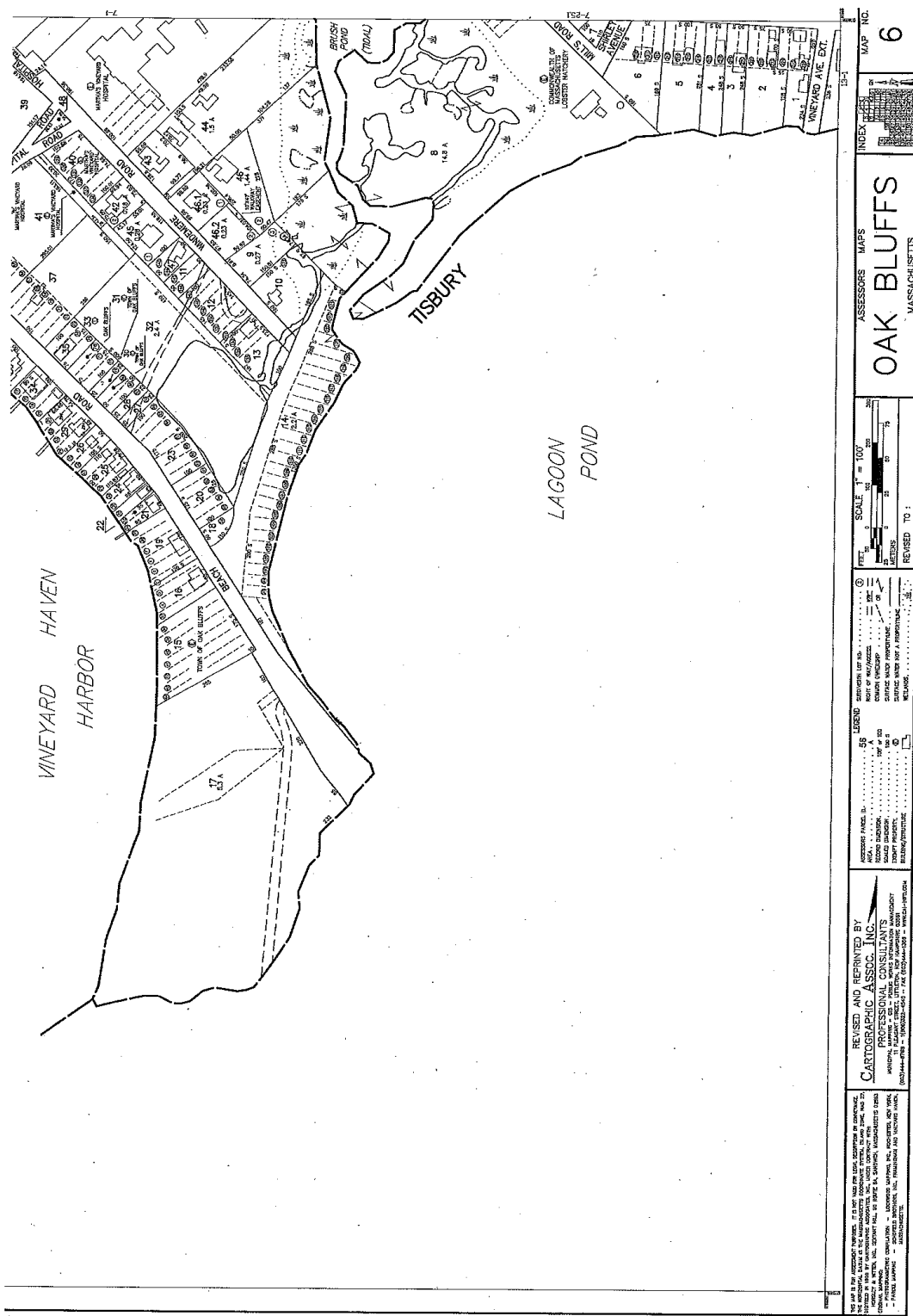
6/8

Commonwealth of Massachusetts
Lobster Hatchery
PO Box 9
Vineyard Haven, MA 02568

6/46

Sandra & Thomas McGee, Trustees
4 Westborough Drive
Simsbury, CT 06089

DOUG'S COVE PRESERVE MANAGEMENT PLAN



Appendix K. Universal Access

The Recreational Opportunities Spectrum (ROS) classification for Doug's Cove Preserve is "less developed". The ROS is a model designed and used by the U.S.D.A. Forest Service to categorize conservation areas or universal access planning. The land bank framework for describing the accessibility of its properties is applied to Doug's Cove Preserve as follows.

Property Name:	Doug's Cove Preserve
Size:	4.4 acres
Primary Activities:	birding, hiking and picnicking
Primary Elements:	two sign stations
Primary Spaces:	views of Lagoon Pond
Obstacles that Limit Accessibility:	trailhead distance and sandy soil
Existing or Potential Alternatives:	State Beach, Eastville Point Beach
Proposed ROS Classification:	less-developed
Proposed Expectation of Accessibility:	possible

For all less-developed land bank conservation areas, the Universal Access Plan states the following (Potter 1997):

Use outdoor recreation access routes to link primary elements and primary spaces within one-quarter mile of a trailhead or drop-off and use accessible recreation trails to connect other primary elements and primary spaces on all less-developed land bank conservation areas.

Universal access is proposed for this preserve along the causeway in the form of a path stabilized with crushed shell. The trailhead is proposed to accommodate one universal access/senior vehicle.