Martha's Vineyard Land Bank Commission

Featherstone Farm

MANAGEMENT PLAN

December 7, 1998

approved by vote of the Oak Bluffs Town Advisory Board: November 19, 1998
approved by vote of the Martha's Vineyard Land Bank Commission: November 30, 1998
approved by the Executive Office of Environmental Affairs: July 28, 1999

Adam Moore, *Land Superintendent*
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Executive Summary

The Martha's Vineyard Land Bank Commission purchased the 18 acres of Featherstone Farm on August 9, 1996 for $200,000. Featherstone Farm is found on Barnes Road in the Town of Oak Bluffs, Massachusetts. Its purchase conserved open space in Oak Bluffs, Martha's Vineyard's most heavily developed town. At the same time, the Meetinghouse of Martha's Vineyard, Inc., a non-profit arts organization, bought the interior six acres of the farm, including all the buildings. Meetinghouse has since converted barns and buildings into Featherstone Meetinghouse for the Arts.

Deeds and historical aerial photographs demonstrate that Featherstone Farm and the surrounding area had long been woodland and pasture. The assemblage of lots which comprise Featherstone Farm today were pieced together by various people in various purchases over the last century. Prior to its purchase by the Land Bank and Meetinghouse, Featherstone was a horse farm. Remnants of this use are everywhere on the property- wire fencing, the splintered remains of a grandstand, even stones marking the horses' graves.

Land Bank staff has studied the natural communities of Featherstone Farm through four seasons. The plan which follows presents and analyzes the results of this year-long inventory. This body of knowledge is the foundation upon which sound land management decisions rest.

Featherstone Farm consists of four natural communities: pitch pine, white oak, and black oak woodlands, and pasture. Species identified on the property are typical for these communities. No endangered species were found; no wetlands are present.

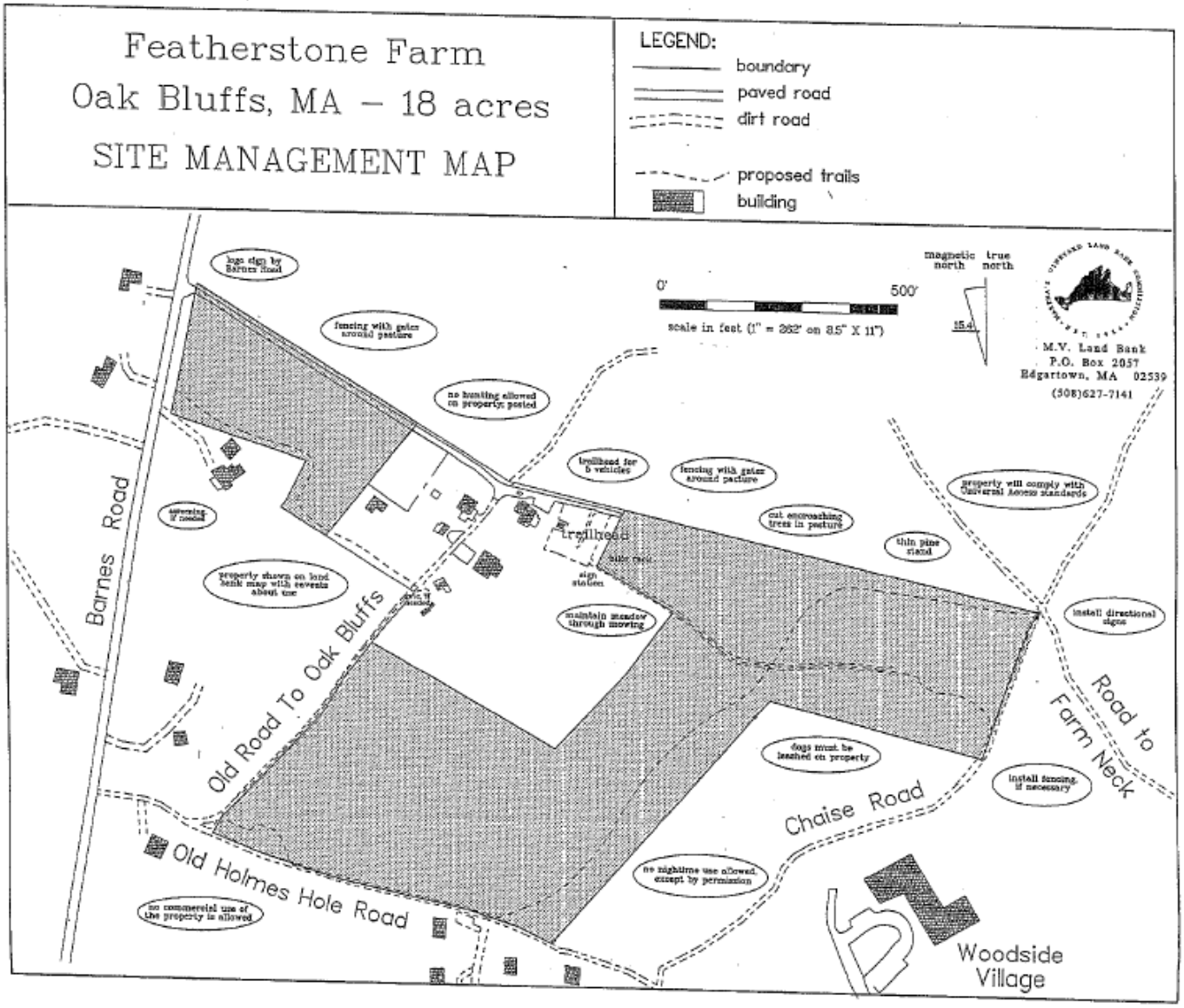
A number of uses are proposed for Featherstone Farm. Among them are: lease of agricultural land for pasture, maintenance of existing trails, establishment of new trails and connections to other trails, removal of old lumber and fencing, and policing and administration of the land. These and other uses are discussed in detail in the Land Management Planning section of this plan.

About the authors...

Adam Moore has been land superintendent at the Land Bank since February 1998. He holds a Master of Forestry degree from the Yale School of Forestry and Environmental Studies and a B.A. in biology from Yale. Wendy Malpass has been the Land Bank ecologist since 1993. She has a Master of Science in oceanography from the University of Maine where she studied benthic community ecology, and a B.S. in natural resources from Cornell University. Property foreman Matthew Dix has worked on Land Bank properties since 1989. He has extensive knowledge of the region's natural history and local geography. Christopher West has been a conservation land assistant since March 1998. He has training in forestry and conservation law enforcement

Map 1: Site Management Map

Featherstone Farm, Oak Bluffs, MA



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Introduction

Featherstone Farm is an 18-acre property located on Barnes Road in the Town of Oak Bluffs, Massachusetts. From the pasture on Barnes Road, the fields and forests of Featherstone slope gently upward and eastward, past farmhouse, stable, coop, and barn, through pasture and orchard, beyond the remains of a show ring and grandstand, up to the Chaise Road ancient way. Featherstone Farm extends south into oak woodlands and is bordered by Webb's Campground to the north and the southern woodlands of Oak Bluffs to the east. Bounded and crisscrossed by ancient ways and old roads, its permanent conservation keeps forever open trails, fields, and woods in this most heavily developed Martha's Vineyard town.

These 18 acres support 145 species of plants from 48 families. Four plant communities have been identified: white oak, black oak, and pitch pine woodlands, and agricultural pasture. Featherstone's natural history of disturbance has invited a somewhat large number of plants for a relatively small piece of property. Closed canopies and open fields combine to provide feeding and nesting habitat for a variety of birds, as well.

The Martha's Vineyard Land Bank Commission bought Featherstone Farm from William H. Y. Stevens in 1996 for $200,000. At the same time, The Meetinghouse of Martha's Vineyard, Inc. bought the interior six acres, complete with buildings, to become Featherstone Meetinghouse for the Arts. At purchase, the Land Bank Commission drafted a set of preliminary management goals for Featherstone Farm, addressing nature conservation, agriculture, recreation, and the administration of the property.

The final section of this management plan outlines the strategy to achieve these goals. The prior sections, however, will present in text, map, and table, the information gathered by Land Bank staff about Featherstone Farm. Before the plan can be put into effect, the Oak Bluffs Town Advisory Board must hold a public hearing and it, the Land Bank Commission, and the Executive Office of Environmental Affairs of the Commonwealth of Massachusetts each must review and approve the plan.

I. Natural Resource Inventory

A. Physical Characteristics

1. Locus

Featherstone Farm is situated at roughly 41°25' north latitude and 70°36' west longitude, **in** the Town of Oak Bluffs, Dukes County, Massachusetts. **Locus Map 1** is a section of the U.S.G.S. Vineyard Haven quadrangle topographical map for the area (U.S.G.S. 1972), the shaded area being Featherstone Farm. Barnes Road forms Featherstone's westernmost boundary and the Chaise Road cartpath the easternmost, while the Old Road to Oak Bluffs, a cartpath, bisects the property. **Locus Map** II is a compilation of several Oak Bluffs assessor's maps, the shaded lot being Featherstone Farm. Following these maps are two **Aerial Photographs** taken in April 1996 (Col-East 1996). One shows the general area and one is a close-up.

2. Base Map

The **Base Map** presents basic information about **Featherstone Farm:** boundaries, roads, trails, buildings, fences, parking lots, etc. It is composed from surveys, photographs, and direct observations.

3. Survey Plan

The Land Bank and Meetinghouse properties were mapped by Schofield, Barbini and Hoehn on March 27, 1996, and revised on May 9, 1996. This is shown on **a** plan entitled "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. and Martha's Vineyard Land Bank Commission, May 1996, Scale lin.= 80 ft. Schofield, Barbini and Hoehn, Inc." (on record at the Dukes County Registry of Deeds as Oak Bluffs Case File No. 327). The **Survey Map** follows.

4. Geology and Soils

Featherstone Farm lies on glacial outwash atop Martha's Vineyard moraine (Soil Conservation Service ("SCS") 1986). (See accompanying **Geology Map.)** Martha's Vineyard itself is the terminal moraine of the Wisconsin ice sheet. Twenty-five thousand years ago, the Wisconsin ice sheet had reached as far south as it could go. Martha's Vineyard is here today because at this site, climate was such that the glacier melted as fast as it advanced. Moraine is formed in much the same way that snow plowed onto the roadside in April leaves behind mounds of road sand as it melts. As the glacier plowed across New England, it scraped up sand, gravel, stones and debris as it advanced. Upon reaching the location of Martha's Vineyard (and Featherstone Farm), the ice melted and left the debris - the moraine - behind.

Outwash is something different. As the climate continued to warm, the ice melted faster, forming streams laden with debris, rushing toward the ocean. Clay particles are minute and can be carried in suspension by all but the most placid currents. But sand and gravel are bigger and heavier, and only rapidly moving water can move them. So, sand and gravel tumbled along in fast-flowing meltwater streams. But just as a river widens at its mouth, these meltwater channels widened as they approached the ocean. As the channel spread the stream slowed, and the meltwater released its sand and gravel. The sand and gravel fell to the bottom to form outwash, the dry, porous soil which lies atop the moraine at Featherstone and forms the broad, sandy plains extending south across Martha's Vineyard to the sea.

Featherstone's sandy soil is not the Vineyard's best. In fact, only a sliver of the land contains Riverhead sandy loam, one of eight soils deemed prime farmland for Dukes County (SCS 1986). Most of Featherstone's soil (16.2 acres) is Carver loamy coarse sand, of which Featherstone has two varieties: one on 3-8% slopes and the other on 8-15% slopes. The Soil Conservation Service (1986) describes Carver loamy coarse sand as a very deep, excessively drained soil found on outwash plains and terminal moraines. Because of their draughtiness, both Carver soils are described as poorly suited to cultivated crops, hay, pasture, and woodland. On the gently sloping lands, however, the right mix of manure, compost, pasture rotation, and proper plants can retain water and make the soil more productive. And in the woods, thinning crowded stands of competing trees can boost the woodlot's productivity (SCS 1986). Carver soils pose moderate limitations for trail development, owing to their sandiness (SCS 1986).

Riverhead sandy loam occupies about 1.8 acres of the southern section of Featherstone Farm (see **Soils Map).** The Soil Conservation Service (1986) characterizes Riverhead sandy loam as "very deep, nearly level, and well drained." It is a prime farmland soil, though at Featherstone Farm it grows only trees. Riverhead has a site index of 50 for white oak, meaning that in 50 years a white oak growing on Riverhead soil will reach a height of 50 feet. Riverhead soils pose slight restrictions for recreational development (SCS 1986). Soil Conservation Service descriptions of these soils are included as Appendix G to this plan.

In 1983, William Wilcox, County Extension Agent for Dukes County, prepared a Soil and Water Conservation Plan for Featherstone Farm. It is included as Appendix F to this plan. Besides detailed soil information, it contains specific recommendations and guidelines for agricultural uses of Featherstone Farm. Wilcox plans for pasture management, manure spreading, water diversion, forest stand thinning, liming, and planting appropriate grasses and forage, among other things. It will be provided to any lessees of the farmland.

Since glaciation, the most significant geological event at Featherstone Farm occurred in the 1950's. In 1956, Mary Guerin sold the front field along Barnes Road to Goodale Construction Company (Deeds 232/3). Over the next three years, Goodale removed the topsoil, and sold the stripped field to Sidney and Elsie Hudson in 1959 (Stevens 1998; Deeds 232/516). Wilcox (1983) addressed this matter in his report, and the

Stevens family added lime and manure to replenish the soil. Some of the grasses found in the field are those recommended by Wilcox to plant, evidence that the Stevens family followed his advice.

5. Hydrology

There are no wetlands on Featherstone Farm; consequently, no hydrology map is included. However, conservation of these 18 acres protects groundwater aquifers in Oak Bluffs. Featherstone Farm also lies in the watershed of Lagoon Pond, a productive shellfish pond.

6. Ecological Processes

The main ecological communities at Featherstone Farm are pitch pine, black oak, and white oak woodlands, and pasture. The stand of pitch pines at the eastern end of the property exemplifies pitch pine's ability to grow on barren, sterile soil. In what was once a horse ring are patches of sand, utterly bare save for a few tiny pitch pines. Its ability to grow on a droughty, sterile, sandy substrate has made pitch pine the dominant tree on Martha's Vineyard and Cape Cod. Pitch pine is a pioneer, the first tree to colonize bare mineral soil, giving it an early advantage over its competition. Hardy and tough, pitch pine withstands drought, wind, and fire. A deep taproot absorbs all the available water the sand will release and anchors the tree against howling gales. Its thick bark protects it from all but intense fires. Indeed, pitch pine is so fire-adapted it uses even severe fires to its advantage. Some of its cones are serotinous - meaning they stay sealed shut for years, and will only open and release their seeds when burned. Thus, pitch pine can not only exploit mineral seedbeds resulting from severe fires, it will be the first plant to do so.

Much of the pitch pine stand is beyond the early stage of colonization and has moved into the "stem exclusion" stage (Larson 1991). In this phase in forest stand development, competition between young trees for light and water is intense. In pine stands, stem exclusion is characterized by dense stands of closely spaced trees with dying lower limbs. Little light penetrates the closed canopy; the dead branches penetrate the darkness below. This is evident to anyone from walking from the Meetinghouse parcel to the Chaise Road. The stem exclusion stage is the appropriate time in the growth of a forest to help the better trees by thinning out the weaker ones.

Perhaps the most interesting tree of Featherstone Farm's black and white oak woodlands is the American beech. American beech competes for stand dominance in an entirely different manner than pitch pine. Where fire-adapted pitch pine demands sunlight and thrives on poor soil, American beech does the opposite. It succumbs to fire, is site-sensitive, and is very tolerant of shade. The thin, gray, elephantine bark makes beech extremely susceptible to fire. The presence of beech indicates the absence of fire. At Featherstone Farm, beech grows in small groves, generally along footpaths and deer trails. Its trailside location indicates that seeds may have been spread by animals which ate the beech nuts and traveled on the trails.

The outstanding trait of American beech is its shade-tolerance. Stretching from forest floor to canopy heights, beech leaves cast shade so deep that nothing grows

beneath them - nothing but beech, that is. Many groves exhibit a form where one large, central beech tree is surrounded by many saplings. These saplings are "root suckers" - small trees sprouting from the roots of the central tree. The whole grove, in fact, is a single tree. These diminutive beeches simply stay in the understory, in the shade of overtopping oaks. There they persist, suppressed for years. They await the death of taller trees and the resulting gap in the canopy. In the meantime, beech casts shade so deep that other trees cannot regenerate. When a taller oak succumbs to insect attack, a logger's saw, disease, wind, anything but fire, the beech rises up to assume that place in the forest canopy. Whereas the competitive strategy of pitch pine is to leap ahead of the pack, the strategy of beech is to lurk in the shadows and wait.

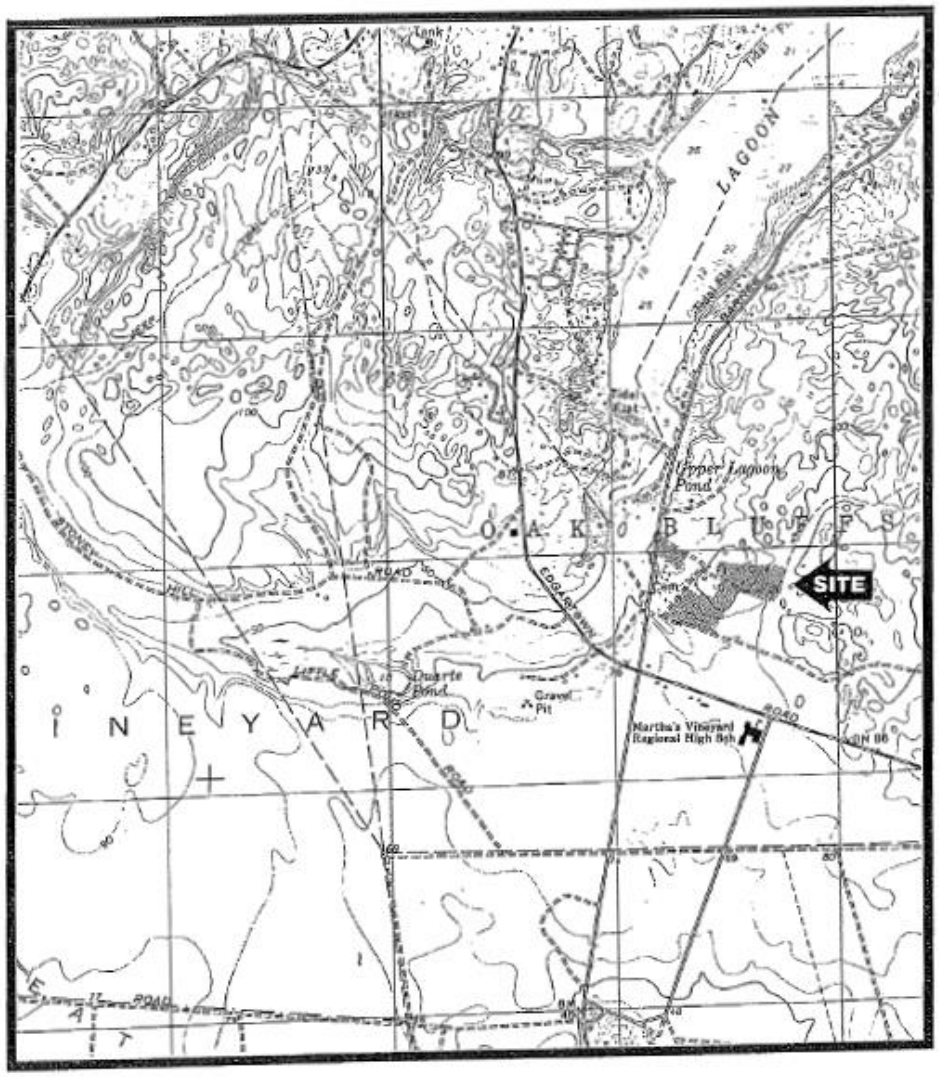
Human influences - soil stripping and firewood cutting - have also driven the ecological processes underway at Featherstone Farm. Deeds from 1889, 1855, and 1843 refer to the property as "woodland" and "wood and pasture land" (Deeds 82/310; 36/501; 29/237). Oak Bluffs residents would cut firewood on five-acre parcels at Featherstone Farm and the adjacent woodlands (Stevens 1998). Aerial photographs from 1938 confirm that the wooded sections of Featherstone Farm were wooded then, as well. The form of many oaks - several sprouts from a single stump - bears testament to the "coppice cutting" done in this region. Coppice cutting is a type of forest management where harvested oak stands regenerate from stump sprouting, rather than acorns. It is an ancient and excellent way of managing a stand for firewood.

As discussed earlier, Featherstone's front pasture suffered the loss of its topsoil in the late 1950's. The site is revegetating both naturally and from the help of the Stevens family. Growing in the field are such plants as little bluestem, beadgrass, and sand flatsedge, along with the fescues, redtop, ryegrass, timothy, and clovers William Wilcox recommended planting. The site had been used as horse pasture for decades prior to its acquisition by the Land Bank. Horse manure has helped improve soil conditions, and continued use of this field as pasture would be a welcome use.

All of Featherstone Farm has been altered by its equine, avian, porcine, canine, and human inhabitants, but no area more so than the northeastern corner of the property along the Chaise Road. Here had been a show ring complete with grandstand. Trampling hooves scoured the earth then, and much of the land is barren still. Pitch pines are slowly colonizing the old ring. Piles of lumber and patches of sand are all that remains of the grandstand and ring.

Map 2: Locus Map 1

Featherstone Farm, Oak Bluffs, MA



Featherstone Farm
Oak Bluffs, MA

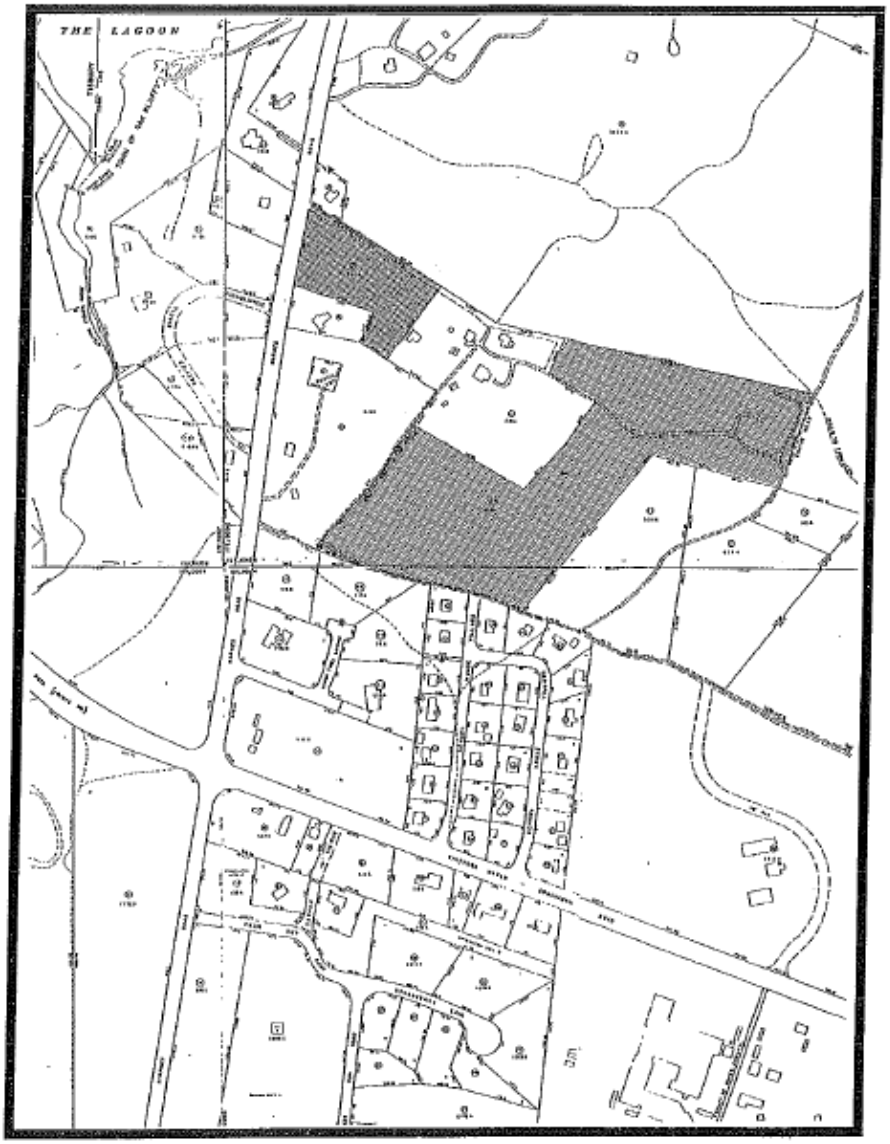
LOCUS MAP I

N

Scale 1:25,000 (1" = 2083' on 8.5"x11")
prepared by M.V. Land Bank Commission (July 1998)

Map 3: Locus Map 2

Featherstone Farm, Oak Bluffs, MA



Featherstone Farm
Oak Bluffs, MA

LOCUS MAP II

N

Scale 1:6,156 (1" = 513' on 8.5"x11")
prepared by M.V. Land Bank Commission (July 1998)
from Oak Bluffs tax assessors maps 40, 41, 50 and 51.

Map 4: Geology Map

Featherstone Farm, Oak Bluffs, MA

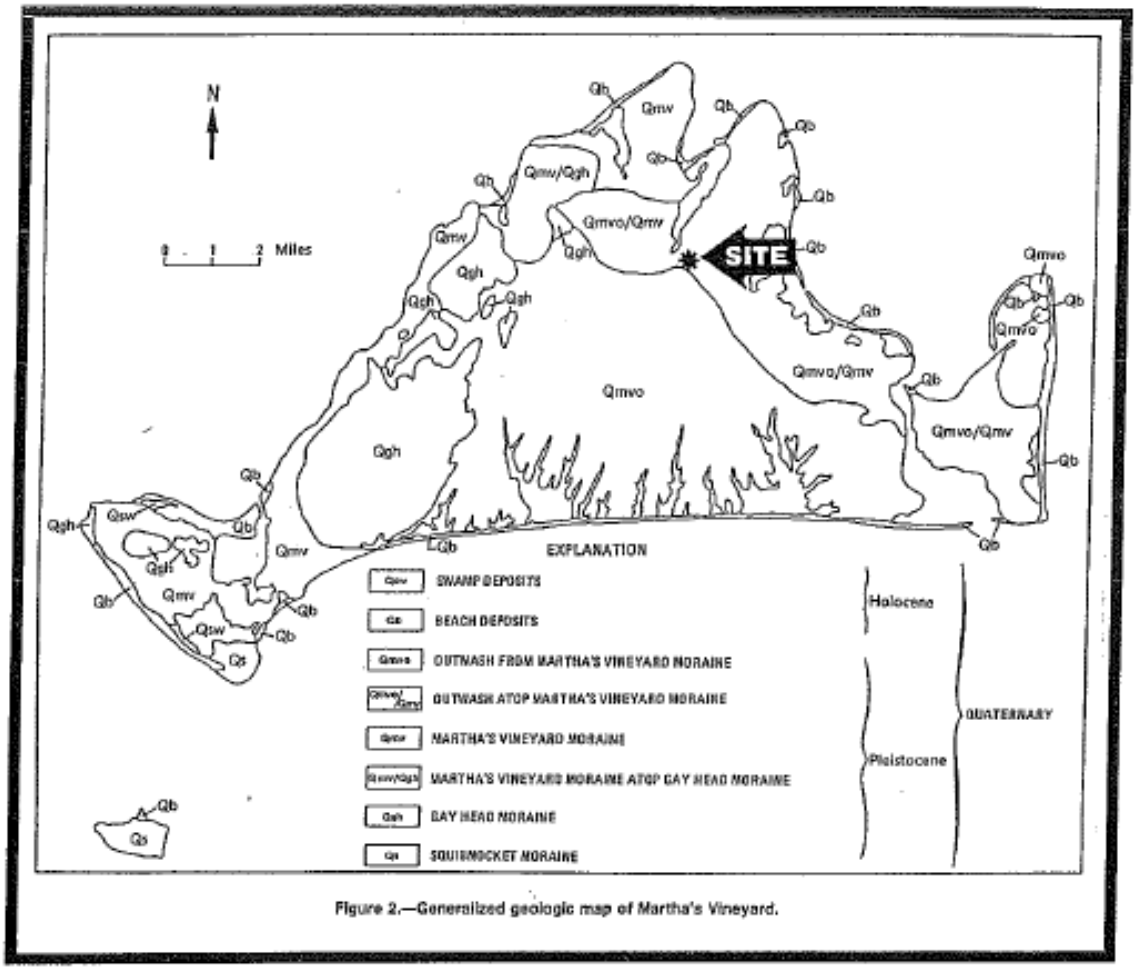


Figure 2.—Generalized geologic map of Martha's Vineyard.

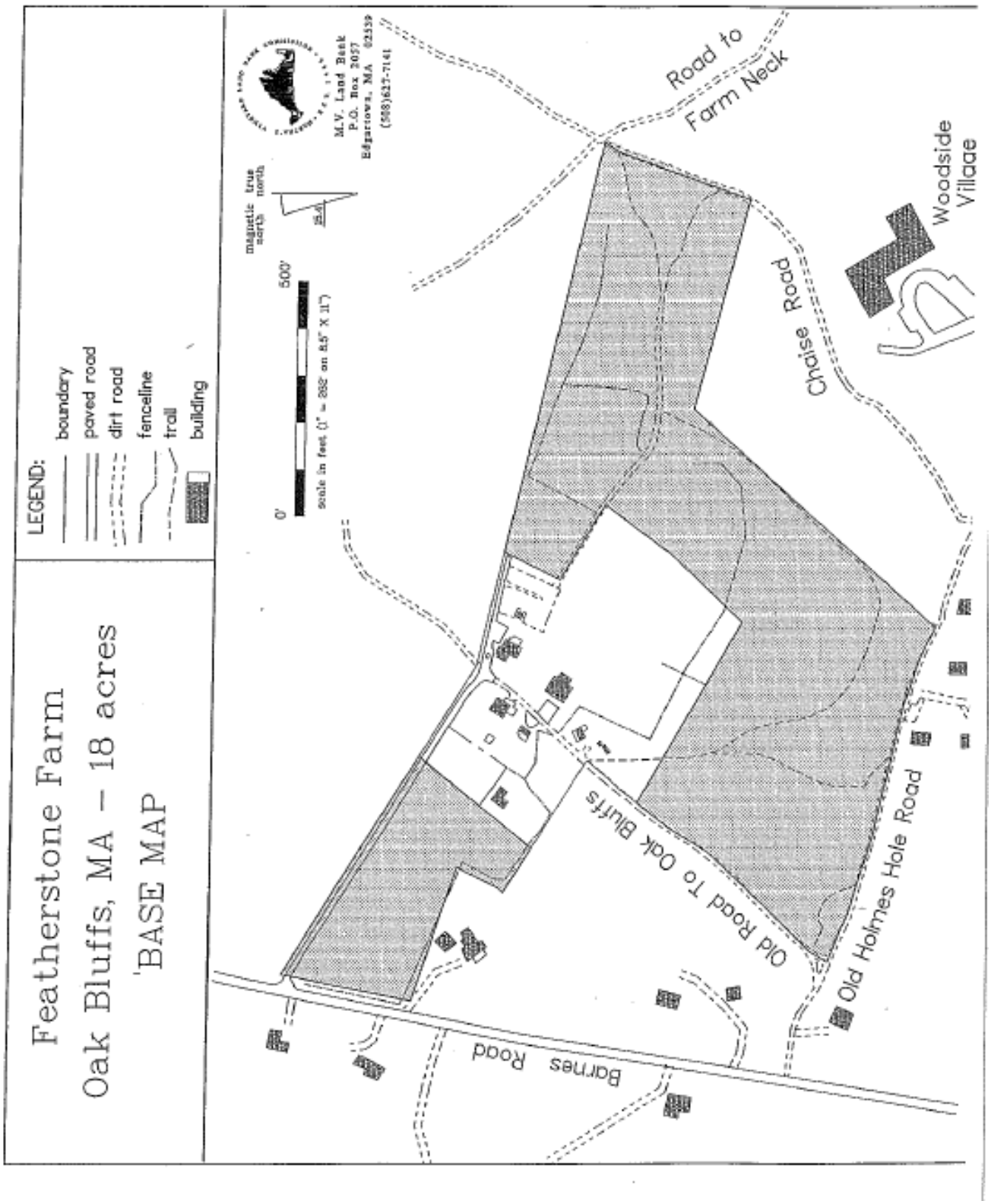
Featherstone Farm
Oak Bluffs, MA

GEOLOGY MAP

prepared by M.V. Land Bank Commission (July 1998)
from USDA Soil Conservation Service Soil Survey (1986)

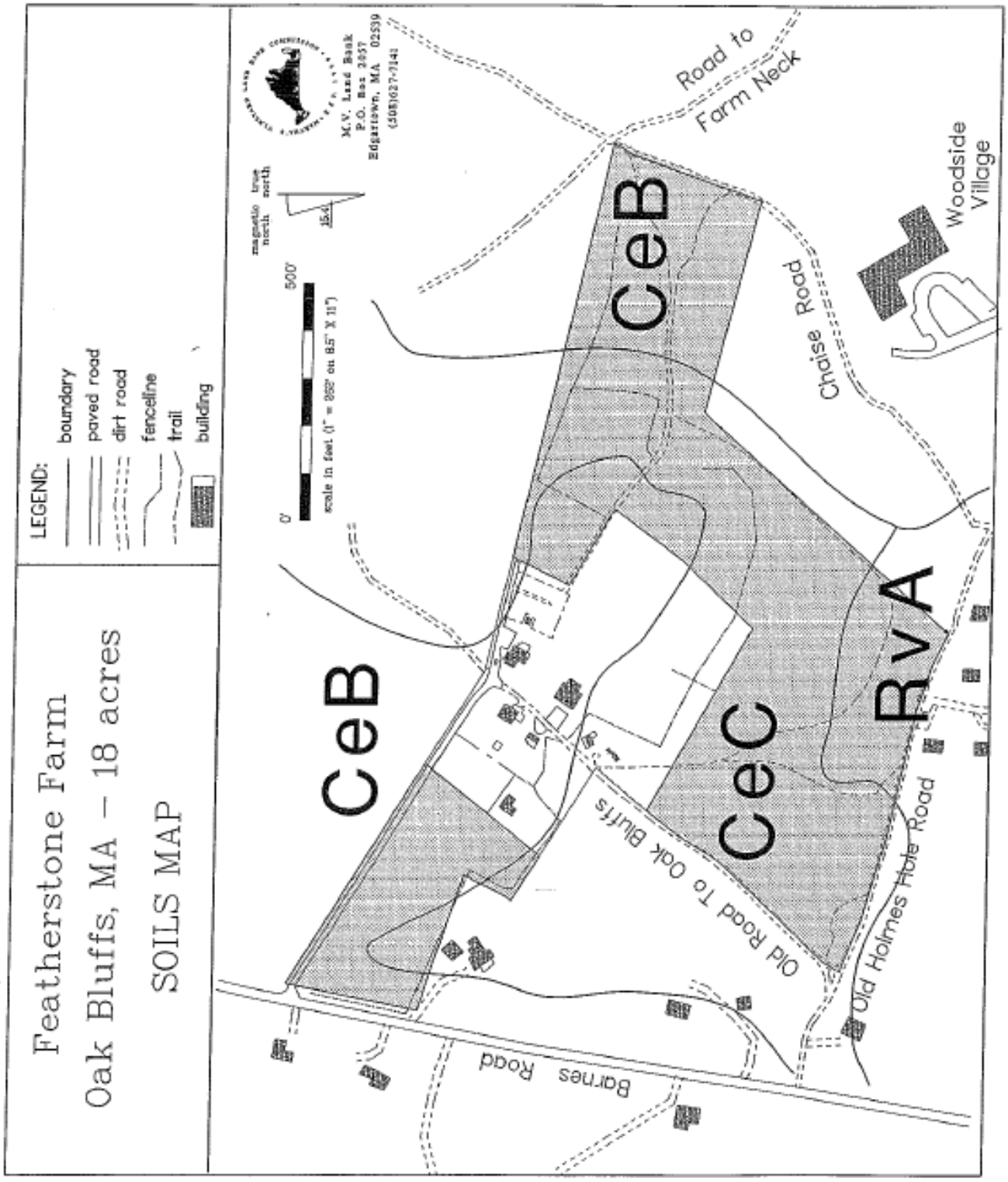
Map 5: Base Map

Featherstone Farm, Oak Bluffs, MA



Map 6: Soils Map

Featherstone Farm, Oak Bluffs, MA



Map 7: Topography Map

Featherstone Farm, Oak Bluffs, MA

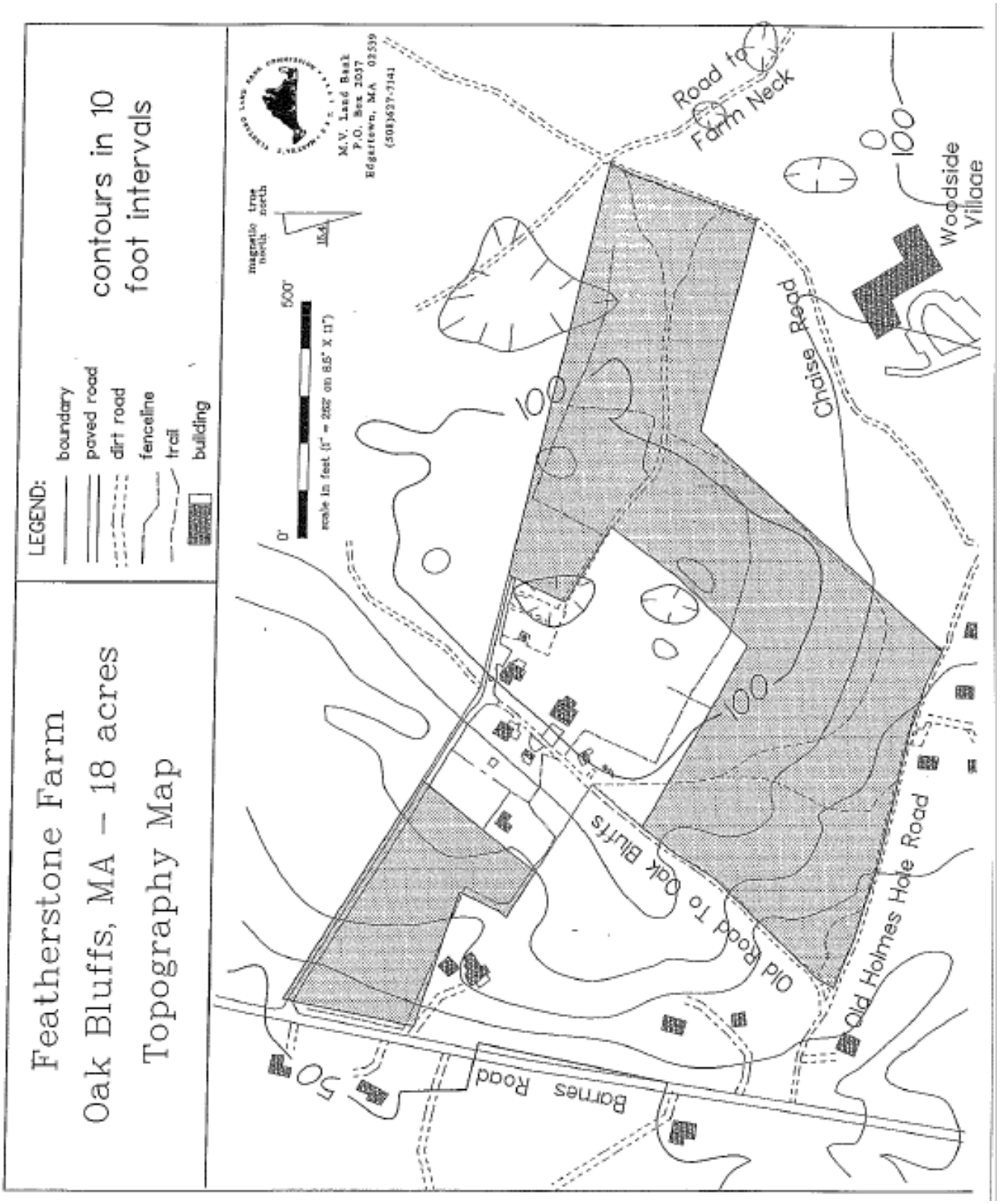


Figure 1: Aerial Photograph 1

April 16, 1996

Featherstone Farm, Oak Bluffs, MA

Featherstone Farm, Oak Bluffs, Massachusetts
Aerial photograph April 16, 1996 16189-15-17. Scale 1:4,717 (1":393')

Figure 2: Aerial Photograph 2 (Close-up)

April 16 1996

Featherstone Farm, Oak Bluffs, MA

Featherstone Farm, Oak Bluffs, Massachusetts
Close-up of aerial photograph April 16, 1996 16189-15-17 Scale 1:2,964 (1":247')

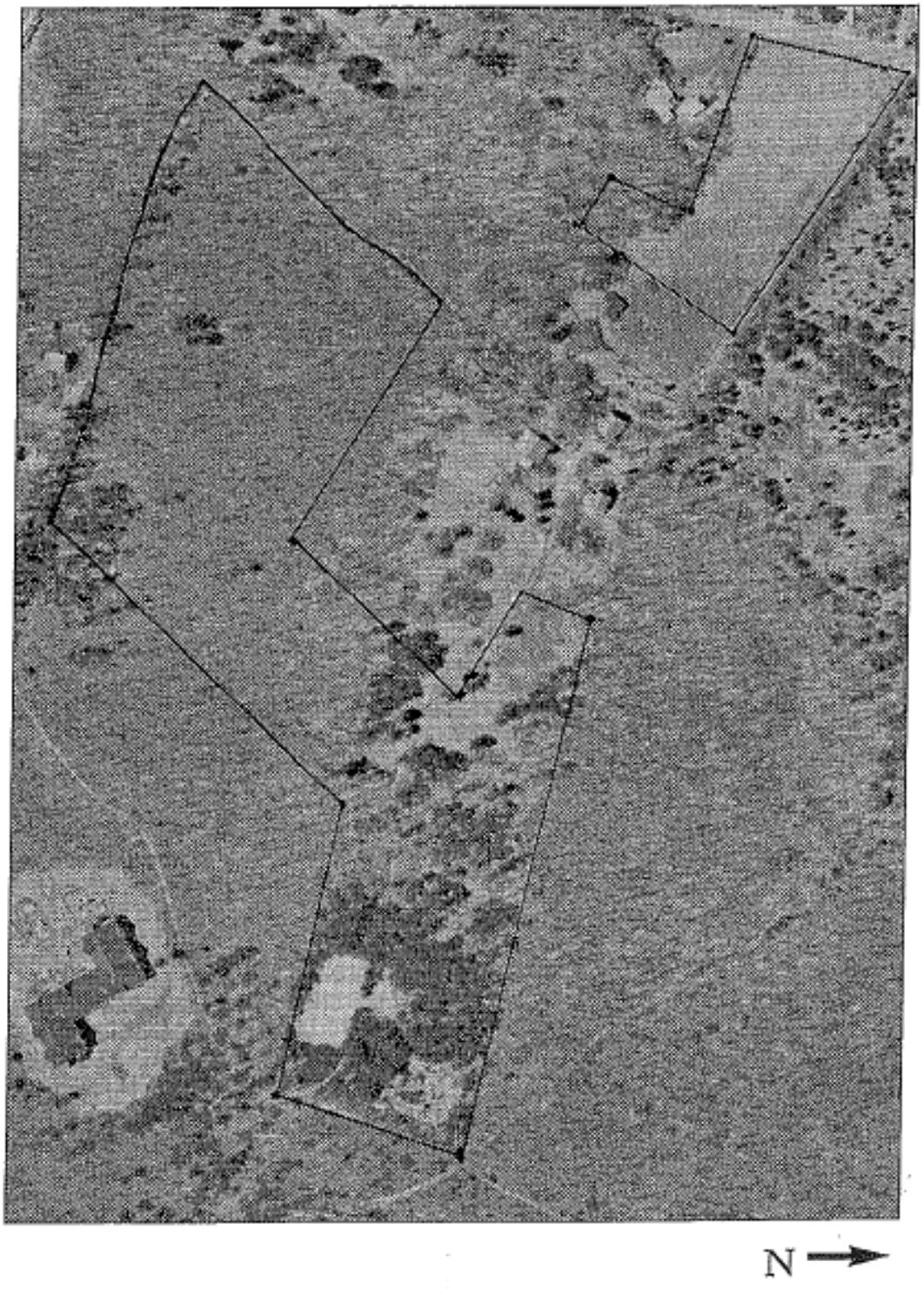
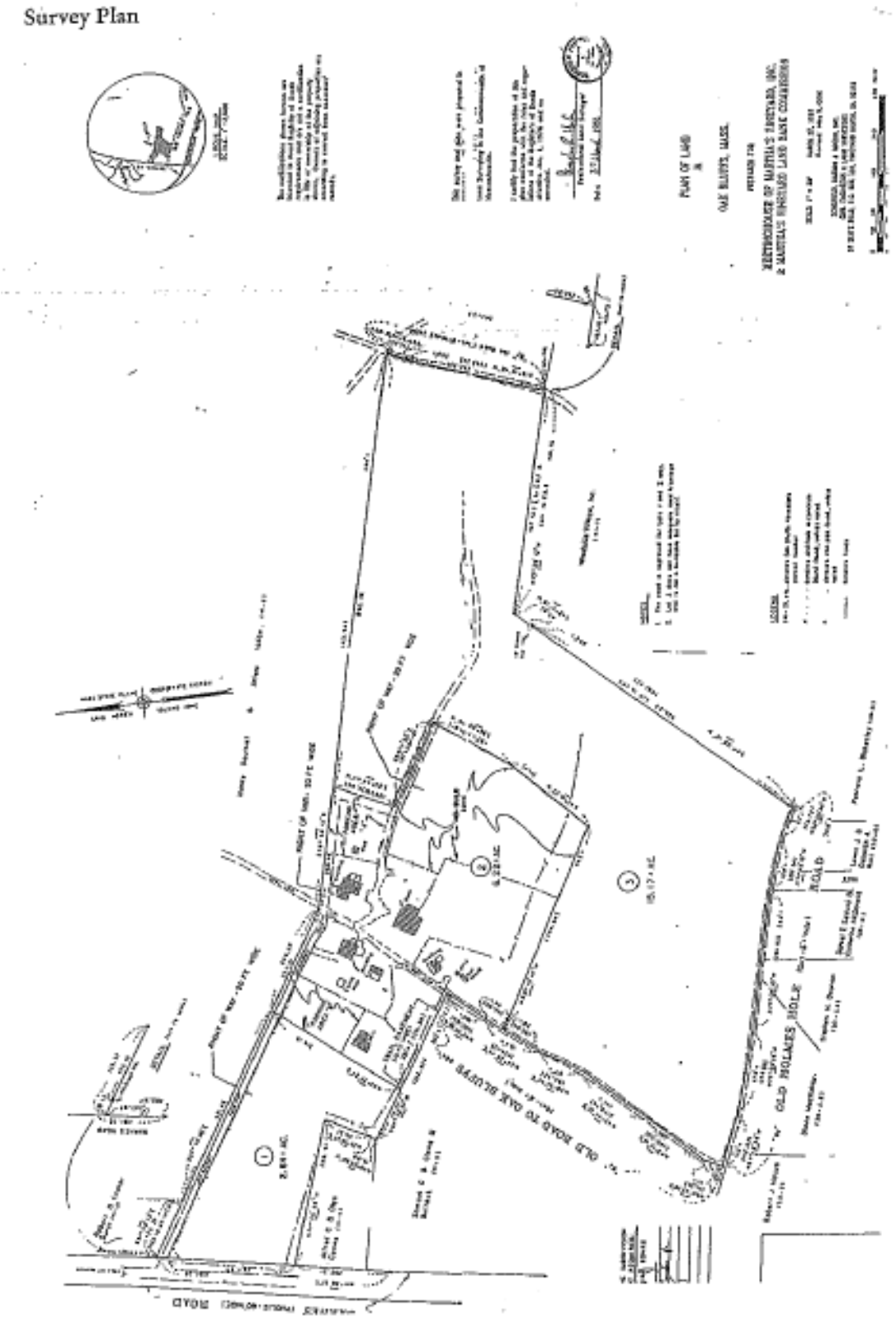


Figure 3: Survey Plan, Plan of Land

Featherstone Farm, Oak Bluffs, MA



B. Biological Characteristics

1. Vegetation

A census of the flora of Featherstone Farm revealed 145 plant species in 48 families, and two lichen species. This is a moderately high floral diversity for a property of 18 acres. This species diversity is due in most part to the relatively high levels of disturbance that have occurred in Featherstone Farm's woodlands, and to the high number of naturalized species that occur in the pasturelands. Four vegetation communities occur at Featherstone Farm. Table 1 summarizes the extent of each type, as well as the number of species found within each community and the number of species that occur on the property within only a single community type (i.e. a unique species). Although these community types generally reflect the history of land-use and underlying soil conditions present on and around the property, they also intergrade to some degree, and in places a single "community type" is difficult to apply. Upland communities cover the entire 18 acres, and include white oak woodland, black oak woodland, pitch pine woodland, and pastures. No wetlands are found at Featherstone Farm. The Vegetation Communities Map details the geographic extent of each community, as well as its relationship to local topography.

Table 1. Vegetation Communities at Featherstone Farm

Vegetation Community	acreage	% property	# species	% unique species
white oak woodland	7.6	42	43	9% (4)
black oak woodland	2.6	15	69	16% (11)
pitch pine woodland & heath opening	4.5	25	68	22% (15)
pastures	3.3	18	71	62% (44)
Total	18.0	100	147	50% (74)

A full botanical list for the property, entitled "Flora of Featherstone Farm, Oak Bluffs, MA" is presented in Table 2. It includes information on the abundance of all 147 species recorded on the property to date. Presentation is alphabetical by scientific name as in Gleason and Cronquist, 1991. Accompanying each scientific name is a frequently used common name and the morphological type. The possible morphological types include: tree, shrub, vine, herb, graminoid, fern, moss, and lichen. An overview of the number of species found within each vegetation community is also presented, along with a description of the season in which the plant species was observed in a survey.

The **white oak woodland** community covers 7.6 acres, or 42 percent of the property's total acreage, and occurs on Carver loamy coarse sand and Riverhead sandy loam soils. This woodland has a closed canopy dominated by white and black oaks, which cover an average of 51 % and 39% of sample plot area, respectively. The average height of the stand is thirty-three feet, with a range of fifteen to forty-two feet. Many of the white oaks have been previously cut for firewood, with up to half a dozen small trunks growing today in a circle around any one stump.

Only small openings occur in this woodland, where narrow foot-paths are maintained through regular use by white-tailed deer and nearby residents. Since few openings occur in this woodland, it has a fairly low plant diversity, with only a few species each of understory trees, shrubs, and herbaceous plants. Much of the diversity comes from species growing along the edges of this woodland, where more light penetrates through breaks in the tree canopy. There are a total of forty-three species identified in this community.

This woodland's overstory is composed mostly of white oak (*Quercus alba*), with a secondary dominance of black oak (*Q. velutina*). Small stands of 30 foot tall American beech occur along the Old Road to Oak Bluffs and smaller trails, and scattered mature pitch pines (*Pinus rigida*) are found rarely. Common understory tree seedlings include black cherry (*Prunus serotina*), black oak, scrub oak (*Q. ilicifolia*), and american beech *(Fagus grandifolia*).

This woodland has a dense 2-4' tall shrub layer dominated by the ericaceous shrubs dangle berry (*Gaylussacia frondosa*) and late lowbush blueberry (*Vaccinium pallidum*), which cover an average of 88% and 34% of the understory, respectively. Other shrubs less commonly present in the understory include highbush blueberry (*V. corymbosum*), lowbush blueberry (*V. angustifolium*), shadbush (*Amelanchier species*), and black huckleberry (*G. baccata*).

The most abundant herbaceous plant in the understory is bracken fern (*Pteridium aquilinum*), with an average cover of 13%. Other common herbs, vines and graminoids are lady's slipper (*Cypripedium acaule*), indian pipes (*Monotropa uniflora*), pennsylvania sedge (*Carex pensylvanica*), common greenbrier (*Smilax rotundifolia*), trailing arbutus (*Epigaea repens*), and pinesap (*Monotropahypopithys*), each covering less than 1 % on average of a sample plot. Other less common plants include haircap moss (*Polytrichum cf. juniperinum*), pincushion moss (*Leucobryum glaucum*) - usually growing at the base of white oaks, wild sarsaparilla (*Aralia nudicaulis*), and wintergreen (*Gaultheria procumbens*). Many of the less common members are represented in Table 2, "Flora of Featherstone Farm, Oak Bluffs, MA."

The **black oak woodland** community covers 2.6 acres, or 15 percent of the property's total acreage, and occurs on Carver loamy coarse sand soils. This woodland has a closed canopy dominated by black oak, with an average canopy cover of 88% in sample plots. The average height of the stand is thirty-four feet, with a range of ten to forty-eight feet. This woodland has a very open understory and a sparse groundcover, due in part to a history of recent grazing by horses. Twenty-foot tall pitch pines occurred in one fifth of the sample plots, reflecting this history of disturbance. As in the white oak woodland, 30 foot tall american beech occur along woodland path edges, and black cherry, black oak, and scrub oak occur as seedlings. Although similar tree species occur here as in

the white oak woodland, their size structure and dominance are very different. White oaks occur rarely in the canopy and subcanopy, but are commonly found as seedlings and saplings in the groundcover layer. The more recent history of disturbance and sparser shrub cover has resulted in a higher diversity of herbs and grasses in the groundcover of this woodland than is found in the white oak woodland, whose groundcover is dominated by a few clonal, ericaceous shrub species. There are a total of sixty-nine species identified in this community.

This woodland's overstory is composed almost entirely of black oak trees, with a sparse subcanopy of pitch pine, white oak, and american beech. Other common understory trees include post oak (*Quercus stellata*), black cherry and scrub oak. Regenerating tree seedlings are common, and many are now entering the sapling size class, as they probably have greater survival rates now that horse grazing has ceased. Two to six foot tall black oak saplings are common, as are one foot tall american beech seedlings.

This woodland has a sparse but diverse 2-6' tall shrub layer composed of a number of shrub and vine species. The ericaceous shrubs late lowbush blueberry, dangleberry, and bayberry dominate the shrub layer, covering an average of 37%, 32%, and 7% of the understory, respectively. The most abundant vine is poison ivy (*Toxicodendron radicans*), covering an average of 4% of study plot area. Other common shrubs and vines commonly found scattered in the understory include lowbush blueberry, wintergreen, pasture rose (*Rosa carolina*), highbush blueberry, prickly and bristly dewberries (*Rubus flagellaris* and *R. hispidus*), shadbush, black chokeberry *(Aronia melanocarpa*), and black huckleberry.

The most abundant herbaceous plants in the understory are bracken fern, with an average cover of 4%, and field sorrel (*Rumex acetosella*), with an average groundcover of less than 1 %. Common herbs, graminoids, and mosses include orchard grass (*Dactylis glomerata*), pincushion moss, striped wintergreen (*Chimaphila maculata*), wild sarsaparilla, pennsylvania sedge, broomsedge (*Andropogon virginicus* var. *virginicus*), swan's sedge (*Carex swanii*), hair cap moss (*Polytrichum* cf. *juniperinum*), sheep fescue (*Festuca ovina*), sweet vernal grass (*Anthoxanthum odoratum*), lady's slipper, and rough-stemmed goldenrod *(Solidago rugosa*). Growing sparsely in clumps on the ground is a reindeer lichen, or Cladonia species. Other less common plants include cow-wheat (*Melampyrum lineare*), indian pipes, and little bluestem (*Schizachyrium scoparium*). Many of the less common members are represented in Table 2, "Flora of Featherstone Farm, Oak Bluffs, MA."

The **pitch pine woodland** community covers 4.5 acres, or 25 percent of the property's total area, and occurs on Carver loamy coarse sand soils. This woodland has a closed canopy dominated by pitch pine and black oak, which cover an average of 68% and 32% of sample plot area, respectively. The average height of the pitch pine stand is thirty-five feet, with a range of fifteen to forty-one feet, while the black oaks average twenty-two feet in height, with a range of ten to thirty-five feet. The density and height of the pitch pines is variable, and directly relates to the land use history. Areas that were used for pasturing horses or were cleared for a dressage ring and spectator stands now exist in varying stages of pitch pine regeneration, including an almost bare sandy clearing, an opening covered with heath and scattered young pitch pine saplings, and a dense stand of twelve foot tall pines. This pitch pine woodland generally has a sparse groundcover dominated by low ericaceous shrubs, sedges, herbaceous plants and vines. There are a total of sixty-eight plant species in this community.

This woodland's overstory is composed mostly of pitch pine trees, with a black oak subcanopy. Other understory trees found commonly as seedlings or saplings include white oak, american beech, scrub oak and black cherry. This woodland has a sparse 2-4' tall shrub layer composed of a number of shrub and vine species. The ericaceous shrubs late lowbush blueberry and bayberry dominate the shrub layer, covering an average of 7% and 9% of the understory, respectively. The most abundant vine is poison ivy, covering an average of 1 % of study plot area. Other shrubs and vines commonly found scattered in the understory include prickly dewberry, common blackberry, lowbush blueberry, and shadbush. The groundcover is composed of herbaceous and graminoid plants as well as mosses, the most abundant of which are pennsylvania sedge, haircap moss, striped wintergreen, trailing arbutus, sheep fescue, wild indigo, and indian pipes. Other common plants include broomsedge, black huckleberry, japanese honeysuckle (*Lonicera japonica*), and bracken fern. Others less common include sweet vernal grass, oriental bittersweet (*Celastrus orbiculatus*), orchard grass, autumn olive (*Elaeagnus umbellata*), cow-wheat, pinesap, dwarf cinquefoil (*Potentilla canadensis*), and sweet and downy goldenrod (*Solidago odora & S. puberula*). Many of the less common species in this woodland are listed in Table 2, "Flora of Featherstone Farm, Oak Bluffs, MA."

Within this community type is a heathland opening dominated by golden heather (*Hudsonia ericoides*), sickle-leaved golden aster (*Chrysopsis falcata*), little bluestem, pennsylvania sedge, oxeye daisy (*Chrysanthemum leucanthemum*), field hawkweed (*Hieracium caespitosum*), virginia rose (*Rosa virginiana*), frostweed (*Helianthemum canadense*), reindeer lichen (*Cladonia* species), field sorrel, and common speedwell (*Veronica officinalis*). Present but uncommon are british soldier lichens (*Cladonia cristatella*), three awn (*Aristida dichotoma*), wavy-leaved aster (*Aster undulatus*), sweet fern (*Comptonia peregrina*), poverty grass (*Danthonia spicata*), hair grass (*Deschampsia flexuosa*), Deptford pink (*Dianthus armeria*), wild strawberry (*Fragaria virginiana*), common St. Johnswort (*Hypericum perforatum*), eastern red cedar (*Juniperus virginiana*), wild lettuce (*Lactuca canadensis*), beach pinweed (*Lechea maritima*), round-headed bush clover (*Lespedeza capitata*), english plantain (*Plantago lanceolata*), shining sumac (*Rhus copallinum*), pasture rose (*Rosa carolina*), and rabbit-foot clover (*Trifolium arvense*). Much of the plant diversity found in the pitch pine woodland is found within this small grassy heathland.

The **pasture** community covers 3.3 acres, or 18 percent of the property's total area, and occurs on Carver loamy coarse sand soils. This grassland is dominated by forage grasses and introduced, weedy herbaceous plants, and has a history of use as pasture land for horses. Dominant grasses and herbs are red fescue (*Festuca rubra*), quackgrass (*Agropyron repens*), english plantain, and orchard grass, chicory, and timothy with average groundcovers of 50%, 23%, 11%, 12%, 8%, and 7%, respectively. Also common are redtop (*Agrostis gigantea*), bulbous buttercup (*Ranunculus bulbosa*), narrow-leaved vetch (*Vicia angustifolia*), rough-fruited cinquefoil (*Potentilla recta*), common dandelion (*Taraxacum officinale*), least hop clover (*Trifolium dubium*), pennsylvania sedge, common St. Johnswort, slender and smooth crabgrass (*Digitaria filiformis & D. ischaemum*), bull thistle (*Cirsium vulgare*), wild madder (*Galium mollugo*), cat's ear (*Hypochoeris radicata*), velvet grass (*Holcus lanatus*), Queen Anne's lace (*Daucus carota*), oxeye daisy, mouse-ear chickweed (*Cerastium vulgatum),* sweet vernal grass, rabbit-foot clover, and red clover (*Trifolium pratense*). Uncommon but present are yarrow (*Achillea millefolium*), poke milkweed (*Asclepias exaltata*), lance-leaved coreopsis (*Coreopsis lanceolata*), field hawkweed, birdsfoot trefoil (*Lotus corniculatus*), common yellow wood sorrel (*Oxalis stricta*), common cinquefoil (*Potentilla simplex*), field sorrel, bladder campion (*Silene cucubalus*), white campion (*S. latifolia*), lesser stitchwort

(*Stellaria graminea*), and common chickweed (*S. media*). Many of the less common species in this grassland are listed in Table 2, "Flora of Featherstone Farm, Oak Bluffs, MA."

The land was stripped of its surface soils in the 1950's and has areas covered by a growth of graminoids and herbs typically found on dry, low nutrient soils typical of the sandplains. Common species found here include beadgrass (*Paspalum setaceum*), sand flatsedge (*Cyperus filiculmis*), little bluestem, sheep fescue, a panic grass (*Panicum* species), and purple lovegrass (*Eragrostis spectabilis*). Less common are butterflyweed (*Asclepias tuberosa*), toothed white-topped aster (*Aster paternus*), wavy-leaved aster, silvery cinquefoil (*Potentilla argentea*), tall goldenrod (*Solidago canadensis* var. *scabra*), and arrowleaf violet (*Viola sagittata*). Uncommon plants at the preserve that are found only in this community include yellow rocket (Barbarea vulgaris var. vulgaris), lesser daisy fleabane (*Erigeron strigosus* var. *strigosus*), lemon-balm (*Melissa officinalis*), yellow goat's-beard (*Tragopogon pratensis*), and spring vetch (*Vicia sativa*). There are a total of seventy plant species in this community type, and forty-four of these (63%) are unique to this community.

The aster family (Asteraceae) has the highest diversity of any family on the property with twenty-four species, including the common plants oxeye daisy, sickle-leaved golden aster, chicory, bull thistle, field hawkweed, cat's ear, rough-stemmed goldenrod, and common dandelion. The second most diverse family is the grass family (Poaceae) with eighteen species. Common road and trailside plants include redtop, sweet vernal grass, and velvet grass. Grasses typical of dry woodlands and sandy openings include broomsedge, three awn, poverty grass, hair grass, little bluestem and beadgrass. Typical pasture grasses include quackgrass, orchard grass, sheep fescue, and timothy. Although uncommon here, perhaps the most interesting plant on the property is butterflyweed, which is found commonly in Massachusetts only on Martha's Vineyard and Nantucket, and which serves as a nectar source for numerous species of butterflies, moths, bees and wasps.

Thirty families, or sixty-three percent of all plant families on the property, are represented by a single species. While there are thirty monotypic families, five families together represent seventy-four species or fifty-one percent of the total plant species. These are the aster family (24 species), the grass family (18 species), the rose family (Rosaceae, 16 species), the heath family (Ericaceae, 8 species), and the pea family (Fabaceae, 8 species). A taxonomic list of vascular plants is provided as Appendix B, arranged alphabetically within each division by family name and then by genus and species.

Table 2. Flora of Featherstone Farm Preserve, Oak Bluffs, MA

				vegetation		community		
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
	lichens and mosses							
1	*Cladonia cristatella*	british soldiers	lichen			u		4
2	*Cladonia species*	reindeer lichen	lichen		C	c		3
3	*Leucobryum glaucum*	pincushion moss	moss	c	C			2, 3

				vegetation community				
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
4	*Polytrichum juniperinum*	haircap moss	moss	A	C	A		1, 2, 3
	vascular plants							
5	*Acer rubrum*	red maple	tree	u	u			1, 2
6	*Achillea millefolium*	yarrow	herb				u	2
7	*Agrostis gigantea*	redtop	graminoid				A	2,3
8	*Amelanchier species*	a shadbush	shrub	C	C	C		2,3
9	*Andropogon virginicus var. virginicus*	broomsedge	graminoid		C	c		3,4
10	*Anthoxanthum odoratum*	sweet vernal grass	graminoid		C	u	c	2,3
11	*Aralia nudicaulis*	wild sarsaparilla	herb	c	C			1, 2, 3
12	*Aristida dichotoma*	three awn	graminoid			u		2
13	*Aronia melanocarpa*	black chokeberry	shrub	u	C			1, 2, 3
14	*Asclepias exaltata*	poke milkweed	herb				u	2
15	*Asclepias tuberosa*	butlerflyweed	herb				u	2
16	*Aster divaricatus*	white wood aster	herb	u	u			1
17	*Aster patemus*	toothed white-topped aster	herb	u	u		u	1, 2
18	*Aster racemosus*	small white aster	herb		u		u	1, 2
19	*Aster undulatus*	wavy-leaved aster	herb		u	u	u	1, 2
20	*Atriplex patuta*	orach	herb			u	u	2
21	*Baptisia tinctoria*	wild indigo	herb			C		1, 2, 3
22	*Barbarea vulgaris var. vulgaris*	yellow rocket	herb				u	2
23	*Berberis thunbergii*	japanese barberry	shrub				u	2
24	*Carex pensylvanica*	pennsylvania sedge	graminoid	C	C	C	C	1, 3
25	*Carex swanii*	swan's sedge	graminoid	u	C			2, 3
26	*Celastrus orbiculatus*	oriental bittersweet	vine		u	u		2
27	*Cerastium fontanum*	mouse-ear chickweed	herb				C	2, 3
28	*Chimaphila maculata*	striped wintergreen	herb	u	C	A		1, 3
29	*Chrysanthemum leucanthemum*	oxeye daisy	herb			c	C	2, 3
30	*Chrysopsis falcata*	sickle-leaved golden aster	herb			c		2
31	*Cichorium intybus*	chicory	herb				C	2, 3
32	*Cirsium vulgare*	bull thistle	herb				C	3
33	*Comptonia peregrina*	sweet fern	shrub			u		1, 2
34	*Coreopsis lanceolata*	lance-leaved coreopsis	herb				u	2
35	*Crataegus crus-galli*	cockspur hawthorn	tree		u			2, 4

				vegetation community				
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
36	*Cyperus filiculmis*	sand flatsedge	graminoid			u	A	2, 3
37	*Cypripedium acaule*	lady's slipper	herb	C	C			1, 2, 3
38	*Dactylis glomerata*	orchard grass	graminoid		C	u	A	1, 2, 3
39	*Danthonia spicata*	poverty grass	graminoid		u	u		1
40	*Daucus carota*	Queen Anne's lace	herb				C	3
41	*Deschampsia flexuosa*	hairgrass	graminoid	u	u	u		2
42	*Dianthus armeria*	Deptford pink	herb			u	u	2
43	*Digitaria filiformis*	slender crabgrass	graminoid				C	3
44	*Digitaria ischaemum*	smooth crabgrass	graminoid				C	3
45	*Elaeagnus umbellate*	autumn olive	tree			u	u	1, 2
46	*Elytrigia repens*	quackgrass	graminoid				A	3
47	*Epifagus virginiana*	beechdrops	herb	u	u			1
48	*Epigaea repens*	trailing arbutus	herb	C	u	C		1, 2, 3
49	*Eragrostis spectabilis*	purple lovegrass	graminoid			u	C	3, 4
50	*Erigeron strigosus var. strigosus*	lesser daisy fleabane	herb				u	2
51	*Euthamia tenufolia*	slender-leaved goldenrod	herb	u	u			2
52	*Fagus grandifolia*	american beech	tree	C	A	A		1, 2, 3
53	*Festuca ovina*	sheep fescue	graminoid		C	A	C	2,3
54	*Festuca rubra*	red fescue	graminoid				A	1, 2, 3
55	*Fragaria virginiana*	wild strawberry	vine			u		2
56	*Galium mollugo*	wild madder	herb				C	2, 3
57	*Gaultheria procumbens*	wintergreen	shrub	c	C			1, 3
58	*Gaylussacia baccata*	black huckleberry	shrub	C	c	c		1, 3
59	*Gaylussacia frondosa*	dangleberry	shrub	A	A			1, 2, 3
60	*Helianthemum canadense*	frostweed	herb			c		1, 2
61	*Hieracium caespitosum*	field hawkweed	herb			c	u	1, 2
62	*Hieracium paniculatum*	panicled hawkweed	herb		u			1
63	*Hieracium venosum*	rattlesnake weed	herb	u				4
64	*Holcus lanatus*	velvetgrass	graminoid	u	u		C	1, 3
65	*Hudsonia ericoidas*	golden heather	herb			c		2, 4
66	*Hypericum perforatum*	common St. Johnswort	herb	u		u	C	2, 3, 4
67	*Hypochoeris radicata*	cat's ear	herb			u	C	1, 2, 3
68	*Hypoxis hirsuta*	yellow startgrass	herb	u				4
69	*Juncus tenuis*	path rush	graminoid	u	u	u		1
70	*Juniperus virginiana*	eastern red cedar	shrub		u	u		1

				vegetation community				
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
71	*Kalmia angustifolia*	sheep laurel	shrub	u	u			1
72	*Lactuca canadensis*	wild lettuce	herb			u		2
73	*Lechea maritima*	beach pinweed	herb			u		2, 4
74	*Lespedeza capitata*	round-headed bush clover	herb			u		1
75	*Lonicera japonica*	japanese honeysuckle	vine			c	u	2
76	*Lotus corniculatus*	birdsfoot trefoil	herb				u	2
77	*Luzuia multiflora*	common woodrush	graminoid	u	u			2
78	*Lysimachia quadrifolia*	whorled loosestrife	herb	u				4
79	*Melampyrum lineare*	cow-wheat	herb	u	c	u		2
80	*Melissa officinalis*	lemon balm	herb				u	2
81	*Monotropa hypopithys*	pinesap	herb	C		u		1, 3
82	*Monotropa uniflora*	indian pipes	herb	C	c	C		2, 3
83	*Myrica pensylvanica*	bayberry	shrub		A	A	u	1, 2, 3
84	*Oenothera perennis*	sundrops	herb				u	3
85	*Oxalis stricta*	common yellow wood sorrel	herb				u	2
86	*Panicum* species	a panic grass	graminoid			u	C	3
87	*Paspalum setaceum*	a beadgrass	graminoid				A	3
88	*Phleum pratense*	timothy	graminoid				C	2, 3
89	*Phytolacca americana*	pokeweed	herb			u		2
90	*Picea abies*	Norway spruce	tree		u			1, 4
91	*Pinus rigida*	pitch pine	tree	C	A	A		1, 3
92	*Pinus strobus*	white pine	tree		u			1, 2
93	*Pinus sylvestris*	scots pine	tree		u			1
94	*Plantago lanceolata*	english plantain	herb			u	A	1, 2, 3
95	*Polygonum convolvulus*	black bindweed	vine				u	2
96	*Polygonum persicaria*	lady's thumb	herb				u	2
97	*Pontentilla argentea*	silvery cinquefoil	herb				u	2
98	*Pontentilla canadensis*	dwarf cinquefoil	herb		u	u		2
99	*Pontentilla recta*	rough-fruited cinquefoil	herb				A	2, 3
100	*Pontentilla simplex*	common cinquefoil	herb				u	2
101	*Prenanthes trifoliata*	tall rattlesnake root	herb	u	u			1, 2
102	*Prunus serotina*	black cherry	tree	C	C	C		1, 2, 3
103	*Pteridium aquilinum*	bracken fern	fern	A	A	c		1, 3
104	*Pyrus malus*	domestic apple	tree		u			2
105	*Quercus abla*	white oak	tree	A	A	A		1, 3

				vegetation community				
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
106	*Quercus ilicifolia*	scrub oak	tree	C	C	C		1, 3
107	*Quercus stellata*	post oak	tree		C			3
108	*Quercus velutina*	black oak	tree	A	A	A		1, 3
109	*Ranunculus bulbosa*	bulbous buttercup	herb				A	2, 3
110	*Rhus copallinum*	shining sumac	shrub			u		1
111	*Rosa carolina*	pasture rose	shrub		C	u		2, 3
112	*Rosa multiflora*	multiflora rose	shrub				u	2
113	*Rosa virginiana*	virginia rose	shrub			c		4
114	*Rubus allegheniensis*	common blackberry	vine		u	C		2, 3
115	*Rubus flagellaris*	prickly dewberry	vine		C	A		1, 3
116	*Rubus hispidus*	bristly dewberry	vine		C			
117	*Rumex acestosella*	field sorrel	herb		A	c	u	2, 3
118	*Rumex crispus*	curled dock	herb				u	2
119	*Sassafras albidum*	sassafras	tree	u				4
120	*Schizachyrium scoparium*	little bluestem	graminoid		c	c	C	1, 2, 3
121	*Silene cucubalus*	bladder companion	herb				u	2
122	*Silene latifolia*	white campion	herb				u	2
123	*Sisymbrium officinale*	hedge-mustard	herb				u	4
124	*Smilax rotundifolia*	common greenbrier	vine	C	u			2, 3
125	*Solanum dulcamara*	bittersweet nightshade	vine				u	2
126	*Solidago canadensis var. scabra*	tall goldenrod	herb				u	2
127	*Solidago odora*	sweet goldenrod	herb		u	u		1
128	*Solidago puberula*	downy goldenrod	herb			u		1
129	*Solidago rugosa*	rough-stemmed goldenrod	herb		C			1, 3
130	*Stellaria graminea*	lesser stitchwort	herb				u	2
131	*Stellaria media*	common chickweed	herb				u	2, 4
132	*Taraxacum officinale*	common dandelion	herb			u	C	2, 3
133	*Toxicodendron radicans*	poison ivy	vine	u	C	A		1, 3
134	*Tragopogon pratensis*	yellow goatsbeard	herb				u	2
135	*Trifolium arvense*	rabbit-foot clover	herb			u	c	2
136	*Trifolium dubium*	least hop clover	herb				C	2, 3
137	*Trifolium pretense*	red clover	herb				c	2
138	*Vaccinium angustifolium*	lowbush blueberry	shrub	C	A	C		2, 3
139	*Vaccinium corymbosum*	highbush blueberry	shrub	A	C			3
140	*Vaccinium pallidum*	late lowbush blueberry	shrub	A	A	A		1, 2, 3

				vegetation community				
	scientific name	**common name**	morphology	white oak woodland	black oak woodland	pitch pine woodland	pasture-lands	survey
141	*Veronica arvensis*	corn speedwell	herb				u	2
142	*Veronica officinalis*	common speedwell	herb		u	c		1, 2, 4
143	*Viburnum recognitum*	northern arrowwood	shrub	u	u			1
144	*Vicia angustifolia*	narrow-leaved vetch	herb				A	2, 3
145	*Vicia sativa*	spring vetch	herb				u	2
146	*Viola sagittata*	arrowleaf violet	herb				u	2
147	*Vitis labrusca*	fox grape	vine					4
		Total # of abundant species		7	10	11	10	
		Total # of common species		16	28	23	22	
		Total # of uncommon species		22	31	34	39	
		# species unique to community		0	11	15	43	
		Total number of species		45	69	68	71	
		% of total species		31	47	46	48	

* A=abundant (percent occurrence in sample plots greater than 50 %), C=common (percent occurrence in sample plots greater than 10 % but less than or equal to 50 %), U=uncommon (percent occurrence in sample plots less than or equal to 10 %), a=abundant (seen on property but not in sample plots), c=common (seen on property but not in sample plots), u=uncommon (seen on property but not in sample plots).

Surveys:
1 = fall 1996 ongoing MVLBC inventory (WM)*, 10/7 - 11/7
2 = spring & early summer 1997 ongoing MVLBC inventory (WM), 3/27/97 - 7/11/97
3 = fall 1997 MVLBC inventory (WM), 10/29/97 -10/31/97
4 = spring 1998 ongoing MVLBC inventory (WM), 3/27/98

* WM = Wendy Malpass

2. Wildlife Habitat

The **Wildlife Map** accompanies the wildlife inventory described in this section. It identifies species of wildlife observed in each habitat on the preserve during the four seasons, including dragonflies and butterflies, amphibians, reptiles, birds, and mammals.

A. Habitat Features

white oak woodland: The woodland has a closed canopy and a dense low ericaceous shrub layer, with only a few openings in the canopy along trails that result in very little grassy or herbaceous groundcover. It has the following habitat features: tall trees for nesting, roosting, and foraging invertebrates, reptiles, birds, and mammals; mast-bearing trees (white, black and scrub oaks and American beech) for fall forage; fruiting trees, shrubs and vines (black cherry, shadbush, dangleberry, highbush and lowbush blueberries, black huckleberry, and common greenbrier) for summer and fall forage; cavities in dead tree limbs and old stumps for foraging and nesting amphibians, reptiles, birds, and mammals; and cover of low shrubs, vines, and leaves for nesting and foraging insects, amphibians, reptiles, birds, and mammals.

black oak woodland: The woodland has a closed canopy and a sparse low ericaceous shrub layer, with scattered canopy openings that provide light for **a** thin but diverse grassy and herbaceous groundcover. It has the following habitat features: tall trees for nesting, roosting, and foraging invertebrates, reptiles, birds, and mammals; mast-bearing trees (black, white, scrub and post oaks) for fall forage; fruiting trees, shrubs, and vines (black cherry, lowbush blueberry, dangleberry, bayberry, poison ivy, pasture rose, and black chokeberry) for summer and fall forage; grassland-woodland ecotone for perching, foraging, and nesting amphibians, reptiles, birds and mammals; cavities in dead tree limbs for nest sites and cover; cover of low shrubs, vines, sedges, grasses and leaves for nesting and foraging insects, amphibians, reptiles, birds, and mammals.

pitch pine woodland: The woodland has a closed canopy with a shaded and sparsely vegetated groundcover, and has the following habitat features: cone and mast-bearing trees (pitch pine, black, white, and scrub oaks, and American beech) for fall forage; fruiting trees, shrubs, and vines (black cherry, late lowbush blueberry, bayberry, poison ivy, prickly dewberry, and common blackberry) for late summer and fall forage; abundant trees and shrubs offer twigs and buds for winter forage; graminoids, herbs, low shrubs, and leaves on the forest floor offer cover for invertebrates, amphibians, reptiles, birds, and mammals; heathland opening with cover of graminoids and herbaceous plants provide forage for amphibians, reptiles, birds, and mammals.

pastures: This grassland has a dense cover of graminoids and herbaceous plants, and provides the following habitat features: forage and cover for insects, reptiles, birds, and mammals; grassland-woodland ecotone provides perching sites and cover for nesting and foraging amphibians, reptiles, birds and mammals.

B. Invertebrates

Terrestrial invertebrates that have suitable habitat on the property include mites and ticks (Arachnida; Order Acarina); spiders (Arachnida; O. Araneida); and insects such as dragonflies (O. Odonata); grasshoppers and crickets (O. Orthoptera); leafhoppers and cicadas (O. Homoptera); beetles (O. Coleoptera); butterflies and moths and their caterpillar larvae (O. Lepidoptera); gnats, midges, mosquitoes and flies (O. Diptera); and wasps, ants, and bees (O. Hymenoptera) (Borror and White, 1970).

A list of invertebrates observed at Featherstone Farm is provided in Appendix C. This provides a summary of species observed in each vegetation community from April through October, 1997. Insects most commonly heard or seen in the white and black oak woodlands include cicadas, beetles, butterflies, and flies, as well as the arachnids ticks and spiders (see Appendix C1). Insects commonly heard or seen in the pitch pine woodland include butterflies and flies (see Appendix C2).

Insects observed in the pastures include common green darner dragonflies, as well as field crickets, grasshoppers, ladybug beetles, at least ten species of butterflies, and wasps and bees (see Appendix C3).

Only flight and simple feeding observations have been used to date to assess the composition of the invertebrate fauna of Featherstone Farm. More valuable knowledge about relationships between insects and their host plants, pollination biology, and dispersal could be gained from future investigations using census techniques such as light and pit trapping.

C. Amphibians

Table 3 details the eight amphibian species that find suitable breeding or nonbreeding habitat at Featherstone Farm (after DeGraaf and Rudis, 1987). Preferred habitat is represented with an asterisk. Not one amphibian species was observed on the preserve from October, 1996 to August, 1997.

Table 3. Suitable Amphibian Habitatat Featherstone Farm, Oak Bluffs

amphibian species		oak woodlands	pitch pine woodland	pastures
spotted salamander	*Ambystoma maculatum*	nonbr	nonbr	
redback salamander	*Plethodon. cinereus*	br, nonbr	br, nonbr	
red-spotted newt	*Notophthalmus v. viridescens*	nonbr	nonbr	
eastern american toad	*Bufo a. americanus*	nonbr	nonbr	nonbr
fowler's toad	*Bufo woodhousii fowleri*		nonbr	nonbr
northern spring peeper	*Pseudacris c. crucifer*	nonbr		
[redacted	*[redacted]*		nonbr	
pickerel frog	*Rana palustris*	nonbr	nonbr	

Note: br - breeding, for - foraging, nonbr - nonbreeding. An asterisk (*) denotes a preferred habitat. Bold denotes a species observed on the preserve.

D. Reptiles

Table 4 details the ten reptile species that find suitable breeding or nonbreeding habitat at Featherstone Farm (after DeGraaf and Rudis, 1987). Preferred habitat

is represented with an asterisk. One reptile species prefers to breed in oak woodland habitat. Two species - northern black racer and northern redbelly snake - prefer to breed in pine woodlands, and two species - spotted turtle and smooth green snake - prefer to breed in pastures (Klemens, 1993).

Although Featherstone Farm has no wetland habitats, nearby freshwater seeps at the Head of the Lagoon provide high quality habitat for nonbreeding spotted turtles. This wetland area is only 800 feet west of the westernmost pasture at Featherstone Farm. However, a busy paved road - Barnes Road - separates the two habitats, and could be a large source of mortality for this species were it to travel from these wetlands to the pastures to breed. Not a single reptile species was observed on the preserve by staff from October, 1996 to August, 1997.

Table 4. Suitable Reptilian Habitat at Featherstone Farm, Oak Bluffs

reptile species		oak woodlands	pitch pine woodland	pastures
common snapping	*Chelydra s. serpentina*		br	br
spotted turtle	*Clemmys guttata*			br*
[redacted]	*[redacted]*	br*, nonbr	nonbr	br, nonbr
northern black racer	*Coluber c. constrictor*	br, nonbr	br*, nonbr	br, nonbr
northern ringneck	*Diadophis punctatus edwardsii*	br, nonbr		br, nonbr
eastern milk snake	*Lampropeltis t. Triangulum*	br, nonbr	br, nonbr	br, nonbr
smooth green snake	*Opheodrys vernalis*	br, nonbr		br*, nonbr
northern redbelly snake	*Storeria o. occipitomaculata*	br, nonbr	br*, nonbr	br, nonbr
eastern ribbon snake	*Thamnophis s. sauritus*		br, nonbr	
eastern garter snake	*Thamnophis s. sirtalis*	br, nonbr	br, nonbr	br, nonbr

Note: br - breeding, nonbr - nonbreeding. An asterisk (") denotes a preferred habitat. **Bold** denotes a species observed on the preserve.

E. Birds

A survey of the birds occurring in Featherstone Farms habitats was conducted on seventeen visits to the property from October 7, 1996 to August 1, 1997. These visits recorded the presence of both occasional migrants and resident birds during the late fall migration (October 7 - November 7), winter (November 22 - April 4), spring migration (April 11 · May 21), and breeding season (June 4-August 1). Birds were sampled from four point count survey locations, as shown on the **Avian Inventory Map.** Survey point one encompasses the small easternmost pastureland and adjacent woodland edge, survey point two *is* located in the pitch pine woodland, survey point three *is* located in the white oak woodland, and survey point four encompasses the western pastureland and bordering shrubland. Of the birds detected at Featherstone Farm, only those that were occasional or common in occurrence in each habitat are listed on the map; uncommon species are not listed here, but are shown in tables 6 and 7.

Table 5 summarizes the changes in the numbers of bird species observed, by season, for the three broad habitat categories present on the property. The numbers do not add up in this table because many birds were seen in more than one habitat type in more than one season. Those species seen in fall months (early-October through early-November) include fall migrants as well as year-round residents. Those species seen in spring (April and May) include year-round residents, spring migrants and summer residents that are just returning to local breeding grounds from southern wintering areas.

Table 5. Seasonal Change in Number of Bird Species at

Featherstone Farm, Oak Bluffs, MA

season	white oak woodland	pitch pine woodland	pastures	total species
fall 96	8	3	16	16
winter 96 – 97	9	8	18	21
spring 97	25	17	30	34
summer 97	20	18	26	31
Total Species	29	22	34	38

Thirty-eight bird species were detected in a year in woodland and pasture habitats at Featherstone Farm (see Table 5). The most species were detected in the pastures and its wooded and shrubby edges than in any other habitat in all seasons, and more species were detected in the spring than in any other season in the white oak woodland and pastureland, while equal numbers of bird species were found in the pitch pine woodland in the spring and summer. The greatest number of species in most four-season point count surveys at any one location are usually found in the spring, when some winter residents still linger, spring migrants are moving through, and summer breeders arriving from the south add to the year-round resident bird fauna. It is likely that a few more species would have been added to the fall total of sixteen bird species had fall surveys been conducted in late August and during September. Likely fall migrants include sharp-shinned and broad-winged hawks, tree swallows, cedar waxwings, hermit thrushes, and a number of flycatcher and warbler species, including blackpoll, black-throated green and yellow-rumped warblers.

Table 6 lists all of the bird species observed at the four point-count survey locations studied at Featherstone Farm, their seasonal residency patterns, abundance within each season, and their breeding status during the summer. This table does not distinguish between habitats.

Table 6. Seasonal Abundance of Birds Observed at

Featherstone Farm, Oak Bluffs, MA*

Bird Species	Fall Migration	Winter	Spring Migration	Breeding Season	Breeding Status**
Year-round Residents					
red-tailed hawk		uncommon	uncommon	uncommon	PO

mourning dove	present	occasional	common	common	PR
red-bellied woodpecker	common		common	common	PR
northern flicker	present	uncommon	common	occasional	PO
downy woodpecker	present	uncommon	common	common	PR
hairy woodpecker		uncommon		uncommon	PO
blue jay	present	occasional	common	common	PR
american crow	common	common	common	occasional	PO
black-capped chickadee	common	common	common	common	CO (hy)
white-breasted nuthatch	common	common	common	common	PR
carolina wren	present	uncommon	common	occasional	PO
eastern bluebird		uncommon	uncommon		NB
american robin	present	occasional	common	common	CO (cf)
northern mockingbird	present	uncommon		uncommon	PO
northern cardinal	present	occasional	common	uncommon	PO
rufous-sided towhee			common	common	CO (hy)
song sparrow		common	common	common	PR
brown-headed cowbird		uncommon	occasional	occasional	PR
house sparrow	present	uncommon	uncommon	common	PR
American goldfinch		common	common	common	PR
house finch	present	uncommon	common	uncommon	PO
Summer Residents					
great-crested flycatcher				occasional	PR
eastern wood-pewee			uncommon	common	PR
barn swallow			uncommon	common	CO (nest)
gray catbird	present		occasional	common	PR
red-eyed vireo			uncommon	common	PR
prairie warbler			common	uncommon	PO
pine warbler		uncommon	common	common	PR
ovenbird			uncommon	common	CO (hy)
chipping sparrow			common	common	CO (hy)
common grackle		uncommon	common	occasional	PR
northern oriole			uncommon	occasional	PO
Spring/Fall Migrants					
herring gull			uncommon		
osprey			uncommon		
tree swallow			common		
common yellowthroat			uncommon		
red-winged blackbird			uncommon		
Winter Residents					
dark-eyed junco	present				

* “common birds” were detected in 50% or more of the survey visits, “occasional birds” were detected in 20 - 49% of the survey visits, and “uncommon birds” were detected in fewer than

20% of the survey visits.

** Breeding status: NB = nonbreeding, PO = possible breeding (species detected in suitable breeding habitat), PR =probable breeding (species heard singing on two occasions over one week apart in suitable breeding habitat). CO = confirmed breeding (species carrying food, feeding young, with begging hatch-year fledglings, or a located nest).

The most common bird species detected in all habitats are listed on the **Wildlife Map,** at the end of this section. Two species were observed only in the **white oak woodland** in the winter (hair woodpecker and northern flicker), four species were observed only in this woodland in the spring (red-eyed vireo, ovenbird, common yellowthroat, and northern oriole), and two species were unique to this woodland in the summer (red-bellied woodpecker and red-eyed vireo). One species was detected only in the **pitch pine woodland** in the winter (pine warbler), and one species was unique to this woodland in the summer (hairy woodpecker). Eight species were observed only in the **pastures** in the winter (red-tailed hawk, downy woodpecker, eastern bluebird, northern mockingbird, northern cardinal, brown-headed cowbird, house sparrow, and house finch), four species were observed only in these grasslands in the spring (osprey, eastern bluebird, prairie warbler, and house sparrow), and four species were unique to this habitat in the summer (red-tailed hawk, northern mockingbird, prairie warbler, and house finch).

Of the thirty-one bird species observed during the breeding season, six were confirmed as breeding on the property, fifteen were probably breeding, and ten were possibly breeding on the preserve in the summer of 1997 (see Table 6). Observations of behaviors associated with nesting or rearing of young, such as carrying nesting material, carrying food to a nest, carrying fecal sacs from a nest, hatch-year birds being attended by adults, or actually finding an active nest were used to confirm a species as breeding on the preserve. The presence of territorial males in suitable breeding habitat - determined by males singing on a territory - on two occasions at least a week apart determines that a species is probably breeding here. No species were confirmed as breeding in the **white oak woodland**. Species confirmed as breeding in the **pitch pine woodland** are black-capped chickadee, american robin, ovenbird, rufous-sided towhee, and chipping sparrow. Species confirmed as breeding in the **pastures** are barn swallow and american robin, both of which forage here regularly but actually breed in nearby habitats. The barn swallows make their nests in the small nearby horse stable, and the robins breed in the shrublands to the east.

The avian fauna of Featherstone Farm has species representing sixteen different families. A complete checklist of birds is provided as Appendix D. The families with most members are the Emberizidae (warblers and sparrows), with thirteen species, and the Picidae (woodpeckers), with four species.

F. Mammals

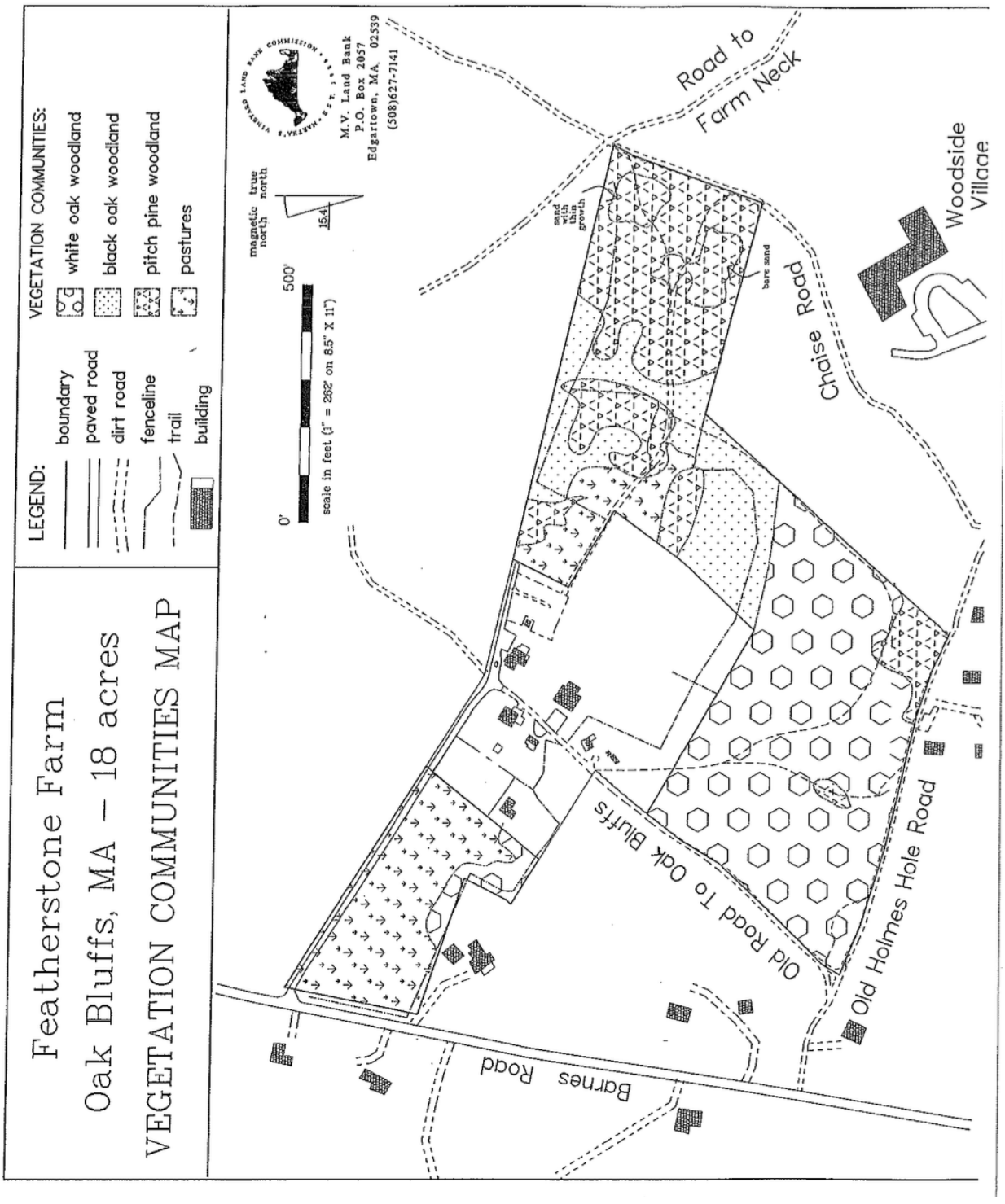
Table 7 details the twenty-three mammal species that find suitable habitat for breeding, foraging, roosting or wintering at Featherstone Farm (after DeGraaf and Rudis, 1987). Preferred habitat for these species is represented with an asterisk, and a species observed in a given habitat is denoted in bold lettering. Two species - eastern gray squirrel and white-footed mouse - prefer to breed and winter in oak woodland habitat, and they and a third species - eastern pipistrelle - prefer to forage in this habitat. One species - eastern pipistrelle - prefers to forage in pine woodlands and one species - hoary bat - prefers to roost in this habitat. Two species - eastern mole and meadow vole - prefer to winter in pasture habitat. In addition, they and eastern cottontail prefer to

breed in this habitat. These three species and eastern pipistrelle prefer to forage in pastures (DeGraaf and Rudis, 1987; Burt, 1981).

Six mammals have been observed by staff on the preserve from October 1996 through October, 1997. Eastern cottontails were abundant in the **pastures** in the fall and spring and were easy to disturb from their foraging. Their scat was common in the pastures and along the woodland edges. Two unidentified bats were observed feeding on insects over the heath opening within the **pitch pine woodland** in late April. Gray squirrels were regularly observed in the **white oak woodland** and on the edge of the **pasturelands** in spring months, and were regularly seen and heard in the **pitch pine woodland** in spring and fall months, when they are very active in breeding and foraging activities. A young striped skunk was observed foraging in the **pitch pine woodland** on a July morning, and signs of digging were regularly seen in this habitat all summer. Upon being disturbed, the young skunk sprayed, ran through the lowbush blueberry bushes, and retreated into a burrow at the north end of the large woodpile on the property. A hairball was found on the roadway through the **pitch pine woodland** in April, and looked like it could have been regurgitated by a domestic cat after grooming. This would not be unlikely, as a residential neighborhood is nearby. White-tailed deer are common about the preserve. Adult white-tailed deer, as well as signs of their activity such as scat, browsed plants, and fur, were observed here in April, May and June, in the **white oak woodland** and along the edge of the **pasture** and **black oak woodland.**

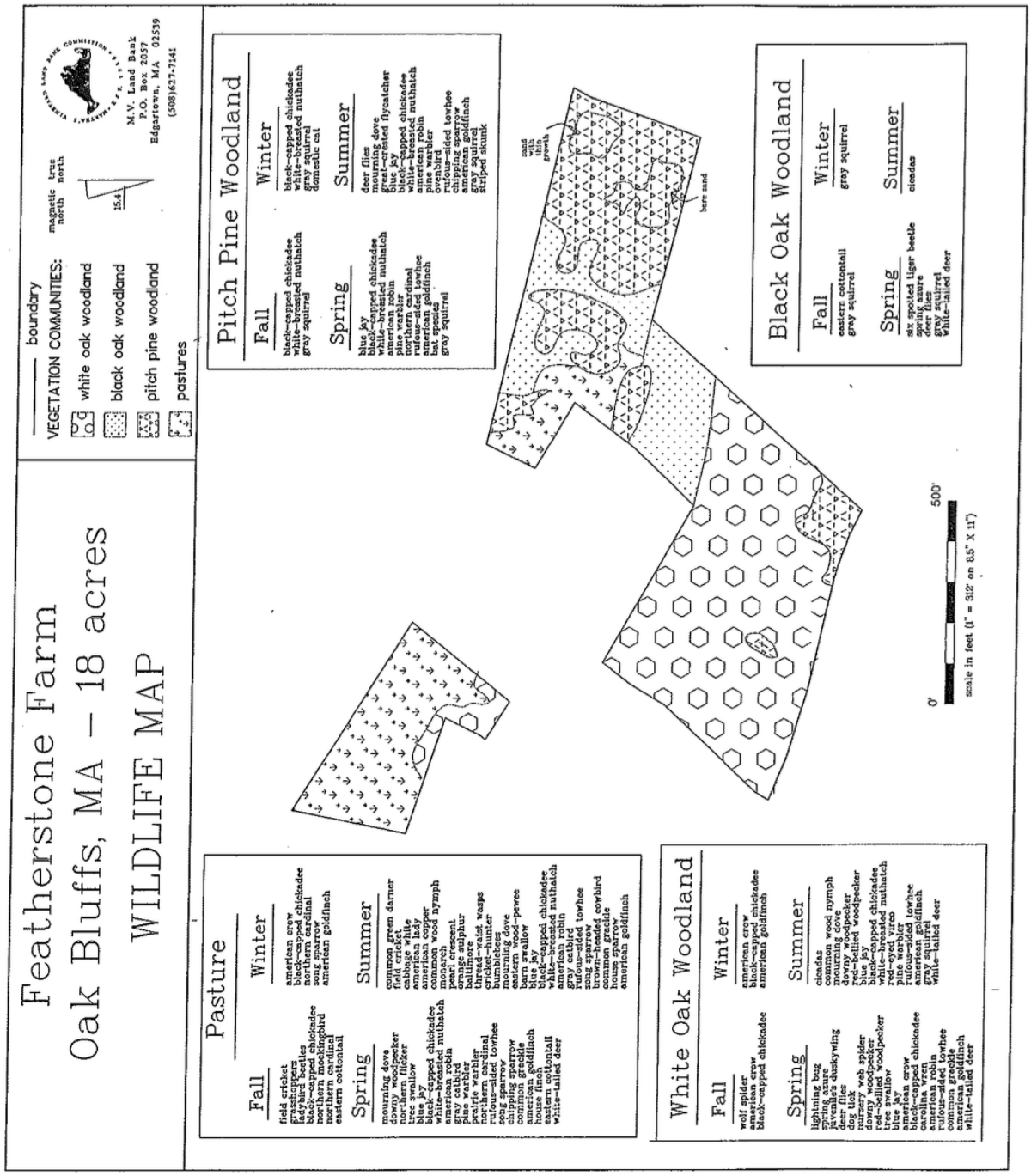
Map 8: Vegetation Map

Featherstone Farm, Oak Bluffs, MA



Map 9: Wildlife Map

Featherstone Farm, Oak Bluffs, MA



Map 10: Avian Inventory Map

Featherstone Farm, Oak Bluffs, MA

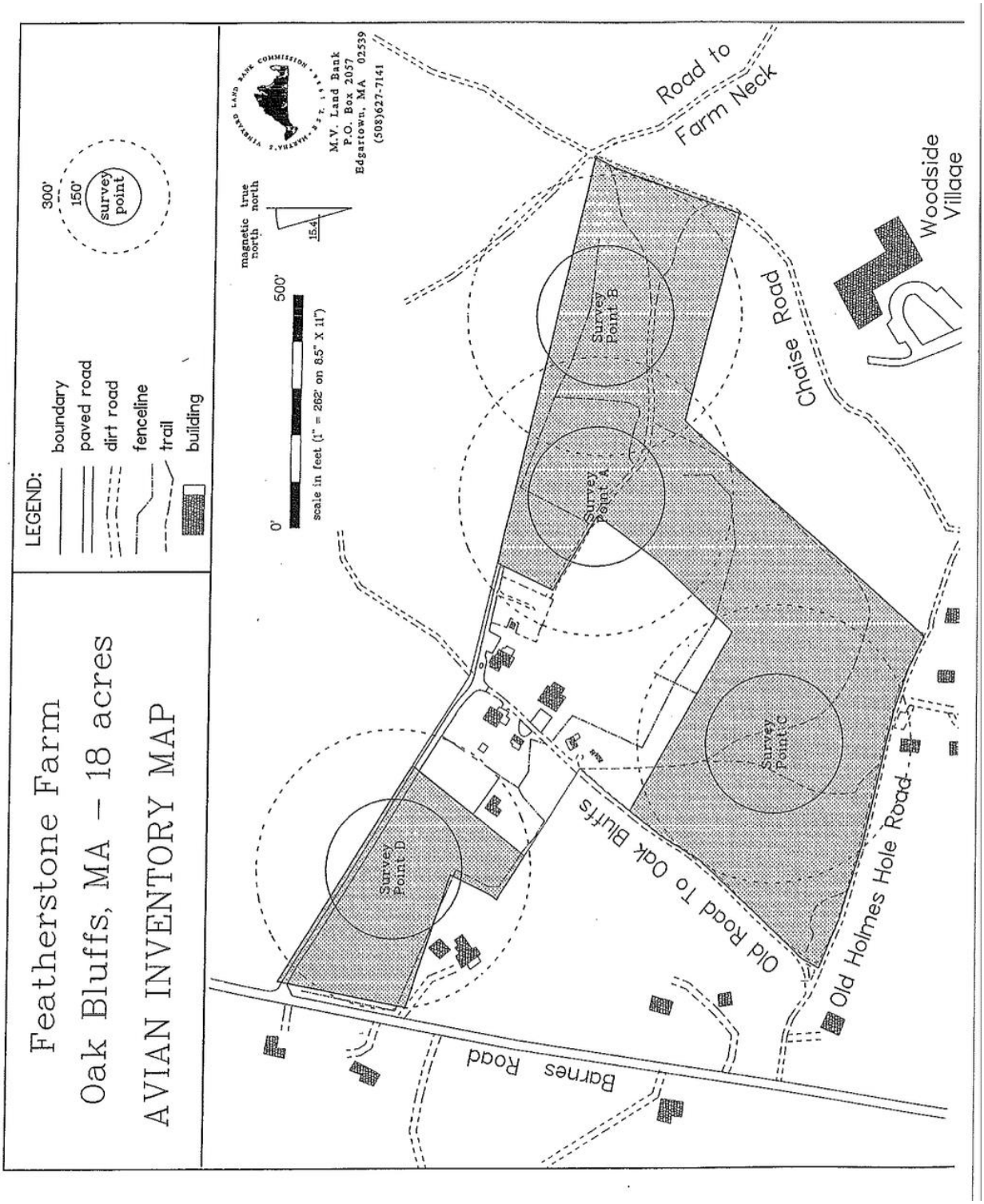


Table 7. Suitable Mammalian Habitat

Featherstone Farm, Oak Bluffs, MA

mammal species		oak woodlands	pitch pine woodland	pastures
masked shrew	*Sorex cinereus*	br, for, win	br, for, win	br, for, win
northern short-tailed shrew	*Blarina brevicanda*	br, for, win	br, for, win	br, for win
eastern mole	*Scalopus aquaticus*	br, for, win		br*, for*, win*
Keen's myotis	*Myotis septentrionalis*	br, for, rst	br, for, rst	for
[redacted]	*[redacted]*	br, for, rst	br, for, rst	for
silver-haired bat	*Lasionycteris noctivagans*	br, for, rst	br, for, rst	for
eastern pipistrelle	*Pipistrellus subflavus*	br, for*, rst	br, for*, rst	**for***
big brown bat	*Eptesicus fucus*	br, for, rst	br, for, rst	for
red bat	*Lasiurus borealis*	br, for, rst	br, for, rst	
hoary bat	*Lasiurus cinereus*	for, rst	br, for, win	for
eastern cottontail	*Sylvilagus floridanus*	br, for, win	br, for, win	**br*, for*,** win
eastern chipmunk	*Tamias striatus*	br, for, win	br, for, win	
eastern gray squirrel	*Sciurus carolinensis*	**br*, for*,** win*	**br**, for, win	
white-footed mouse	*Peromyscus leucopus*	br*, for*, win*	br, for, win	br, for, win
meadow vole	*Microtus pensylvanicus*	br, for, win	br, for win	br*, for*, win*
norway rat	*Rattus norvegicus*		for, win	for
house mouse	*Mus musculus*		br, for, win	br, for, win
meadow-jumping mouse	*Zapus hudsonius*	br, for, win	br, for, win	br, for, win
woodland jumping mouse	*Napaeozapus insignis*	br, for, win	br, for, win	
raccoon	*Procyon lotor*	br, for, win	br, for	
striped skunk	*Mephitis mephitis*	br, for, win	br, for, win	br, for
river otter	*Lutra canadensis*	br, win	br, win	
white-tailed deer	*Odocoileus virginianus*	**br, for,** win	br, win	**br, for**

3. Rare and Endangered Species

Although general plant and wildlife inventory data are addressed above in this plan, a separate section on rare and endangered species is warranted. Focus on rare and endangered species is important as a meter for the most sensitive qualities of the land's ecological communities as well as a description that helps encompass the full range of biological diversity.

According to the commonwealth's Natural Heritage and Endangered Species Program, Featherstone Farm is not presently recognized as a "priority site of rare species habitats and exemplary natural communities", nor does it contain "estimated habitats of rare wildlife and certified vernal pools" (MA NHESP, 1997). The **Rare Species Maps** show the property in relationship to other near-by, priority habitats. Featherstone Farm does have the potential to be used by state-listed, rare species as foraging habitat during the breeding season (i.e. foraging rare turtles).

The following state-listed rare species are documented for the town of Oak Bluffs in similar habitats to those at Featherstone Farm:

common name	scientific name	protection status
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern

Neither of the two species of rare plants listed as occurring in similar habitats in Oak Bluffs *is* present at Featherstone Farm. Although not found here, one rare plant species is present in the dry, open grasslands of the nearby Trade Wind Fields Preserve and the Felix Neck Wildlife Sanctuary. Suitable habitat is present here for this plant (MA NHESP, 1985a), but only its congener was observed at the preserve in the open sandy areas within the pitch pine woodland community. Although suitable habitat also exists for another rare plant in these same open sandy areas (MA NHESP, 19856), not a single *species* of blue-eyed grass has been observed at Featherstone Farm.

Two rare invertebrates documented above have not been observed at Featherstone Farm. Suitable habitat for one of rare invertebrates, large and showy invertebrate, is present in the oak and pitch pine woodlands here (Covell, 1984), but no individuals have been observed to date. The other rare invertebrate is found in open, sandy or grass-free areas at Katama Plains, Edgartown (Braker, 1987), and at Trade Wind Fields Preserve, Oak Bluffs. This rare invertebrate is described as a sandplain grassland species found in open, nonvegetated areas such as the sandy ecotonal edges of pine forests, and as living in association with bearberry *(Arctostaphyllos uva-ursi),* with which it is cryptic (BEC, 1988). Although sandy ecotonal edges of pine woodlands occur at Featherstone Farm, bearberry is not found here. Thus, suitable habitat for this rare invertebrate does not occur here. However, a congener, the six-spotted green tiger beetle (*Cicindela sexguttata)* (Milne and Milne, 1989), was observed along a narrow woodland path in the black oak woodland in late June.

A rare turtle species has not been observed on the property. Suitable breeding habitat exists on the property in the loose, sandy soils in the pitch pine woodland and along the edges of the grassy pastures, and foraging habitat exists on the property in the oak and pine woodlands, with dense, fruiting shrub understories (MA NHESP, 1994). It is unlikely that these turtles are found at Featherstone Farm due to the residential nature of the surrounding neighborhood and the presence of a resident population of predatory striped skunks.

The following state-listed rare species are documented at the nearby Felix Neck Wildlife Sanctuary in similar habitats to those at Featherstone Farm:

common name	scientific name	protection status
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern
[Redacted]	*[Redacted]*	special concern

Two rare moths can be found in oak and pine forest (MA NHESP, n.d.a.; MA NHESP, n.d.b.), although one prefers pitch pine-scrub oak barrens habitat (MA NHESP, n.d.b.), which is found at Featherstone Farm. The larvae of the one of these rare moths feed on several species of oaks (Covell, 1984; MA NHESP, n.d.b.). Featherstone Farm provides suitable habitat for these species, although neither has been noted here to date. The other rare moth feeds on milkweeds in its larval stage (Covell, 1984). Although Featherstone Farm hosts two milkweed species, they are both uncommon here. Thus this very localized food source provides a low quality habitat for this moth.

Although a pair of breeding rare birds lives at the Felix Neck Wildlife Sanctuary, these birds do not breed at Featherstone Farm, nor have they been seen here. Structures exist in the nearby that would provide suitable nesting habitat (MA NHESP, 1995), and artificial nest boxes could be provided. Although some foraging habitat exists here in Featherstone Farm's three acres of pastures, the extensive salt marsh habitat present around Sengekontacket Pond at Felix Neck is not available here. Thus, the amount of foraging habitat at this location may be limiting for this species.

C. Cultural Characteristics

1. Land Use History

The human occupation of Featherstone Farm began with the Wampanoag Tribe. The southern aspect of its wooded slope, its proximity to Sengekontacket and Lagoon Ponds and the calm waters of Vineyard and Nantucket Sounds, and, for Martha's Vineyard, its relative shelter from winter winds may have made Featherstone Farm a good place to spend the winter. At some point in the seventeenth or eighteenth centuries, ownership changed from Indian to English hands. The deeds for this transfer, and any transfer in these centuries, are difficult to trace.

But in 1828, Benjamin Davis of Edgartown and Ephraim Norton sold land to Shubael Norton which likely included or was in the vicinity of Featherstone Farm (Deeds 30/27). In 1843, Davis sold another parcel in the same area, known as "Upper Fields" and described as "pasture and woodland," to Elijah and Darius Norton of Edgartown and Bayes Norton of Tisbury (Deeds 29/237). For $725, Elijah, Darius, and Bayes Norton added to their holdings in 1855 with the purchase of 100 acres of "wood and pasture land" (Deeds 36/501). From these descriptions, it is plain that these Yankee farmers knew that this land wasn't suited for much more than pasture and woodland. The holding at the time extended to the Head of the Lagoon, indicating that Featherstone Farm may well have been part of the modern Bayes Norton Farm.

Somehow over the next 16 years, Darius Norton came to own it all, and then sold it to his nephew, another Bayes F. Norton, in 1871 (Deeds 48-260). In 1890, Elisha T. Smith and George A. Smith paid $250 for at least part of the land, described as "woodland" (Deeds 82/310). Elisha T. Smith of Cottage City sold at least 2 acres of this land to Elisha M. Smith of Cottage City, which by 1885 included buildings (Deeds 75/54). Elisha M. came to own Elisha T.'s share, and in 1892, Elisha M. Smith and George A. Smith swapped their lands (Deeds 88/162; 88/164). Elisha Smith sold his portion, about 12 acres including buildings, to Mary Fortier of New Bedford in 1919, and George Smith sold his share to Walter Taylor in 1927(Deeds 150/33; 174-411). George Young of Newton, Massachusetts bought both these portions, from Mary Fortier in 1924 and Walter Taylor in 1929 (Deeds 159/496; 179/70).

Over the following years the various Featherstone lots changed hands several times - to Sidney and Elsie Hudson, William and Mary Guerin, Goodale Construction Company, Charles Bannerman, Ann Bannerman Qater Ann Bowers), and finally Ann Bowers to William H.Y. Stevens (Deeds 212/125, 228/592, 232/3, 236/516, 255/249, 255/515, 257/277, 268/398, 268/403, 272/233, 371/733). The most significant of these transfers were those involving Goodale Construction Company. Goodale removed the topsoil from the Barnes Road pasture during its tenure- as owner (Stevens 1998). The name "Featherstone Farm" arose in connection with a town of the name Featherstone in England (Vance 1998).

The Stevens family bought the farm from Ann Bowers (formerly Bannerman) in 1980 (Deeds 371/733). During Bannerman's ownership, shows were held in the horse ring. The Stevens family, however, concentrated on horse breeding. With the purchase of land and buildings came a cancerous dog and two cancerous goats named Anwar and Sadat (Stevens 1998). Featherstone Farm's livestock was not confined to horses, goats,

and dogs, though. The Stevens family also raised pigs, chickens, and 42 Muskovy ducks, which were eventually sold in exchange for slaughtering the pigs. Chickens lived in the chicken coop, which later became a mother-in-law house.

The Bannermans began burying the horses in the front pasture, a tradition continued by the Stevens', although they discontinued placing tombstones over the buried beasts. The Bannermans did (Stevens 1998.) Featherstone Farm included its present structures plus a "passion pit," used to breed horses (Stevens 1998).

On August 9, 1996 William H.Y. Stevens sold 18 acres of Featherstone Farm to the Martha's Vineyard Land Bank Commission. The way in which Featherstone Farm was purchased is unique and worth noting. Mr. Stevens set up a charitable remainder trust in which the price paid by the Land Bank was placed. Mr. Stevens is the first seller of property to the Land Bank to use such a vehicle.

2. Planning Concerns

No portion of this property contains wetlands or is within 100 feet of a wetland. Activities at Featherstone Farm are therefore not subject to review by the Oak Bluffs Conservation Commission. Activities are subject to review, however, by the Martha's Vineyard Commission. Featherstone Farm is included in the District of Critical Planning Concern designated on May 14, 1998. Concerned about development in this wooded region, the Martha's Vineyard Commission created the District to closely regulate development in the area. The decision is attached as Appendix H to this plan. The decision gives the Town of Oak Bluffs one year to develop a Resource Management Plan for the District. The Resource Management Plan will specifically address:

1) assessment of the natural and cultural resources of the District;
2) protection of drinking water and adjacent surface water resources;
3) identification and preservation of cultural and historical sites and values;
4) enhancement of recreational opportunities of both and active and passive nature;
5) consideration of the preservation of woodland landscape and habitat fragmentation issues as well as other land use impacts to habitats;
6) recognition of construction and landscaping limitations inherent in the soils and topography of the District;
7) consideration of alternative methods of development including flexible siting and cluster development in order to meet the goals of the District.

Regulations and a Site Review Committee will be developed for the District (MVC 1998). Although the Martha's Vineyard Commission and a Site Review Committee for the District may want to review the Featherstone Farm Management Plan, it is unlikely that any element of the Land Bank plan will run counter to the guidelines for the District.

3. Abutters

The following is a list of those owning property within 200 feet of Featherstone Farm.

Table 8. List of Properties Abutting or Within 200 Feet of

Featherstone Farm, Oak Bluffs, MA

Map	Lot	Owner Name	Owner Address	Number on Abutters Map
41	6	The Meetinghouse of Martha's Vineyard, Inc.	P.O. Box 2523 Vineyard Haven, MA 02568	1
41	2	Douttiel, Nancy and Arlene Bodge	RR3, Box 100 Vineyard Haven, MA 02568	2
41	8	Burns, Padriac and Kawai Ikuko	9 Downing Street Brookline, MA 02146	3
41	7	Woodside Village, Inc.	RFD Box 50A Vineyard Haven, MA 02568	4
41	7.1	Island Elderly Housing, Inc.	RFD Box 50A Vineyard Haven, MA 02568	5
50	22	Kelly, Richard J. and Patricia A.	P.O. Box 1606 Vineyard Haven, MA 02568	6
50	21	Blakesley, Patricia L.	RR3, Box 91-A Vineyard Haven, MA 02568	7
50	10	Reis, Lewis J. and Deborah A.	P.O. Box 199 Oak Bluffs, MA 02557	8
50	9	Seklecki, Daniel T. and Catherine D. McDonald	P.O. Box 455 Vineyard Haven, MA 02568	9
50	2.3	Dourian, Stephen H.	Katama Drive, RFD 216 Edgartown, MA 02539	10
50	2.2	Mackellar, Dianne	P.O. Box 2287 Vineyard Haven, MA 02568	11
50	2	Dunn, James E. and Patricia L.	P.O. Box 838 West Tisbury, MA 02575	12
41	5	Bullock, Samuel C. and Gloria W.	7141 Lincoln Drive Philadelphia, PA 18105	13
41	9	Meisner, Alice Cynthia and Janet Heather Wansack	P.O. Box 1081 Edgartown, MA 02539	14
41	4	Covina, Alfred C. and Olga	P.O. Box 984 Oak Bluffs, MA 02557	15
40	1.1	Silva, Elio G.	RR3, Box 98-A Vineyard Haven, MA 02568	16
40	1.3	Greer, Rebecca E. and James C.	P.O. Box 2535 Oak Bluffs, MA 02557	17
41	1.1	Litchfield, Robert W. and Patricia A.	P.O. Box 405 Edgartown, MA 02539	18
41	3	Cotterell, Ian I. and Sandra E.	810 Parker Street Boston, MA 02120-3022	19
40	1	Pachico, Shirley	P.O. Box 1266 Oak Bluffs, MA 02557	20
50	8	Shelley, William J. and Beatrice L.	P.O. Box 457 Oak Bluffs, MA 02557	21

4. Existing Use and Infrastructure

By far, the most significant existing use of Featherstone Farm does not occur on Land

Bank property. This is the use of the interior six acres and buildings by Meetinghouse of Martha's Vineyard, Inc.. Featherstone Meetinghouse for the Arts consists of six acres and nine buildings. Formerly, these were four houses, two barns, two sheds, a brick oven kiln, and a chicken coop. Now they house offices, workshops, darkrooms, studios, and the property caretaker. Meetinghouse has converted a horse barn into an arts workshop, housing studios for pottery, screen printing, drawing, watercolors, weaving, stained glass, and a darkroom. Signs bearing names of the barn's former occupants - horses - hang above the doors, and each stable has been converted into its own individual studio. The lawn east of the workshop forms a natural amphitheatre, ideal outdoor performance space. And the property is dotted with bathtubs (horse drinking troughs), since converted to flowerbeds.

There are a number of existing uses on the Land Bank portion of Featherstone Farm, outlined below and indicated on the accompanying **Existing Use Map.**

1) Trails, Roads, and Ancient Ways

Featherstone Farm is flanked and crossed by trails, roads, and ancient ways. Old Holmes Hole Road forms the southernmost boundary and the Chaise Road the easternmost. The northeast corner occurs at the intersection of the Chaise Road, the Road to Farm Neck, and one of the Featherstone trails. The driveway forms slightly less than half the northern boundary, and Barnes Road forms the westernmost. Another ancient way, the Old Road to Oak Bluffs is the western boundary of the southern, wooded portion of Featherstone, and runs northeast, beneath limbs and between banks, straight through the Meetinghouse parcel and on into Webb's Campground. A farm road runs from the parking lot to the eastern boundary. Horses, deer, and hikers have created a number of paths through woods.

2) Horse Ring

The pitch pines occupying the easternmost portion of the property grow in what once was a horse show ring. Scattered piles of splintered wood are what remains of the grandstand. Patches of bare sand and piles of topsoil are what remains of the ring.

3) Fencing

Wire fencing is found throughout Featherstone Farm. Even individual trees have been fenced in, to prevent horses from devouring the fruit.

4) Drinking troughs

White drinking troughs for horses are scattered throughout the property.

5) Pastures

The field along Barnes Road and the field behind the parking lot have been used for pasture.

6) Horse Graveyard

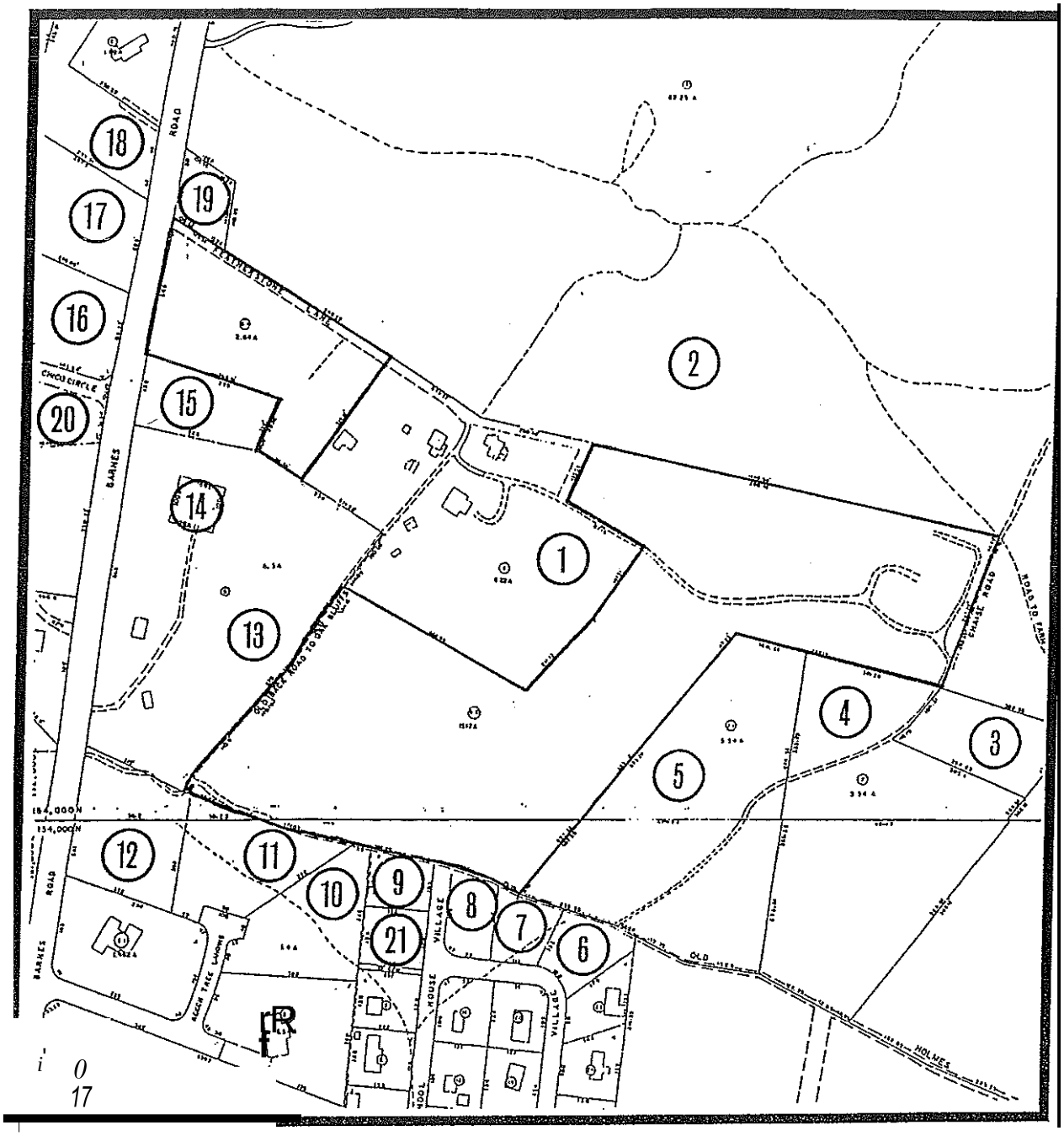
A section of the Barnes Road pasture was used for the burial of horses and other animals.

5. Views

Sunset is a fine time to visit Featherstone Farm for the view. From the top of the pasture, one can watch the sun sink below the wooded western hills, its final rays setting upon the blades of pasture grass. The view from Barnes Road is lovely, even to cars passing by at 35 miles per hour. Various vantage points on Land Bank and Meetinghouse property offer interior views of the property. The view into the pitch pine stand to the east of the rear pasture can be dramatically improved with thinning and pruning. Standing on the northeastern corner of Featherstone Farm, at the juncture of the Chaise Road and the Road to Farm Neck, one can gaze east, beneath the canopy, through oak stems, deep into the woodlands beyond.

Map 11: Abutters Map

Featherstone Farm, Oak Bluffs, MA



II. Inventory Analysis

A. Constraints & Issues

1. Ecological Context

Featherstone Farm lies amidst the oak woodlands, pasture, farmland, and residential development recently designated a District of Critical Planning Concern by the Martha's Vineyard Commission. Situated between Lagoon Pond and Sengekontacket Pond, Featherstone Farm is part of the last large tract of undeveloped land in the Town of Oak Bluffs. It is important because it is one end of the last large, unfragmented piece of forest in Oak Bluffs. Its conservation is helpful to interior species who require unbroken tracts of forest. Its conservation helps protect groundwater aquifers and nearby ponds.

Yet no endangered species have been found here. No wetlands are found here. The oaks and pitch pines at Featherstone Farm are ubiquitous on Martha's Vineyard. Featherstone Farm's most outstanding and important ecological characteristic is the mere fact that it is open land.

2. Natural Resource Concerns

Invasive Plants

There are many alien plant species (plants that do not naturally occur in Massachusetts) at Featherstone Farm. Only five are also considered to be invasive species. An invasive plant species is one that is able to outcompete and displace native species and can even significantly alter the composition of natural vegetation communities (Somers 1996). Although often well established at a site, the commonwealth recommends that they be restricted from sale or importation into Massachusetts (Somers 1996). The five invasive plants found here include:

Japanese barberry	*uncommon along pasture edges;*
oriental bittersweet	*uncommon in black oak and pitch pine woodlands and pastures where a few scattered patches are dense but cover small areas;*
autumn olive	*uncommon on edge of path through the easternmost pasture and pitch pine woodland;*
Japanese honeysuckle	*common in the pitch pine woodland where it has densely covered edges of the heathland opening and uncommon in the pastures; and*
multiflora rose	*uncommon along pasture edges.*

All these species are rapidly spread by frugivorous birds that forage on the berries and then

defecate while perched on fences, trees and shrubs along pasture and woodland edges. The most rapidly invading of these species - oriental bittersweet and Japanese honeysuckle - are vines that can quickly smother surrounding vegetation, from herbaceous plants to shrubs and trees. A sixth plant, hedge-mustard, is not previously recorded on Martha's Vineyard (MVSRP, 1997) and was most likely brought here as seeds in the fill used in repaving the driveway. It is a robust 4' tall plant that occurs only along this roadside and did not occur here in 1997, but was noted in 1998. It is not currently listed as an invasive plant, but could possibly become one; little is known about this plant on Martha's Vineyard.

Predation by Domestic Animals

Although domestic cats and dogs have not been regularly seen on the property, the close proximity to residential neighborhoods suggests that there is a potential for significant impact from predation by domestic animals on groundnesting and foraging wildlife. Control measures are difficult to implement, but leashing, impoundment, and fines provide ways to reduce predation on wildlife on the property.

3. Sociological Context

Although in the least developed part of Oak Bluffs, Featherstone Farm is in the most developed town on Martha's Vineyard. Its proximity to nearby neighborhoods, senior housing, and the regional high school offers opportunity for all these people to enjoy Featherstone Farm. In addition, arts programs at Featherstone Meetinghouse for the Arts are likely to draw people from across the island and these nearby communities in particular. Featherstone Farm may be a destination itself, a pleasant way to walk to a Meetinghouse function, or a starting point for a longer hike.

4. Neighborhood Concerns

Land bank staff considers the concerns of neighbors as part of the planning process. In particular, neighbors have expressed concern about the potential for trespassing, increased traffic, trail location, and disturbance of private cemeteries. The Land Management Planning section of this management plan attempts to address these concerns. Neighbors have the opportunity to express concerns to Land Bank staff at any time, but also at regular meetings of the Land Bank Commission and at the Oak Bluffs Town Advisory Board public hearing on this management plan.

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. This "shared-use" policy strives to provide a mix of public benefits, ranging from low-impact recreation and aesthetics to wildlife conservation and watershed protection. Protection of natural resources is the Land Bank's highest priority, yet a "shared-use" policy demands balancing the use of natural resources with protection of the same. The Land Bank endeavors to manage the public resources sustainably. Balancing use and protection **is** the essence of conservation.

2. Goals at Purchase

Whenever the Land Bank Commission acquires land, it and the town advisory board of the town which the land is in draft a set of goals for the property. These goals serve as guidelines for staff in preparing the plan, and may be modified after study of the property. The Land Bank Commission and Oak Bluffs Town Advisory Board adopted the following management preliminary management goals on March 11, 1996.

Featherstone Farm – Preliminary Management Plan

Nature Conservation Goals

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 and encourage their populations.

Primary Production Goals

1. Consider the development of a farm plan which will allow leasing of land for pasturing, crops and/or other agricultural or silvicultural uses.
2. Maintain the property as a “no-hunting” area.

Recreational Goals

1. Choose appropriate site for trailhead, with preliminary interest in the creation of a joint parking area with the Meetinghouse of Martha’s Vineyard, if joint arrangements are made, five spaces will be reserved for land bank visitors and the land bank will share parking and road maintenance costs on a fair-share basis to be formalized in an agreement.
2. Open property for hiking, non-motorized biking and horseback-riding; maintain existing trails and install new trails, as needed and appropriate.
3. Work to connect property with other conservation areas by means of the planned Cross-Oak Bluffs Trail and other trails.
4. Permit construction of a paved bicycle path along the Barns Road frontage, if sensitively sited and if part of a larger community plan to create a bicycle path along this road.

Administrative Goals

1. Oversee and police the property on a regular basis in order to maintain property as an attractive conservation area.
2. Complete management plan before December of 1977.

3. Opportunities

Featherstone Farm offers a number of opportunities for use of the property. This section considers each opportunity, but does not recommend any. Staff recommendations follow in the Land Management Planning section.

Agriculture Featherstone Farm's two pastures are immediately available for agricultural use.
Pastureland is limited in Oak Bluffs and space to graze animals would likely be welcome. Gardening and Christmas tree culture are other potential uses of the space. Leasing agricultural space must conform to Land Bank agricultural lease policies. Farmers should refer to the plan Soil and Water Conservation Plan attached as Appendix F.

Bird-watching The best places for birding at Featherstone Farm are the woodland and pasture edges. In particular, walking east along the trail from the parking lot brings one to the confluence of pasture, pitch pines, and oaks. Birds using each of these habitats can be observed from this vantage point.

Hunting Featherstone Farm has game aplenty. It is also a relatively small piece of property, with plenty of neighbors, including children and senior citizens who will likely walk to art classes through the woods. Hunting would pose serious safety concerns. Pursuing wounded animals could create conflicts as well.

Picnicking Featherstone Farm is a decent place for a picnic but Featherstone Meetinghouse for the Arts is better. The Meetinghouse grounds are most inviting for this type of use. Picnics pose potential problems, such as litter and attraction of undesirable wildlife. Litter can be reduced through periodic cleanups and posting explanatory signs.

Stargazing Featherstone may be an attractive place for stargazing, although in some directions views are obstructed with buildings and trees. Stargazing itself does not pose problems, but nighttime use may be of concern to neighbors.

Trails Featherstone Farm is a great place to hike in, into, or out of. The ancient ways bordering Featherstone Farm make it a starting point for a longer hike. Trails on the property itself offer views of the Meetinghouse grounds, curious trees, and deep subcanopy views into the southern woodlands of Oak Bluffs. Trails can be open to biking and horseback riding, but erosion and conflicts could result if such use is heavy. Segregating pedestrians, equestrians, and bicyclists may be necessary if conflicts arise.

Views Featherstone Farm's four best views are 1) of the sunset from the buildings; 2) of the farmhouse from Barnes Road; 3) the long, penetrating view into the woods from the Chaise Road boundary; and 4) views of the Meetinghouse grounds. Views into the pitch pine stand can be improved by thinning and pruning.

Winter sports Featherstone's trails make for good cross-country skiing and the Barnes Road pasture makes for good sledding. The front pasture is sloped *so* that the steepest part is farthest from the road, leaving plenty of room to glide to a stop or bail out before hitting the fence. The fence will prevent anyone from sliding into Barnes Road. Potential problems are the falls and bumps typical of these sports.

Table 9: Universal Access Plan Compliance Checklist

Featherstone Farms, Oak Bluffs, MA

Objective Number	Description	Expected degree of compliance	Reasons for non-compliance
1	ROS category	100%	none
2	solicit opinion	100%	none
3	inform public	100%	none
4	parking	100%	none
5	toilets	0%	accessible toilets at Meetinghouse
6	more-developed trails	100%	none
7	less-developed trails	100%	none
8	facilities	100%	none
9	chemicals	100%	none
10	site information	100%	none

4. Universal Access

The Land Bank's *Universal Access Plan* outlines universal access goals for the organization and considerations to be made for each property (Universal Access Committee, 1997). Featherstone Farm has been examined using the Recreation Opportunity Spectrum (ROS), a model designed by the U.S.D.A. Forest Service. Given the proximity of Featherstone Farm to the Island Senior Housing, Featherstone Farm is an especially fitting property to be among the first to be universally accessible. The table below lists features of Featherstone Farm ("primary elements" or "spaces"), their distance from the trailhead, and possible obstacles to making these features accessible. The locations of these features are indicated on the accompanying **Universal Access Map.**

Proposed ROS Classification: more-developed.

Proposed Expectation of Accessibility: moderate.

Table 10. Primary Elements and Spaces

Featherstone Farm Oak Bluffs, MA

Primary Element or Space	Feet from Trailhead	Conflicts for Linking to Trailhead	Likely to Overcome?
1. Sunset view	475	none	yes
2. View from Barnes Road	1050	slope, surface	yes
3. Interior views	various	surface	yes
4. View into southern woodlands	1075	surface	yes
5. Old Road to Oak Bluffs	525	slope, surface	maybe
6. Old Holmes Hole Road	1180	slope, surface	maybe
7. Chaise Road	920	surface	yes
8. Road to Farm Neck	1075	surface	yes
9. Sign station at trailhead	0	none	yes
10. Access to Meetinghouse facilities	160	surface	yes
11. Access to elderly housing	1440	surface; property boundaries	maybe

III. Land Management Planning

This final section of the management plan states goals for Featherstone Farm and outlines strategies for achieving them. This plan is designed to fit within the ecological and sociological constraints defined previously. The plan addresses five areas of planning concern: nature conservation, recreation and aesthetics, natural products, community interaction, and land administration. The order in which goals, objectives, and strategies are placed is not meant to imply any priority.

A. Nature Conservation

Goal: **Provide long-term protection for plants, animals, and natural processes occurring at Featherstone Farm.**

Objective 1: Protect endangered species.
Strategies:

A. Continue to observe species on the property during regular property checks.
B. If an endangered species is found, develop strategy to protect it.

Objective 2: Discourage invasive plants including but not limited to oriental bittersweet (*Celastrus orbiculatus),* Japanese honeysuckle (*Lonicera japonica)*, Russian olive (*Eleagnusspp.)*, common speedwell (*Veronica officinalis*), hedge mustard (*Sisymbrium officianale),* and, in certain places, poison ivy (*Toxicodendron radicans).*

Strategies:

A. Gradually reduce populations of invasive plants by cutting or digging them out.
B. Explore other control methods.

Objective 3: Allow pitch pine to naturally colonize patches of bare sand within the pitch pine stand.

Strategies:

A. Use split-rail fencing if necessary to prevent further disturbance of the bare sand areas.
B. If colonization of sand patches by pitch pine is not significant after five years, consider adding topsoil and fertilizer and transplanting pitch pines.

Objective 4: Favor promising trees in pitch pine stand.
Strategies:

A. Conduct a low thinning in dense stands of pitch pines; favor vigorous and remove weak.
B. Favor trees with live crown ratio of 1/3 or greater (live crown ratio is the ratio of the length of stem with live branches to the entire height of the tree).
C. Remove felled trees from stand; remove branches or create brush piles for wildlife.
D. Allow at least three snags per acre to stand for wildlife habitat.

Objective 5: Maintain pastures in grassy condition.

Strategies:

A. If pastures are not leased for agricultural use, mow during the growing season but not between mid-May and mid-July.
B. Control woody plant succession by cutting or digging out encroaching woody vegetation.

B. Recreation and Aesthetics

Goal: **Allow limited, low-impact recreational use of the area for hiking, horseback riding, non-motorized biking, and cross-country skiing provided these uses do not preclude attainment of nature conservation objectives. Maintain attractive views and landscapes.**

Objective 1: Maintain trailhead in conjunction with Meetinghouse of Martha's Vineyard, Inc.

Strategies:

A. Reserve five parking spaces for Land Bank visitors, including at least one universally accessible space. These parking spaces are on Meetinghouse property.
B. On Land Bank property immediately adjacent to parking area, construct trailhead sign station to post maps, information, and rules.
C. On Land Bank property in location shown on **Site Management Map**, provide bicycle racks to accommodate ten bicycles.
D. Work with Meetinghouse to resolve potential parking conflicts during Meetinghouse events.

Objective 2: Construct and maintain a recreational trail system.

Strategies:

A. Maintain trail in location as approximately shown on the **Site Management Map**. Trail corridors will be six feet wide and eight to ten feet tall. Trail treads will be approximately sixteen inches wide and free of rocks and stones where practical. Install erosion control measures (e.g. waterbars and ditches) where needed. Mark trails with colored markers.
B. Create trails in compliance with guidelines in Land Bank's *Universal Access Plan.*
C. Allow use of the trails by non-motorized bicycles and equestrians. Allow Land Bank staff discretion to create alternative trails for these uses or restrict these uses if significant erosion or conflicts develop.
D. In compliance with the *Universal Access Plan*, install small, primitive wooden benches at appropriate intervals and in appropriate locations.
E. Consider items presented in Table 10 indicated on **Universal Access Map** to be "primary elements or spaces."
F. Allow Land Bank staff the discretion to relocate trails.
G. Permit construction of a paved bicycle path along the Barnes Road frontage, if sensitively sited and if part of a larger community plan to create a bicycle path along this road.
H. Strive to protect aesthetic characteristics of existing ancient ways (e.g. road beds, cut banks).

Objective 3: Maintain attractive views from several vantage points and maintain an attractive overall appearance of the property.

Strategies:

A. Maintain views described in plan by trimming or cutting encroaching vegetation.
B. Provide an aesthetic view into pitch pine stand by thinning of stand and pruning of selected vigorous trees up to a height of 12 feet.

C. Repair wire fencing along Barnes Road.
D. Maintain Barnes Road frontage, driveway, trailhead, and trails in an attractive condition through periodic mowing and cutting of vegetation.
E. Plant vegetative screening along southwestern edge of Barnes Road pasture.

C. Natural Products

Goal: Encourage the agricultural use of Featherstone Farm; do not allow hunting.

Objective 1: Lease the pastures for agricultural use.
Strategies:

A. Seek lessee to use both pastures for horses, sheep, goats, or cattle.
B. Ensure compliance with Soil and Water Conservation plan (Appendix F).
C. Monitor condition of pasture grasses to ensure pasture is not overgrazed.
D. Reduce grazing intensity or rotate pastures if necessary.
E. If proper pasture grasses for the type and number of animals proposed to be pastured is present in insufficient amounts, sow the necessary amount and type of grass seed.
F. If leased for pasture, install fencing to enclose animals and exclose visitors. Use split-rail or wire fencing along Barnes Road and wire fencing elsewhere. Also install fencing if necessary to prevent erosion or damage to plants.
G. If fencing is installed, install gates of sufficient width to allow tractors and equipment to enter the pasture.
H. Entertain other agricultural proposals (e.g. hay, Christmas tree culture, organic gardening) for the pastures if no suitable pasture arrangement can be made.
I. Allow lessee to convert some woodlands to pasture or field. Conversion must be approved by the Land Bank Commission and may require permission of the Martha's Vineyard Commission.

Objective 2: Do not allow hunting on the property.
Strategies:

A. Post the property as a no-hunting property.
B. Identify the property on the Land Bank map as one that does not allow hunting.
C. Check property during hunting season for violators.

D. Community Interaction

Goal: Provide helpful and interesting information about the property for visitors.

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

A. Include the property on Lank Bank map as a universally accessible property; provide directions.
B. Maintain Land Bank logo marker on Barnes Road.
C. Limit trespassing by marking boundaries as trails reach them.
D. Limit trespassing by providing hand-held trail maps at sign station.
E. Post map of property and trails on sign station.

Objective 2: Provide useful and interesting information about the property and its surroundings.
Strategies:

A. Install a sign station at the trailhead for posting information about animals, plants, and natural processes occurring on the property.

B. Install directional signs identifying ancient ways at the northeastern corner of property.
C. Maintain copies of plan at Land Bank office, Oak Bluffs Library, Oak Bluffs School, Martha's Vineyard Regional High School, and Oak Bluffs Conservation Commission.

E. Land Administration

Goal: Oversee and police the land on a regular basis; improve condition of property; work to create neighborhood links.

Objective 1: Limit use by maintaining set hours of use.
Strategies:
A. Open property every day of year from one half-hour before sunrise to one half-hour after sunset.
B. Allow nighttime use only with special permission from Land Bank staff.

Objective 2: Improve the condition of the property.
Strategies:
A. Repair or remove wire fencing. Remove metal stakes, rotting lumber, etc.
B. Fill in trenches at eastern end of property.
C. Remove or spread piles of topsoil at eastern end of property.

Objective 3: Keep well-maintained boundaries and monitor for encroachment.
Strategies:
A. Locate corners and walk boundaries annually.
B. Keep photographic record of corners.

Objective 4: Keep good records of all land management activities and natural events.
Strategies:
A. Complete a Land Bank event record for all significant events, natural or anthropogenic.
B. Continue to update plant and animal inventories.
C. Maintain photographic record of landscape appearance.

Objective 5: Employ adequate staff to effectively implement land management goals.
Strategies:
A. Inspect property at least monthly.

Objective 6: Develop good working relationship with neighbors.
Strategies:
A. Work with Meetinghouse, Island Elderly Housing, Martha's Vineyard Regional High School, and other neighbors to establish trail links to Featherstone Farm.
B. Consider neighborhood requests for signs, fencing, screening, etc., to prevent trespass.
C. If necessary, plant screening to prevent trespassing in private cemetery near Barnes Road pasture.

Objective 7: Do not permit commercial use of the property.
Strategies:
A. Define commercial use as "an activity conducted by any private enterprise for the purpose of profit, gain, or the promotion of that enterprise."
B. Require those seeking to use Featherstone Farm for activities not otherwise

permitted by this management plan to seek permission of the Land Bank Commission.

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Appendix A: Deeds and Easements

Featherstone Farm
Appendix A

QUITCLAIM DEED

I, **WILLIAM H.Y. STEVENS**, of P.O. Box 1116, Oak Bluffs, Massachusetts 02557 (the "Grantor") in consideration of the sum of **ONE ($1.00) DOLLAR**, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby grant to **SIDNEY N. TOWLE, JR., INDEPENDENT SPECIAL TRUSTEE of the WILLIAM H.Y. STEVENS AND MARY M. STEVENS CHARITABLE REMAINDER TRUST**, u/d/t August 7, 1996 to be recorded herewith, with an address c/o Sidney N. Towle, Jr., H. C. Wainwright Company, One Boston Place, Boston, Massachusetts 02108 (the "Grantee"),

with *quitclaim covenants*,

the land with the buildings and improvements thereon, located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, more particularly bounded and described as follows:

Property Address: Barnes Road, Oak Bluffs, MA

FIRST PARCEL:

Beginning at a bound at the junction of the Old County Road and the Old Road to Oak Bluffs bounding the Northwesterly side of the Parcel herein conveyed; thence Northeasterly by said Old Road to Oak Bluffs five hundred sixty-nine (569) feet, more or less, to other land now or formerly of Elsie M. Hudson; then South sixty-four degrees thirty-five minutes East (64° 35′) seven hundred ninety (790) feet, more or less, to a bound at land now or formerly of Tobias Kramer; thence South fifty-one degrees eight minutes West (S. 51° 8′ W.) three hundred five (305) feet, more or less, to a bound; thence South fifty-two degrees fifty-five minutes West (S. 52° 55′ W.) three hundred forty-eight (348) feet, more or less, to the Old County Road; thence Northwesterly by said road seven hundred forty-seven (747) feet to the point of beginning; containing nine and seven tenths (9.7) acres. Variation of Transit needle 11° 13′ W.

Being the Third Parcel as set forth in the deed from John R. Young to Sidney J. Hudson and Elsie M. Hudson dated November 1, 1946 recorded with Dukes County Deeds, Book 212, Page 125.

SECOND PARCEL:

Beginning at the Southeasterly corner of said Parcel at the Old Road to Oak Bluffs on the line between said land and land formerly of Darius Norton and later of Harold Webb; thence running Northwesterly by said Webb land twenty (20) rods to a stake and stones; thence running Southwesterly nineteen (19) rods to a stake and stones; thence running Southeasterly twenty (20) rods to a stake and stones at the Old Road to Oak Bluffs; thence running Northeasterly by said road nineteen (19) rods to the point of beginning excepting therefrom that parcel beginning at the intersection of the Old Road to Oak Bluffs with land now or formerly of Harold Webb; thence Northwesterly along said land to a point where the line of an electrified wire fence running from Northeast to Southwest would, if extended, intersect the aforesaid boundary of land now or formerly of Harold Webb; thence Southwesterly along the line of said wire fence to land now or formerly of Mary Guerin; thence Southeasterly along said land to the Old Road to Oak Bluffs (being the same as the third course in the above description); thence along said road nineteen (19) rods, more or less, to the point of beginning (being the same as the fourth course in the above description), with the building thereon used as a beauty parlor; being part of the Second Parcel conveyed by John R. Young to Sidney J. Hudson and Elsie M. Hudson by deed dated November 1, 1946, recorded November 12, 1946 Dukes County Deeds Book 212, Page 125.

THIRD PARCEL:

Land adjacent and contiguous with Parcel Second hereby conveyed, bounded and described as follows:

Beginning at a point on the Easterly side of Barnes Road at the Southerly side of the twenty (20) foot way hereby conveyed as Parcel Fourth; thence Southerly by Barnes Road two hundred eighty (280) feet, more or less, to a pipe bound at land now or formerly of Elsie M. Hudson, thence Southeasterly to other land hereby conveyed as Parcel Second; thence Northeasterly along other land hereby conveyed as Parcel Second, to a rock with yellow mark; thence Northwesterly by the Southerly side of the twenty (20) foot way hereby conveyed as Parcel Fourth four hundred sixty-six (466) feet, more or less, to the edge of the pavement of Barnes Road at the point of place of beginning.

The last course is intended to convey only to the layout of Barnes Road.

2

Being part of the same premises conveyed to Sidney J. Hudson, now deceased, and Elsie M. Hudson by deed of Goodale Construction Co., Inc., dated May 15, 1959, recorded with Dukes County Deeds, Book 236, Page 516.

FOURTH PARCEL:

Beginning at the intersection of Barnes Road and the boundary between land now or formerly of Harold Webb and land formerly of Mary A. Guerin on the Easterly side of Barnes Road; thence Southeasterly by said land of said Harold Webb to land hereby conveyed as Parcel Second; thence Southwesterly twenty (20) feet to other land hereby conveyed; thence Northwesterly by land hereby conveyed as Parcel Third four hundred sixty-six (466) feet, more or less, to Barnes Road; thence Northeasterly by Barnes Road to the point or place of beginning; reserving to Elsie M. Hudson the right to use for herself and her invitees for purposes of ingress and egress the said roadway from Barnes Road to the parcel excepted in the description of Parcel Second above.

Meaning and intending hereby to convey to the Grantee the Fee to the twenty (20) foot right of way, which way was granted to Elsie M. Hudson by Mary A. Guerin by deed dated November 30, 1964 and recorded with Dukes County Deeds in Book 257, page 277.

There is appurtenant to the above-described premises the following easements:

1. To maintain, repair and replace an underground pipe for transmission of water from the Main of the Town of Oak Bluffs located on Barnes Road and to enter on said premises to maintain, repair or replace said underground pipe.

2. To maintain utility service from a pole line extending from Barnes Road over land now or formerly of Elsie M. Hudson and to share in accordance with the number of users, the cost of maintenance of said utility line.

FIFTH PARCEL: (First Parcel of Hudson deed recorded with Dukes County Deeds Book 272, page 233)

Beginning at a point 221 feet, more or less, Southwesterly along the Old Road to Oak Bluffs from the bound therein in the Southerly boundary of land now or formerly of Harold Webb; thence 92 feet, more or less, Southerly along other land now or formerly of Ann McD. Bannerman; thence 104 feet, more or less, Southwesterly along other land now or formerly of Ann McD. Bannerman to the Northwesterly boundary of land conveyed by Elsie M. Hudson to Ann McD. Bannerman by deed dated October 6, 1967; thence Northwesterly along said boundary 130 feet, more or less, to the Old Road to Oak Bluffs; thence Northeasterly along said road 181 feet, more or less, to the point of beginning.

SIXTH PARCEL: (Second Parcel of Hudson deed recorded with Dukes County Deeds Book 272, page 233)

Beginning at the Southeasterly corner of said Parcel at the bound in the Old Road to Oak Bluffs on the Southerly boundary of land now or formerly of Harold Webb; thence running Northwesterly by said Webb land to other land now or formerly by Ann McD. Bannerman; thence running Southwesterly by said other land now or formerly of Ann McD. Bannerman nineteen (19) rods, more or less, to land now or formerly of Mary Guerin; thence running Southeasterly along said land to a stake and stones at the Old Road to Oak Bluffs; thence running Northeasterly by said road nineteen (19) rods, more or less, to the point of beginning, being that part of the Second Parcel conveyed by John R. Young to Sidney J. Hudson and Elsie M. Hudson by deed dated November 1, 1946, recorded November 12, 1946 in Dukes County Deeds Book 212, Page 125, not heretofore conveyed by Elsie M. Hudson to Ann McD. Bannerman.

There is a appurtenant to the above-described premises the following easements:

1. To maintain, repair and replace an underground pipe for transmission of water from the Main of the Town of Oak Bluffs located on Barnes Road and to enter on said premises to maintain, repair or replace said underground pipe.

2. To maintain utility service from a pole line extending from Barnes Road over land now or formerly of Elsie M. Hudson and to share in accordance with the number of users, the cost of maintenance of said utility line.

SEVENTH PARCEL: (Parcel of Charles S. Bannerman deed recorded with Dukes County Deeds Book 255, Page 515)

Beginning at a bound on the road bounding the northwesterly side of this conveyance and northeasterly seven hundred fifty (750) feet from the junction of said road with the Old County Road, thence northeasterly by said first mentioned road two hundred twenty-one (221) feet to a bound; thence south sixty-six degrees and twenty-five minutes East (S. 66° 25′ E.) eleven hundred thirty-one (1131) feet to the Chaise Road so-called; thence southwesterly by said Chaise Road three hundred forty (340) feet to a bound; thence north sixty-four degrees and thirty-five minutes west (N. 64° 35′ W.) four hundred sixty-eight (468) feet to a bound; thence south fifty-one degrees and eight minutes west (S. 51° 8′ W.) forty-eight (48) feet to a bound; thence north sixty-four degrees and thirty-five minutes west (N. 64° 35′ W.) six hundred sixty feet (660); thence northeasterly by

land now or formerly of Elsie M. Hudson 104 ± feet; thence northwesterly 92 ± feet to the point or place of beginning.

Containing 9.25± acres. Being the same premises conveyed to Charles S. Bannerman by deed of Elsie M. Hudson, dated October 26, 1964 and recorded with Dukes County Deeds Book 255, Page 249.

Together with a Right of Way to be in common with Elsie M. Hudson and others now or hereafter entitled over a 20 foot way along the northerly sideline of land now or formerly of Elsie M. Hudson which is located between Barnes Road and the above described premises.

There is appurtenant to the above-described premises the following easements:

1. To maintain, repair and replace an underground pipe for transmission of water from the Main of the Town of Oak Bluffs located on Barnes Road and to enter on said premises to maintain, repair or replace said underground pipe.

2. To maintain utility service from a pole line extending from Barnes Road over land now or formerly of Elsie M. Hudson and to share in accordance with the number of users, the cost of maintenance of said utility line.

The above-described premises are subject to an easement for such portions of the above referred utility line and underground pipe which may cross the land now or formerly of Ann McD. Bannerman to service land now or formerly of Elsie M. Hudson.

Being subject to all easements and encumbrances of record.

Being the same real property with the improvements thereon located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, shown as Lot 1, Lot 2 and Lot 3 on a plan entitled, "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. & Martha's Vineyard Land Bank Commission Scale: 1" = 80' March 27, 1996 Revised: May 9, 1996 Schofield, Barbini & Hoehn, Inc. Civil Engineers & Land Surveyors 97 State Road, P.O. Box 339, Vineyard Haven, MA 02568", recorded with the Dukes County Registry of Deeds as Oak Bluffs Case File No. 327 (the "Plan").

EXCEPTION AND EXCLUSION:

There is excepted and excluded from the above-described property all interests in the land with the improvements thereon previously conveyed in deeds from this Grantor to The

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Meetinghouse of Martha's Vineyard, Inc. and the Martha's Vineyard Land Bank Commission, dated of even date and recorded herewith in the Dukes County Registry of Deeds.

For title, see Deed, dated January 14, 1980, from Ann B. Bowes to the Grantor, recorded in the Dukes County Registry of Deeds in Book 371, Page 733.

EXECUTED as a sealed instrument this 7th day of August, 1996.

William H.Y. Stevens

COMMONWEALTH OF MASSACHUSETTS

~~Dukes~~ County, ss. August 7th, 1996

Then personally appeared the above-named William H.Y. Stevens, and acknowledged the foregoing instrument to be his free act and deed, before me,

Notary Public

My commission expires: 12/27/02

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MARTHA'S VINEYARD LAND BANK FEE

☐ PAID: $

☒ EXEMPT. $0

14054 8/12/96

NO. DATE CERTIFICATION

6

M0037185

QUITCLAIM DEED

SIDNEY N. TOWLE, JR., INDEPENDENT SPECIAL TRUSTEE of the WILLIAM H.Y. STEVENS AND MARY M. STEVENS CHARITABLE REMAINDER TRUST, u/d/t dated August 7, 1996 to be recorded herewith, with an address c/o Sidney N. Towle, Jr., H. C. Wainwright Company, One Boston Place, Boston, Massachusetts 02108 (the "Grantor") in consideration of the sum of **TWO HUNDRED THOUSAND AND NO/100 DOLLARS ($200,000.00)** and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby grant to the **MARTHA'S VINEYARD LAND BANK COMMISSION**, a corporate body politic, with an address of P.O. Box 2057, 167 Main Street, Edgartown, Massachusetts 02539 (the "Grantee"), with ***quitclaim covenants***, a Ninety-Seven and 56/100 percent (97.56%) undivided interest in the real property with the improvements thereon located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, more particularly described as follows:

Property Address: Barnes Road, Oak Bluffs, MA

Being Lot 1 and Lot 3 on a plan entitled, "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. & Martha's Vineyard Land Bank Commission Scale: 1" = 80' March 27, 1996 Revised: May 9, 1996 Schofield, Barbini & Hoehn, Inc. Civil Engineers & Land Surveyors 97 State Road, P.O. Box 339, Vineyard Haven, MA 02568", recorded with the Dukes County Registry of Deeds as Oak Bluffs Case File No. 327 (the "Plan").

The above-described property is conveyed subject to a perpetual easement, appurtenant to Lot 2 as shown on the Plan, to use that portion of the right of way shown as "RIGHT OF WAY - 20 FT. WIDE" on the Plan (the "Right of Way") which crosses Lot 1, for the purpose of accessing Lot 2 as shown on the Plan and for all other purposes for which streets and ways may be used in the

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Town of Oak Bluffs, and the right to maintain the Right of Way in order to so use it.

The above-described property is conveyed subject to and together with the benefit of all easements, restrictions, covenants, rights and other matters of record, including, but not limited to, those easements, rights and restrictions set forth in that certain Agreement of Easements, Restrictive Covenants and Shared Costs and Maintenance and that certain Easement Agreement, both dated of even date herewith, and both executed by and between the Grantee and The Meetinghouse of Martha's Vineyard, Inc. and recorded herewith in the Dukes County Registry of Deeds.

The above-described property is conveyed subject to the express restriction that said property shall be used only for the purposes set forth in Chapter 736 of the Acts of 1985, as amended, all as contained in the Massachusetts General Laws.

For title, see Deed, dated January 14, 1980, from Ann B. Bowes to William H.Y. Stevens, recorded in the Dukes County Registry of Deeds in Book 371, Page 733.

EXECUTED as a sealed instrument this 7th day of August, 1996.

7496A000 12:16 EXCISE TAX
TAX CASH 912.00 912.00
08/12/96
DEEDS REC FB DUKES

Sidney N. Towle, Jr., Independent
Special Trustee, as aforesaid

COMMONWEALTH OF MASSACHUSETTS

~~Dukes~~ County, ss. August 7, 1996

Then personally appeared the above-named Sidney N. Towle, Jr., Independent Special Trustee of the William H.Y. Stevens and Mary M. Stevens Charitable Remainder Trust, and acknowledged the foregoing instrument to be his free act and deed, before me,

Notary Public

My commission expires: 12/29/01

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MARTHA'S VINEYARD LAND BANK FEE
☐ PAID: $
☒ EXEMPT: $ 0
19055 NO. 8/12/96 DATE CERTIFICATION

BK683PG189

EASEMENT AGREEMENT

AGREEMENT made this 9th day of August, 1996, by and between **THE MEETINGHOUSE OF MARTHA'S VINEYARD, INC.**, a Massachusetts non-profit corporation, with an address of P.O. Box 2523, Vineyard Haven, Massachusetts 02568, its successors and assigns (the "Grantor") and the **MARTHA'S VINEYARD LAND BANK COMMISSION**, a corporate body politic, having a principal place of business at P.O. Box 2057, 167 Main Street, Edgartown, Massachusetts 02539, its successors and assigns (the "Grantee").

W I T N E S S E T H

WHEREAS, the Grantor is the owner of a certain parcel of land situated in Oak Bluffs, Massachusetts, shown as Lot 2 on the plan (the "Plan"), entitled "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. & Martha's Vineyard Land Bank Commission Scale 1" = 80' March 27, 1996, Revised: May 9, 1996 Schofield, Barbini & Hoehn, Inc. Civil Engineers & Land Surveyors 97 State Road, P.O. Box 339, Vineyard Haven, MA 02568" recorded with the Dukes County Registry of Deeds as Oak Bluffs Case File No. 327 (the "Grantor's Property"); and

WHEREAS, the Grantor wishes to grant an easement to Grantee, on and subject to the terms and conditions set forth herein and the Grantee wishes to agree to the terms and conditions of the easement set forth herein;

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

(1) The Grantor hereby grants to the Grantee, with quitclaim covenants, a perpetual easement over, under and across the following portions of Grantor's Property (collectively, the "Easement Areas"): (a) the area shown as "TRAIL EASEMENT (10 FT. WIDE)" on the Plan (the "Trail Easement Area"); and (b) that portion of the road shown as "dirt road" on the Plan which runs between the Trail Easement Area and Lot 3, as shown on the Plan (the "Dirt Road"), together with the right to create a trail within the Trail Easement Area, in accordance with the provisions set forth below (the "Trail"), and the right to maintain said Easement Areas and the Trail to be created, all in accordance herewith.

The foregoing easement and rights shall be utilized for the sole and exclusive purpose of providing the Grantee, its employees, guests and invitees, with pedestrian and equestrian access and access for non-motorized vehicles over, under and across the Trail and

the Dirt Road, for passive recreation, nature study and scenic enjoyment and in order to access Lot 3, as shown on the Plan.

(2) The Trail as constructed shall be no greater than four (4) feet in width (unless otherwise authorized by the Grantor).

(3) The Grantee shall have the right to cut, clear, trim and remove such trees, brush, and other vegetation and obstructions from the Easement Areas as may be reasonably required in order to construct the Trail and to use and maintain the Trail and the Dirt Road as permitted hereunder, and the right to mark the Trail and the Dirt Road with markers in order to guide users along their course.

The Grantee shall also have the right to seek such permits, in the name of Grantor, as may be required for the construction and maintenance of the Trail and the Dirt Road.

(4) Notwithstanding any provision contained herein to the contrary, the Grantee, its agents, employees or representatives, may use such power equipment and/or motorized vehicles as may be necessary for the construction and maintenance of the Trail and the Dirt Road.

(5) The precise location of the Trail Easement Area shall be established by the cutting of the Trail and shall consist of the Trail and two strips, both three (3) feet in width on either side of the Trail, such that the total width of the Trail Easement Area is ten (10) feet.

The Grantee shall have the right, at any time and from time to time, with the prior consent of the then owner of the Grantor's property, to relocate the Trail within the Trail Easement Area.

(6) The parties agree that no improvements other than the Trail shall be made in the Easement Areas.

(7) All expenses associated with or arising out of the construction of the Trail, and the maintenance and improvement of the Trail and the Dirt Road, shall be borne solely by or on behalf of the Grantee. The Grantor shall have no responsibility or obligation to maintain or repair the Trail or the Dirt Road.

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(8) The easement hereby conveyed does not grant to the Grantee or to the public or to any private person any rights in, under or across any portion of the Grantor's property other than the Easement Areas. The Grantee agrees to erect fences, plant vegetation or take whatever measures it deems reasonably necessary or appropriate to protect the Grantor's privacy, subject to the prior written consent of the Grantor.

(9) The easement and rights granted herein shall be appurtenant to land of the Grantee shown as Lot 1 and Lot 3 on the Plan, and shall run with the land.

(10) The foregoing constitutes the complete agreement and understanding between the parties hereto with respect to the matters set forth herein and supersedes all prior agreements between the parties concerning the subject matter hereof, whether written or oral. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts (without reference to choice of law provisions).

EXECUTED as a sealed instrument on and as of the date first above written.

WITNESS/ATTEST:

GRANTOR:
THE MEETINGHOUSE OF MARTHA'S VINEYARD, INC., a Massachusetts non-profit corporation

By: Margaret Pinney Vance
Name: Margaret Pinney Vance
President

By:
Name:
Treasurer

WITNESS/ATTEST:

GRANTEE:
MARTHA'S VINEYARD LAND BANK COMMISSION, a corporate body politic

By:

By:

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COMMONWEALTH OF MASSACHUSETTS

Dukes County, ss. August 12, 1996

Then personally appeared the above-named Margaret Penney Vance and Betty Chestnut

President and Treasurer, respectively, of The Meetinghouse of Martha's Vineyard, Inc., and acknowledged the foregoing instrument to be their free act and deed as such President and Treasurer and the free act and deed of said The Meetinghouse of Martha's Vineyard, Inc., before me,

Notary Public MARCIA M. CINI
My commission expires: October 16, 1998

COMMONWEALTH OF MASSACHUSETTS

Dukes County, ss. August 9, 1996

Then personally appeared the above-named Priscilla L. Sylvia, Secretary/Treasurer of Martha's Vineyard Land Bank Commission and Richard Knight, Vice-Chairperson of Martha's Vineyard Land Bank Commission

of the Martha's Vineyard Land Bank Commission, and acknowledged the foregoing instrument to be their free act and deed as said Secretary, Treasurer and Vice-Chairperson

and the free act and deed of said Martha's Vineyard Land Bank Commission, before me,

Notary Public
My Commission Expires: February 21, 2003

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AGREEMENT OF EASEMENTS, RESTRICTIVE COVENANTS AND SHARED COSTS AND MAINTENANCE

THIS AGREEMENT made and entered into this 9th day of August, 1996, by and between **THE MEETINGHOUSE OF MARTHA'S VINEYARD, INC.**, a Massachusetts non-profit corporation, with an address of P.O. Box 2523, Vineyard Haven, Massachusetts 02568 ("Meetinghouse") and the **MARTHA'S VINEYARD LAND BANK COMMISSION**, a corporate body politic, with an address of P.O. Box 2057, 167 Main Street, Edgartown, Massachusetts 02539 (the "Land Bank").

W I T N E S S E T H

WHEREAS, Meetinghouse is the owner of certain real improved property located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, shown as Lot 2 ("Lot 2") on the plan entitled, "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. & Martha's Vineyard Land Bank Commission Scale: 1" = 80' March 27, 1996 Revised: May 9, 1996 Schofield, Barbini & Hoehn, Inc. Civil Engineers & Land Surveyors 97 State Road, P.O. Box 339, Vineyard Haven, MA 02568", recorded with the Dukes County Registry of Deeds as Oak Bluffs Case File No. 327 (the "Plan"); and

WHEREAS, the Land Bank is the owner of certain real improved property located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, shown as Lot 1 on the Plan ("Lot 1") and Lot 3 on the Plan ("Lot 3"); and

WHEREAS, Meetinghouse and the Land Bank wish to impose certain restrictions on, and create certain easements and rights in connection with their respective properties;

NOW THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, for themselves and their respective successors and assigns, hereby agree as follows:

A. Easements:

1. Meetinghouse hereby grants to the Land Bank, its successors and assigns, with quitclaim covenants, for the benefit of and appurtenant to Lot 1 and Lot 3, a perpetual easement to use, and to permit its employees, tenants, guests and invitees to use, that portion of the right of way shown as "RIGHT OF WAY - 20 FT. WIDE" on the Plan (the "Right of Way") which crosses Lot 2 and runs between Lot 1 and the northeasterly edge of the area shown as "PARKING AREA "A"" on the Plan ("Parking Area A"), for the purpose of accessing Lot 3 and Parking Area A and for all other purposes for which streets and ways may be used in the Town of Oak Bluffs, together with the right to construct an extension of the existing road shown as "asphalt road" on the Plan (the "Existing Road"),

within the Right of Way (the "Road Extension"), so that said Existing Road extends to Parking Area A and the right to maintain said Existing Road and Road Extension in order to so use them. The foregoing easement shall run with the land.

2. Meetinghouse grants to the Land Bank, its successors and assigns, with quitclaim covenants, for the benefit of and appurtenant to Lot 3, a perpetual easement to travel, and to permit its employees, tenants, guests and invitees to travel, across and through Parking Area A for the purpose of accessing Lot 3 and the dirt road which runs through Parking Area A, shown as "dirt road" on the Plan, and for conservation and natural resources management. The foregoing easement shall run with the land.

3. Meetinghouse grants to the Land Bank, its successors and assigns, with quitclaim covenants, for the benefit of and appurtenant to Lot 1 and Lot 3, a perpetual and exclusive easement to use, and to permit its employees, tenants, guests and invitees to use, five (5) parking spaces in the Parking Lot, as defined below, to be created in Parking Area A, together with the right to post signs identifying said parking spaces as Land Bank parking.

B. Shared Costs and Maintenance:

1. Meetinghouse and the Land Bank shall create a plan (the "Planning Scheme") for: (a) the improvement of the Existing Road; and (b) the creation of the Road Extension within the Right of Way, so that the Existing Road connects with Parking Area A; and (c) the creation of a parking lot in Parking Area A with a minimum of five (5) spaces (the "Parking Lot"). Certain components of the Planning Scheme may be required by, or subject to the approval of, the Martha's Vineyard Commission and/or other permit granting authorities. Meetinghouse and the Land Bank shall agree on the particulars of the Planning Scheme before any action to implement it is taken. Once both parties have agreed upon the Planning Scheme, Meetinghouse, at its sole cost and expense, shall promptly implement the Planning Scheme. Notwithstanding the foregoing to the contrary, if the total cost to Meetinghouse to implement the Planning Scheme exceeds the sum of Twenty Thousand and 00/100 Dollars ($20,000.00) (the "Maximum Amount"), the Land Bank shall reimburse Meetinghouse one hundred percent (100%) of the dollar amount by which the cost to implement the Planning Scheme exceeds the Maximum Amount. Once the Planning Scheme has been fully implemented, Meetinghouse and the Land Bank shall maintain the Existing Road, the Road Extension and the Parking Lot (collectively, the "Common Areas") in good condition and repair. Meetinghouse shall pay eighty-five percent (85%) of the cost to so maintain and repair the Common Areas, and the Land Bank shall pay fifteen percent (15%) of the cost to so maintain and repair said Common Areas. Said percentages may be adjusted, from time to time, by agreement of the parties, based on their respective usage of said Common Areas. The parties hereto acknowledge and agree that

prior to performing any maintenance or repair work to the Common Areas, the party proposing to perform the work shall notify the other party, in writing, of its intent to perform the work and make reasonable efforts to obtain said other party's consent to said work. Notwithstanding the foregoing to the contrary, either party may perform maintenance or repair work to the Common Areas without the other party's prior consent, provided in each instance that: (a) prior to performing any work, the party performing said work has notified the other party of its intent to perform said work and has attempted to obtain said other party's consent to said work, in accordance herewith; and (b) said work will not result in a substantial change to any of the Common Areas, or a substantial alteration of the aesthetic qualities of any of the Common Areas; and (c) the party performing the work pays the entire cost of performing said work. All notices given hereunder shall be given in writing and sent, by certified or registered U.S. mail, to the parties at their respective addresses set forth above and shall be deemed given when so deposited with the U.S. mail. Either party may, at any time and from time to time, change the address to which notices to said party should thereafter be sent, by written notice to the other party given in accordance with the foregoing notice provision.

C. No-Build Zone:

No building of any kind, as the term "building" is defined by the zoning by-law of the Town of Oak Bluffs, Massachusetts, shall be erected on that portion of Lot 2 shown as "NO-BUILD ZONE" on the Plan. Notwithstanding the foregoing to the contrary, Meetinghouse shall be permitted to erect tents in the "NO-BUILD ZONE".

D. Insurance:

1. Meetinghouse shall, at all times, maintain comprehensive public liability insurance insuring Meetinghouse against all claims and demands in connection with injury to or death of persons or damage to property which may be claimed to have occurred in, on, or about Lot 2 or the Common Areas and the Land Bank shall, at all times, maintain comprehensive public liability insurance insuring the Land Bank against all claims and demands in connection with injury to or death of persons or damage to property which may be claimed to have occurred in, on, or about Lot 1, Lot 3 or the Common Areas.

2. All liability insurance which the parties hereto are required to carry hereunder shall be effected with insurers qualified to do business in Massachusetts and in good standing therein. All liability insurance policies which Meetinghouse carries as required hereunder shall name the Land Bank as additional insured and all liability insurance policies which the Land Bank carries as required hereunder shall name Meetinghouse as additional insured. The Land Bank and Meetinghouse shall each

deposit with each other certificates for the insurance they are required to carry hereunder immediately upon execution of this Agreement and thereafter within thirty (30) days prior to the expiration of any such policies. All such policies shall provide that they shall not be canceled without at least twenty (20) days prior written notice to both parties hereto.

E. Indemnity:

1. Meetinghouse shall defend all actions against the Land Bank and its commissioners, officers, directors, agents and employees (collectively, the "Land Bank Indemnitees") with respect to, and shall indemnify and save harmless each of said Land Bank Indemnitees from and against, any and all liability, injury, loss, claim, damage, cost, expense (including reasonable attorneys fees and costs), cause of action, suit, demand and judgment of every kind, arising out of, or in connection with, the use of the Common Areas, or other exercise of the rights granted herein, by Meetinghouse or those claiming by or through Meetinghouse.

2. The Land Bank shall defend all actions against Meetinghouse and its officers, directors, agents and employees (collectively, the "Meetinghouse Indemnitees") with respect to, and shall indemnify and save harmless each of said Meetinghouse Indemnitees from and against, any and all liability, injury, loss, claim, damage, cost, expense (including reasonable attorneys fees and costs), cause of action, suit, demand and judgment of every kind, arising out of, or in connection with, the use of the Common Areas, or other exercise of the rights granted herein, by the Land Bank or those claiming by or through the Land Bank.

F. General Provisions:

1. The paragraph headings contained herein are for convenience of reference only and shall not be used to interpret or deemed to amend or modify in whole or in part any of the substantive provisions hereof.

2. This Agreement contains the entire agreement between the parties hereto concerning the subject matter hereof and supersedes all prior agreement between the parties, whether written or oral, concerning the subject matter hereof. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts (without reference to choice of laws or provisions) and may only be amended by a written instrument signed by both parties hereto.

3. The rights and obligations contained herein shall inure to and be binding upon the successors and assigns of the parties hereto.

4. The restrictions contained herein shall continue and remain in full force and effect for thirty (30) years from the date of the recording of this instrument, and may be extended and continued in full force and effect thereafter in accordance with the provisions of M.G.L. Chapter 184, Section 27, as it may be amended from time to time, or as provided in similar successor provisions, for further periods of twenty (20) years each, or for such other maximum further periods as may be allowed by any amendments of said law or by any successor provisions.

EXECUTED as a sealed instrument on and as of the date set forth above.

WITNESS/ATTEST:

THE MEETINGHOUSE OF MARTHA'S VINEYARD, INC., a Massachusetts non-profit corporation

By: _____
Name: Margaret Penny Vance
President

By: _____
Name:
Treasurer

WITNESS/ATTEST:

MARTHA'S VINEYARD LAND BANK COMMISSION, a corporate body politic

By: _____

By: _____

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COMMONWEALTH OF MASSACHUSETTS

Dukes County, ss. August 12, 1996

Then personally appeared the above-named Margaret Penney Vance and Betty Chestnut

President and Treasurer, respectively, of Meetinghouse of Martha's Vineyard, Inc., and acknowledged the foregoing instrument to be their free act and deed as such President and Treasurer and the free act and deed of said Meetinghouse of Martha's Vineyard, Inc., before me,

Notary Public, MARCIA M. CINI
My commission expires: October 16, 1998

COMMONWEALTH OF MASSACHUSETTS

Dukes County, ss. August 9, 1996

Then personally appeared the above-named Priscilla L. Sylvia, Secretary/Treasurer of Martha's Vineyard Land Bank Commission and Richard Knight, Vice-Chairperson of Martha's Vineyard Land Bank Commission

of the Martha's Vineyard Land Bank Commission, and acknowledged the foregoing instrument to be their free act and deed as said Secretary/Treasurer and Vice-Chairperson

and the free act and deed of said Martha's Vineyard Land Bank Commission, before me,

Notary Public
My Commission Expires: February 21, 2003

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BK683PG149

QUITCLAIM DEED

I, **WILLIAM H.Y. STEVENS**, of P.O. Box 1116, Oak Bluffs, Massachusetts 02557 (the "Grantor") in consideration of the sum of **ONE ($1.00) DOLLAR** and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby grant to the **MARTHA'S VINEYARD LAND BANK COMMISSION**, a corporate body politic, with an address of P.O. Box 2057, 167 Main Street, Edgartown, Massachusetts 02539 (the "Grantee"),

with ***quitclaim covenants***,

a Two and 44/100 percent (2.44%) undivided interest in the real property with the improvements thereon located in the Town of Oak Bluffs, County of Dukes County, Commonwealth of Massachusetts, more particularly described as follows:

Property Address: Barnes Road, Oak Bluffs, MA

Being Lot 1 and Lot 3 on a plan entitled, "Plan of Land in Oak Bluffs, Mass. Prepared for Meetinghouse of Martha's Vineyard, Inc. & Martha's Vineyard Land Bank Commission Scale: 1" = 80' March 27, 1996 Revised: May 9, 1996 Schofield, Barbini & Hoehn, Inc. Civil Engineers & Land Surveyors 97 State Road, P.O. Box 339, Vineyard Haven, MA 02568", recorded with the Dukes County Registry of Deeds as Oak Bluffs Case File No. 321 (the "Plan").

The above-described property is conveyed subject to a perpetual easement, appurtenant to Lot 2 as shown on the Plan, to use that portion of the right of way shown as "RIGHT OF WAY - 20 FT. WIDE" on the Plan (the "Right of Way") which crosses Lot 1 as shown on the Plan, for the purpose of accessing Lot 2 as shown on the Plan and for all other purposes for which streets and ways may be used in the Town of Oak Bluffs, and the right to maintain the Right of Way in order to so use it.

The above-described property is further conveyed subject to and together with the benefit of all easements, restrictions, covenants, rights and other matters of record, including, but not limited to, those easements, rights and restrictions set forth in that certain Agreement of Easements, Restrictive Covenants and Shared Costs and Maintenance and that certain Easement Agreement, both dated of even date herewith, and both executed by and

BK683PG150

between the Grantee and Meetinghouse of Martha's Vineyard, Inc. and recorded herewith in the Dukes County Registry of Deeds.

The above-described property is conveyed subject to the express restriction that said property shall be used only for the purposes set forth in Chapter 736 of the Acts of 1985, as amended, all as contained in the Massachusetts General Laws.

For title, see Deed, dated January 14, 1980, from Ann B. Bowes to the Grantor, recorded in the Dukes County Registry of Deeds in Book 371, Page 733.

EXECUTED as a sealed instrument this 7th day of August, 1996.

William H.Y. Stevens

William H.Y. Stevens

COMMONWEALTH OF MASSACHUSETTS

Dukes County, ss. August 7th, 1996

Then personally appeared the above-named William H.Y. Stevens, and acknowledged the foregoing instrument to be his free act and deed, before me,

Notary Public

My commission expires: 12/27/02

n:\wl1996\jul\b-deed1.g2

MARTHA'S VINEYARD LAND BANK FEE

☐ PAID: $

☒ EXEMPT. $ 0

19052 8/12/96

NO. DATE CERTIFICATION

2

Appendix B: Taxonomic List of Vascular Plants for Featherstone Farm Preserve

	Scientific name	**Common name**
	Division Bryophyta (Mosses and Liverworts)	
	Leucobryaceae	
1	*Leucobryum glaucum*	pincushion moss
	Polytrichaceae	
2	*Polytrichum cf. juniperinum*	haircap moss
	Division Polypodiophyta (Ferns)	
	Dennstaedtiaceae (Bracken Family)	
3	*Pteridium aquilinum*	bracken fern
	Division Pinophyta (Gymnosperms)	
	Cupressaceae (Cypress Family)	
4	*Juniperus virginiana*	eastern red cedar
	Pinaceae (Pine Family)	
5	*Picea abies*	norway spruce
6	*Pinus rigida*	pitch pine
7	*Pinus strobus*	white pine
8	*Pinus sylvestris*	scots pine
	Division Magnoliophyta (Flowering Plants)	
	Aceraceae (Maple Family)	
9	*Acer rubrum*	red maple
	Anacardaceae (Cashew Family)	
10	*Rhus copallinum*	shining sumac
11	*Toxicodendron radicans*	poison ivy
	Apiaceae (Carrot Family)	
12	*Daucus carota*	Queen Anne’s lace
	Araliaceae (Ginseng Family)	
13	*Aralia nudicaulis*	wild sarsaparilla
	Asclepiadaceae (Milkweed Family)	
14	*Asclepias exaltata*	poke milkweed
15	*Asclepias tuberosa*	butterflyweed
	Asteraceae (Aster Family)	
16	*Achillea millefolium*	yarrow
17	*Aster divaricatus*	white wood aster
18	*Aster paternus*	toothed white-topped aster
19	*Aster racemosus*	small white aster
20	*Aster undulatus*	wavy-leaved aster
21	*Chrysanthemum leucanthemum*	oxeye daisy

22	*Chrysopsis falcata*	sickle-leaved golden star
23	*Cichorium intybus*	chicory
24	*Cirsium vulgare*	bull thistle
25	*Coreopsis lanceolata*	lance-leaved coreopsis
26	*Erigeron strigosus* var. *strigosus*	lesser daisy fleabane
27	*Euthamia tenuifolia*	slender-leaved goldenrod
28	*Hieracium caespitosum*	field hawkweed
29	*Hieracium paniculatum*	panicled hawkweed
30	*Hieracium venosum*	rattlesnake weed
31	*Hypochoeris radicata*	cat's ear
32	*Lactuca canadensis*	wild lettuce
33	*Prenanthes trifoliata*	tall rattlesnake root
34	*Solidago canadensis* var. *scabra*	tall goldenrod
35	*Solidago odora*	sweet goldenrod
36	*Solidago puberula*	downy goldenrod
37	*Solidago rugosa*	rough-stemmed goldenrod
38	*Taraxacum officinale*	dandelion
39	*Tragopogon pratensis*	yellow goatsbeard
	Berberidaceae (Barberry Family)	
40	*Berberis thunbergii*	japanese barberry
	Brassicaceae (Mustard Family)	
41	*Barbarea vulgaris* var. *vulgaris*	yellow rocket
42	Sisymbrium officinale	hedge-mustard
	Caprifoliaceae (Honeysuckle Family)	
43	*Lonicera japonica*	japanese honeysuckle
44	*Viburnum recognitum*	northern arrowwood
	Caryophyllaceae (Pink Family)	
45	*Cerastium vulgatum*	mouse-ear chickweed
46	*Dianthus armeria*	deptford pink
47	*Silene cucubalus*	bladder campion
48	*Silene latifolia*	white campion
49	*Stellaria graminea*	lesser stitchwort
50	*Stellaria media*	common chickweed
	Celastraceae (Staff-tree Family)	
51	*Celastrus orbiculatus*	asiatic bittersweet
	Chenopodiaceae (Goosefoot Family)	
52	*Atriplex patula*	orach
	Cistaceae (Rockrose Family)	
53	*Helianthemum canadense*	frostweed
54	*Hudsonia ericoides*	golden heather
55	*Lechea maritima*	beach pinweed
	Clusiacaea (Mangosteen Family)	
56	*Hypericum perforatum*	common St. Johnswort
	Cyperaceae (Sedge Family)	

57	*Carex pensylvanica*	pennsylvania sedge
58	*Carex swanii*	swan's sedge
59	*Cyperus filiculmis*	sand flatsedge
	Elaeagnaceae (Oleaster Family)	
60	*Elaeagnus umbellata*	autumn olive
	Ericaceae (Heath Family)	
61	*Epigaea repens*	trailing arbutus
62	*Gaultheria procumbens*	wintergreen
63	*Gaylussacia baccata*	black huckleberry
64	*Gaylussacia frondosa*	dangleberry
65	*Kalmia angustifolia*	sheep laurel
66	*Vaccinium angustifolium*	lowbush blueberry
67	*Vaccinium corymbosum*	highbush blueberry
68	*Vaccinium pallidum*	lowbush blueberry
	Fabaceae (Pea Family)	
69	*Baptisia tinctoria*	yellow wild indigo
70	*Lespedeza capitata*	round-headed bush clover
71	*Lotus corniculatus*	birdsfoot trefoil
72	*Trifolium arvense*	rabbit-foot clover
73	*Trifolium dubium*	least hop clover
74	*Trifolium pratense*	red clover
75	*Vicia angustifolia*	narrow-leaved vetch
76	*Vicia sativa*	spring vetch
	Fagaceae (Beech Family)	
77	*Fagus grandifolia*	american beech
78	*Quercus alba*	white oak
79	*Quercus ilicifolia*	scrub oak
80	*Quercus stellata*	post oak
81	*Quercus velutina*	black oak
	Juncaceae (Rush Family)	
82	*Juncus tenuis*	path rush
83	*Luzula multiflora*	common woodrush
	Lamiaceae (Mint Family)	
84	*Melissa officinalis*	lemon-balm
	Lauraceae (Laurel Family)	
85	*Sassafras albidum*	sassafras
	Liliaceae (Lily Family)	
86	*Hypoxis hirsuta*	yellow stargrass
	Monotropaceae (Indian Pipe Family)	
87	*Monotropa hypopithys*	pinesap
88	*Monotropa uniflora*	indian pipe
	Myricaceae (Bayberry Family)	
89	*Comptonia peregrina*	sweetfern
90	*Myrica pensylvanica*	bayberry
	Onagraceae (Evening-primrose Family)	

91	*Oenothera species*	common evening-primrose
	Orchidaceae (Orchid Family)	
92	*Cypripedium acaule*	lady's slipper
	Orobanchaceae (Broom-rape Family)	
93	*Epifagus* virginiana	beechdrops
	Oxalidaceae (Wood-sorrel Family)	
94	*Oxalis stricta*	common yellow wood sorrel
	Phytolaccaceae (Pokeweed Family)	
95	*Phytolacca americana*	pokeweed
	Plantaginaceae (Plaintain Family)	
96	*Plantago lanceolata*	english plantain
	Poaceae (Grass Family)	
97	*Agropyron repens*	quackgrass
98	*Agrostis gigantea*	redtop
99	*Andropogon virginicus* var. *virginicus*	broomsedge
100	*Anthoxanthum odoratum*	sweet vernal grass
101	*Aristida dichotoma*	three awn
102	*Dactylis glomerata*	orchard grass
103	*Danthonia spicata*	poverty grass
104	*Deschampsia flexuosa*	hairgrass
105	*Digitaria filiformis*	slender crabgrass
106	*Digitaria ischaemum*	smooth crabgrass
107	*Eragrostis spectabilis*	purple love grass
108	*Festuca ovina*	sheep fescue
109	*Festuca rubra*	red fescus
110	*Holcus lanatus*	velvet grass
111	*Panicum* species	a panic grass
112	*Paspalum setaceum*	beadgrass
113	*Phleum pratense*	timothy
114	*Schizachyrium scoparium*	little bluestem
	Polygonaceae (Smartweed Family)	
115	*Polygonum convolvulus*	black bindweed
116	*Polygonum persicaria*	lady's thumb
117	*Rumex acetosella*	field sorrel
118	*Rumex crispus*	curled dock
	Primulaceae (Primrose Family)	
119	*Lysimachia quadrifolia*	whorled loosestrife
	Pyrolaceae (Shinleaf Family)	
120	*Chimaphila maculata*	striped wintergreen
	Ranunculaceae (Buttercup Family)	
121	*Ranunculus bulbosa*	bulbous buttercup
	Rosaceae (Rose Family)	
122	*Amelanchier* species	a shadbush
123	*Aronia melanocarpa*	black chokeberry
124	*Crataegus crus-galli*	cockspur hawthorn

125	*Fragaria virginiana*	wild strawberry
126	*Potentilla argentea*	silvery cinquefoil
127	*Potentilla canadensis*	dwarf cinquefoil
128	*Potentilla recta*	rough-fruited cinquefoil
129	*Potentilla simplex*	common cinquefoil
130	*Prunus serotina*	black cherry
131	*Pyrus malus*	domestic apple
132	*Rosa carolina*	pasture rose
133	*Rosa multiflora*	multiflora rose
134	*Rosa virginiana*	virginia rose
135	*Rubus allegheniensis*	common blackberry
136	*Rubus flagellaris*	prickly dewberry
137	*Rubus hispidus*	bristly dewberry
	Rubiaceae (Madder Family)	
138	*Galium mollugo*	wild madder
	Scrophulariaceae (Figwort Family)	
139	*Melampyrum lineare*	cow-wheat
140	*Veronica arvensis*	corn speedwell
141	*Veronica officinalis*	common speedwell
	Smilacaceae (Catbrier Family)	
142	*Smilax rotundifolia*	common greenbrier
	Solanaceae (Nightshade Family)	
143	*Solanum dulcamara*	bittersweet nightshade
	Violaceae (Violet Family)	
144	*Viola sagittata*	arrowleaf violet
	Vitaceae (Grape Family)	
145	*Vitis labrusca*	fox grape

Appendix C: Invertebrates at Featherstone Farm Preserve, Oak Bluffs, MA

1. White & Black Oak Woodlands								
scientific name	**common name**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**
Order Homoptera = cicadas, aphids								
F. Cicadidae	a cicada					X		
Order Coleoptera = beetles								
F. Lampyridae	lightning bug	X						
Cicindela sexguttata	six-spotted green tiger beetle			X				
Order Lepidoptera = butterflies & moths								
Celastrina ladon	spring azure		X					
Erynnis juvenalis	juvenile's duskywing		X					
Cercyonis pegala	common wood nymph					X		
Order Diptera = flies								
Chrysops species	deer flies			X				
Arachnida = mites, ticks & spiders								
?Dermacentor species	dog tick		X					
F. Lycosidae	wolf spider							X
Pisaurina mira	nursery web spider			X				

2. Pitch Pine Woodland								
scientific name	**common name**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**
Order Lepidoptera = butterflies & moths								
Nymphalis antiopa	mourning cloak	X						
Celastrina ladon	spring azure	X	X	X				
Order Diptera = flies								
Chrysops species	deer flies			X	X			

3. Pastureland								
scientific name	**common name**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**
Order Odonata = damselflies & dragonflies								
Anax junius	common green darner			X	X			
Order Orthoptera = grasshoppers & crickets								
Gryllus pennsylvanicus	field cricket				X			X
Schistocerca alutacea	bird grasshopper							X
Order Coleoptera = beetles								
F. Coccinellidae	ladybug beetle							X
Order Lepidoptera = butterflies & moths								
Celastrina ladon	spring azure		X					
Pieris rapae	cabbage white		X		X			
Vanessa virginiensis	american lady				X			
Lycaena phlaeas	american copper				X			
Cercyonis pegala	common wood nymph				X			
Danaus plexippus	monarch				X	X		
Phyciodes tharos	pearl crescent				X	X		
Colias eurytheme	orange sulphur			X	X	X		
Euphydryas phaeton	baltimore				X			
SuperF. Hesperioidea	a skipper (brown)				X			
Order Hymenoptera = ants, wasps & bees								
Ammophila species	thread-waist wasps				X			
Chlorion aerarium	steel-blue cricket hunter				X			
Bombus species	bumblebees				X			

Appendix D: Checklist of Avian Fauna at Featherstone Farm Preserve, Oak Bluffs, MA

		Foraging Guild *
Family Laridae (gulls and terns)		
herring gull	*Larus argentatus*	s/w: carnivore, coastal scavenger
Family Accipitridae (hawks and eagles)		
red-tailed hawk	*Buteo jamaicensis*	s/w: carnivore, ground pouncer
osprey	*Pandion haliaetus*	s: piscivore, water foot-plunger
Family Columbidae (pigeons and doves)		
mourning dove	*Zenaida macroura*	s/ w: granivore, ground gleaner
Family Tyrannidae (flycatchers)		
great crested flycatcher	*Myiarchus crinitus*	s: insectivore, air sallier
eastern wood-pewee	*Contopus virens*	s: insectivore, air sallier
Family Picidae (woodpeckers)		
red-bellied woodpecker	*Melanerpes carolinus*	s/w: insectivore, bark gleaner
northern flicker	*Colaptes auratus*	s: insectivore, ground gleaner w: omnivore, ground gleaner
downy woodpecker	*Picoides pubescens*	s/w: insectivore, bark gleaner
hairy woodpecker	*Picoides villosus*	s/w: insectivore, bark gleaner
Family Hirundinidae (swallows)		
tree swallow	*Tachycineta bicolor*	s: insectivore, air screener
barn swallow	*Hirundo rustica*	s: insectivore, air screener
Family Corvidae (jays and crows)		
blue jay	*Cyanocitta cristata*	s/w: omnivore, ground gleaner
american crow	*Corvus brachyrhynchos*	s/w: omnivore, ground gleaner
Family Paridae (titmice and chickadees)		
black-capped chickadee	*Parus atricapillus*	s: insectivore, lower canopy gleaner w: omnivore, lower canopy gleaner
Family Sittidae (nuthatches)		
white-breasted nuthatch	*Sitta carolinensis*	s/w: insectivore, bark gleaner

Family Troglodytidae (wrens)		
white-breasted nuthatch	*Thryothorus ludovicianus*	s/w: insectivore, lower canopy gleaner
Family Muscicapidae (thrushes)		
eastern bluebird	*Sialia sialis*	s/w: omnivore, ground gleaner
american robin	*Turdus migratorius*	s/w: omnivore, ground gleaner
Family Vireonidae (vireos)		
red-eyed vireo	*Vireo olivaceus*	s: insectivore, upper canopy gleaner
Family Emberizidae (warblers and sparrows)		
prairie warbler	*Dendroica discolor*	s: insectivore, lower canopy gleaner
pine warbler	*Dendroica pinus*	s: insectivore, bark gleaner
ovenbird	*Seiurus aurocapillus*	s: insectivore, ground gleaner
common yellowthroat	*Geothlypis trichas*	s: insectivore, lower canopy gleaner
northern cardinal	*Cardinalis cardinalis*	s: insectivore, lower canopy gleaner
		w: granivore, ground gleaner
rufous-sided towhee	*Pipilo erythrophthalmus*	s: omnivore, ground gleaner
song sparrow	*Melospiza melodia*	s: omnivore, ground gleaner
		w: granivore, ground gleaner
chipping sparrow	*Spizella passerine*	s: omnivore, ground gleaner
dark-eyed junco	*Junco hyemalis*	w: granivore, ground gleaner
red-winged blackbird	*Agelaius phoeniceus*	s: omnivore, ground gleaner
brown-headed cowbird	*Molothrus ater*	s: omnivore, ground gleaner
		w: granivore, ground gleaner
common grackle	*Quiscalus quiscula*	s: omnivore, ground gleaner
northern oriole	*Icterus galbula*	s: omnivore, upper canopy gleaner
Family Passeridae (weavers)		
house sparrow	*Passer domesticus*	w/s: granivore, ground gleaner
Fringillidae (finches)		
american goldfinch	*Carduelis tristis*	s: omnivore, ground gleaner
		w: granivore, ground gleaner
house finch	*Carpodacus mexicanus*	*s: omnivore, ground gleaner*
		w: granivore, ground gleaner

* Sources: DeGraaf & Rudis (1987) and Ehrlich, Dobkin & Wheye (1988).
** s = foraging guild during summer (breeding season), w = foraging guild during winter (or nonbreeding seasons).

Appendix E: Oak Bluffs Town Advisory Board Meeting Minutes of November 19, 1998

Appendix E

Martha's Vineyard Land Bank Commission

OAK BLUFFS TOWN ADVISORY BOARD

MINUTES
REGULAR SESSION
MEETING OF NOVEMBER 19, 1998

Elementary School. Oak Bluffs, Massachusetts

CALL TO ORDER: 5:15 pm

BOARD MEMBERS PRESENT AT CALL TO ORDER
Melanie Bilodeau, Elizabeth Durkee, Kerry Scott, Elizabeth Talbot

BOARD MEMBERS ABSENT AT CALL TO ORDER
Richard Combra, Jr., Richard Coutinho, Nancy Penn

LAND BANK COMMISSIONERS PRESENT AT CALL TO ORDER
Priscilla Sylvia

STAFF PRESENT AT CALL TO ORDER
James Lengyel, Wendy Malpass, Adam Moore

PUBLIC HEARINGS

1. Featherstone Farm (Barnes Road)

The following members of the public were present for the following hearing: Robert Culbert, Cynthia Meisner, Melissa Moore, William H.Y. Stevens, Richard Toole, Margaret Vance.

The Board conducted a public hearing on this property's draft management plan, which had been prepared by staff. Mr. Moore and Ms. Malpass summarized the plan's contents and Mrs. Bilodeau opened the hearing for input.

Margaret Vance, on behalf of the abutting Featherstone Meetinghouse for the Arts, Inc., suggested that a direct trail link be created between the arts center and the schoolhouse village road. She also suggested that the fields be used for crops rather than for pasturing, in order to avoid mosquitos.

P.O. Box 2057 • Edgartown, Massachusetts 02539 • 508 627-7141 • Fax 508 627-7415

Cynthia Meisner urged the land bank to do whatever it could to keep the nearby Smith family cemetery "secluded and untroubled."

William H.Y. Stevens suggested that the land bank clear around the animal graveyard in the lower field "as a point of interest."

Richard Toole asked if the ancient ways would be changed. Mr. Moore responded that some would be stabilized but that aesthetic considerations would be paramount. Mr. Toole reported that the Martha's Vineyard Commission had discussed the possibility of creating a road from the Barnes Road to the Woodside Village elderly complex and wondered if the road might cross the Featherstone Farm; Mr. Lengyel outlined the procedure, since article 97 of the Massachusetts constitution would be triggered.

Hearing no other input, Mrs. Bilodeau closed the hearing.

2. Wapatequa Woods Preserve (Road to Wapatequa)

The Board conducted a public hearing on this property's draft management plan, which had been prepared by staff. Mrs. Bilodeau opened the hearing for input; none was offered. Mr. Moore summarized the letters which had been received on this subject.

Commissioner Priscilla Sylvia departed the meeting at this time.

NEW BUSINESS

1. Featherstone Farm (Barnes Road)

The Board discussed the input which had been received at the hearing earlier that evening. The Board also discussed whether to take action at this time or to wait until its next regularly scheduled meeting, which will take place in January of 1999. After additional discussion and by a motion made and seconded, the Board voted unanimously to approve the draft management plan as written, with the following amendment: to replace the expression "undesirable species" under the nature conservation goals with a more fitting expression.

By a motion made and seconded, the Board voted unanimously to request that the Land Bank Commission begin the public process for soliciting agricultural leases for

this property's fields.

2. Wapatequa Woods Preserve (Road to Wapatequa)
The Board discussed the letters which had been received at the hearing earlier that evening. The Board also discussed whether to take action at this time or to wait until its next regularly scheduled meeting, which will take place in January of 1999. After additional discussion and by a motion made and seconded, the Board voted unanimously to approve the draft as written, with the following amendment: to replace the expression "undesirable species" under the nature conservation goals with a more fitting expression.

APPROVAL OF THE MINUTES OF SEPTEMBER 22, 1998

By a motion made and seconded, the Board voted three in favor, none opposed and Ms. Scott abstaining to approve the minutes as written.

APPROVAL OF THE MINUTES OF OCTOBER 5, 1998

By a motion made and seconded, the Board voted three in favor, none opposed and Mrs. Bilodeau abstaining to approve the minutes as written.

APPROVAL OF THE MINUTES OF OCTOBER 27, 1998

By a motion made and seconded, the Board voted three in favor, none opposed and Mrs. Durkee abstaining to approve the minutes as written.

EXECUTIVE SESSION

By a motion made and seconded, the Board voted unanimously in a roll call vote to enter executive session for the purpose of discussing land acquisition negotiations and not to return to regular session. 6:44 pm

Appendix F: Soil and Water Conservation Plan

Featherstone Farm
Appendix F

SCS-CONS-40
Rev. 8-69

SOIL AND WATER CONSERVATION PLAN

W. STEVENS
Cooperator

DUKES
CONSERVATION DISTRICT

Assisted by

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

U.S. GOVERNMENT PRINTING OFFICE 16—72305-4

U.S. Department of Agriculture
Soil Conservation Service

MA-CO-18
Rev. August 1979
(File Code CO-14-5)

LEGEND FOR SOIL MAP

MAP SYMBOL

67-C = SOIL - SLOPE

or

67 / C = SOIL / SLOPE

SLOPE

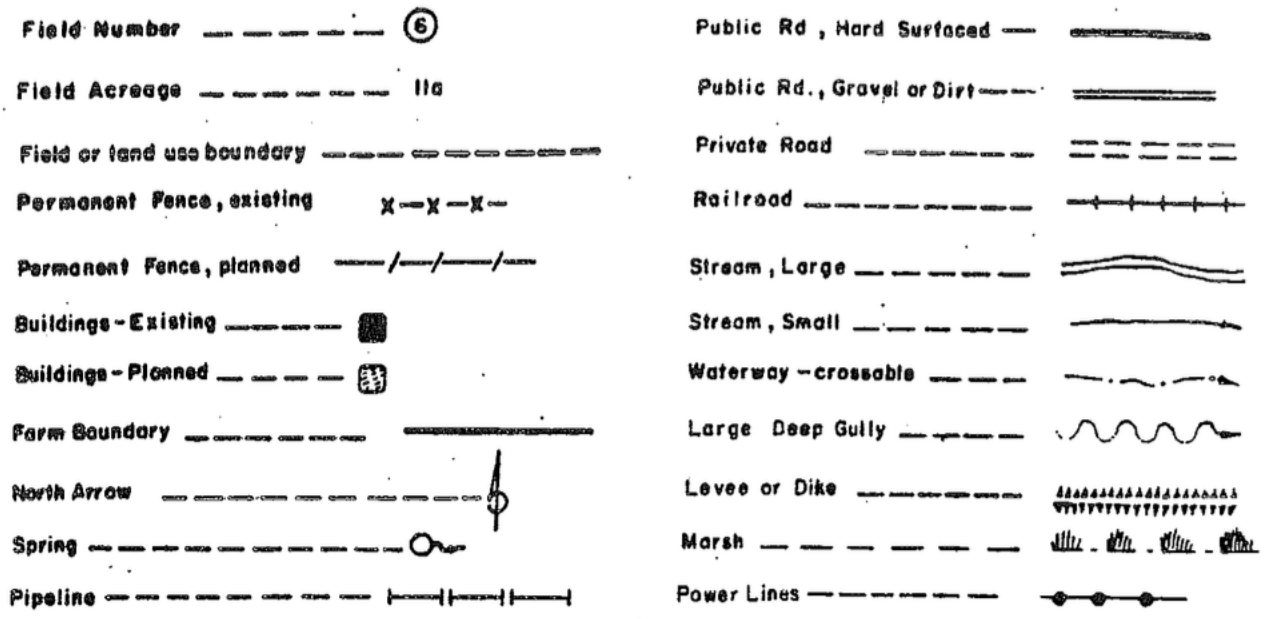
A-Level or nearly level	0-3%
B-Gently sloping	3-8%
C-Moderately sloping	8-15%
D-Strongly sloping	15-25%
E-Steep	25-35%
F-Very steep	over 35%

SOILS ON YOUR LAND

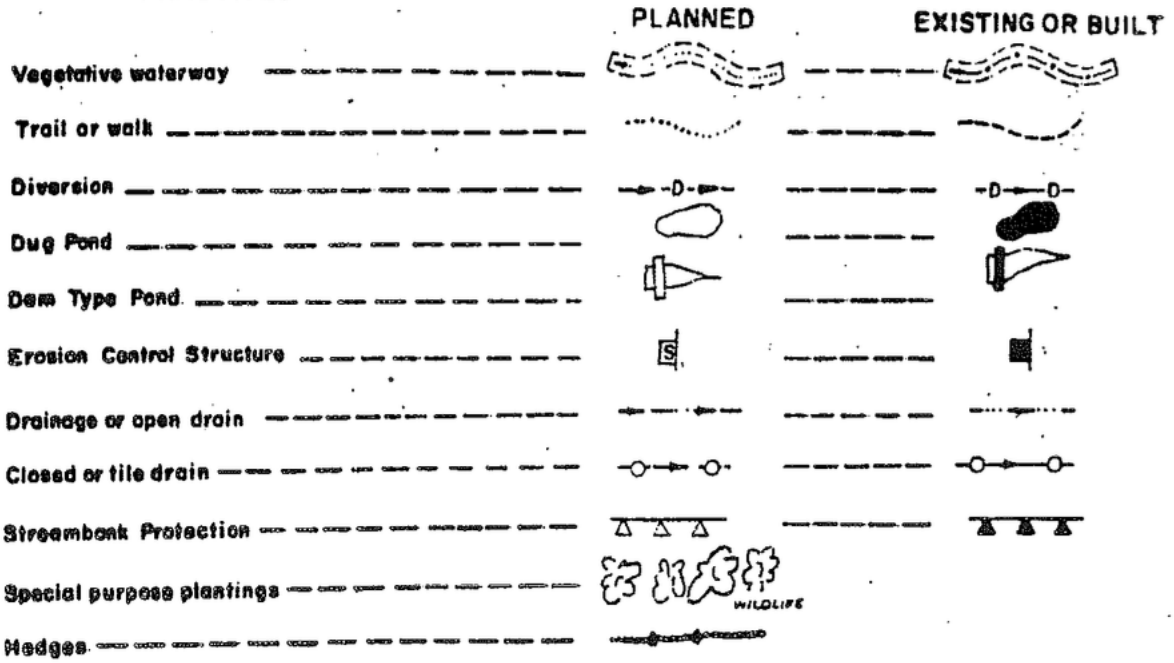
MAPPING UNIT	SOIL NAME	SOIL DESCRIPTION	AGRONOMIC CAPABILITY UNIT	SUITABILITY GROUP					
				WOODLAND	WILDLIFE				
					Open-land	Wood-land	Wet-land	Apple Orchard	Other
36 B	CARVER Loamy Coarse SAND 3-8%	These are excessively drained soils formed in deep deposits of coarse and very coarse sand. They have sand and loamy sand surface soils and coarse or very coarse sand subsoils. They contain only small amounts of gravel. The rapid permeability of these soils causes them to be droughty.	459	551		see attached sheets for descriptions			
C	" " 8-15%		759*	551					
45 A	RIVERHEAD SAND 0-3%	These are well drained soils formed in deep deposits of sand. They have sandy loam and loamy surface soils. The upper part of the subsoil is sandy loam or fine sandy loam and the lower part varies from fine sandy loam to gravelly loamy sand. Below about 30 inches the underlying materials consist of sand and gravel.		301					

* NOTE: MAJORITY OF FIELD 1 AS MEASURED IS LESS THAN OR EQUAL TO 8%
NO AREAS ARE OVER AS SLOPE [illegible]

LEGEND FOR CONSERVATION PLAN MAP



PRACTICES



U. S. Department of Agriculture
Soil Conservation Service
Amherst, Massachusetts

Planning Guide Sheets
Agronomic Interpretations
June 1980

Capability Unit IVs9

Description

These nearly level to moderately sloping soils are loose sands or sands and gravels to depths of three or four feet. Water moves rapidly through these soils. These soils do not hold enough water to enable plants to tolerate even short periods of drought. The water table is below five feet throughout the year. These soils have few or no stones on the surface.

Limitation

Droughtiness is the major limitation for the use and management of these soils. The risk of erosion is a secondary limitation.

Crop Use

These soils are poorly suited to most crops grown in the area, unless they are irrigated. For best crop yield, frequent applications of small amounts of water, lime and fertilizer are needed. The sloping soils will erode when they are cultivated, unless conservation practices are applied. These practices include cover crops, diversions, stripcropping and farming across the slope or on the contour. Cover crops, incorporating grasses and legumes in the crop rotation and mixing manure and crop residues into the plow layer, improve tilth and increase water-holding capacity.

Forage Use

These soils are poorly suited to grasses and legumes for hay and pasture. Bluegrass grows poorly. Other forage grasses such as timothy or orchardgrass give higher yields. Alfalfa will grow on these soils but frequent reseeding will be necessary to maintain a satisfactory stand. They are poorly suited for clover. On the sloping soils, reseeding in strips, across the slope, or on the contour reduces the risk of erosion. Frequent applications of small amounts of water, lime and fertilizer are needed for best yields. The main management objective should be the prevention of overgrazing that reduces the hardiness and density of desirable plants. Proper stocking rates, timely grazing, and restricting use during wet periods, help maintain plant densities and reduce surface compaction.

Yields

The estimated yields that can be expected on these soils with good management and where conservation practices have been applied are:

Silage corn, 10 to 16 tons per acre.

Potatoes, 210 to 275 hundredweight per acre.

Alfalfa-grass hay, 2.0 to 3.5 tons per acre.

The soils in this unit are:

U. S. Department of Agriculture
Soil Conservation Service
Amherst, Massachusetts

Planning Guide Sheets
Agronomic Interpretations
June 1980

Capability Unit VIIs9

Description

These nearly level to steep soils are loose sands or sands and gravel to depths of three or four feet. Water moves rapidly through these soils. These soils do not hold enough water for satisfactory plant growth. The water table is below five feet throughout the year. These soils have few or no stones on the surface.

Limitation

Droughtiness or slope are major limitations for the use and management of these soils.

Crop and Forage Use

These soils are poorly suited to cultivated crops, hay, or pasture. The droughtiness, slope, or both, make planting and management unfeasible.

Yields

These soils are not rated for production.

The soils in this unit are:

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AMHERST, MASSACHUSETTS

JOB SHEET MA-111
JANUARY 1978

PASTURE AND HAYLAND MANAGEMENT

A. Lime and Fertilizer

Lime and fertilizers shall be in accordance with the provisions of the most current edition of the "Agronomy Guide" or will be based on a current soil test. In the absence of both, use the following:

400 # of 10-10-10 in split application in spring and early fall
2 Tons lime every 4 years.

B. Stage of Growth for Mowing or Rotation Grazing

Planted fields should be managed to protect the crop or until the forage reaches the following heights:

alfalfa, alfalfa-grass	10+ inches*
clover-grass	8+ inches
pure tall grass stands	8+ inches
bluegrass stands	5+ inches

*Pasture only until early September, then restrict grazing until mid-October, at which time grazing can begin again.

Grazing of wet areas should be avoided during periods when grazing animals could cause punching of the soil and vegetation.

See CROP MANAGEMENT on reverse side.

C. Weed and Brush Control

Control weeds by clipping. The brush competing with the forage should be effectively suppressed or eliminated by mechanical or chemical methods.

D. Rotation Grazing

Where rotation grazing is to be practiced, pastures shall be sub-divided into plots that will provide removal of forage within fourteen days or less and provide a recovery period. Maintain 4"-6 of top growth by rotating pastures; supplementing pasturing with hay or silage, as needed.

JOB SHEET MA-111 2.

E. Continuous Grazing

Continuous grazing is defined as grazing the same area for more than two continuous weeks and to a height not less than specified. Orchardgrass, bluegrass and prostrate type birdsfoot trefoil (Empire variety) may be grazed continuously during the normal grazing season providing that bluegrass and birdsfoot trefoil are not grazed closer than 2-1/2 inches and orchardgrass not closer than five inches. With the exception of Reed canarygrass, continuous grazing of other species in Item B above will result in lowered production and density of stands and is not acceptable. Reed canarygrass on poorly drained soil may be grazed continuously, provided it is not grazed closer than six inches.

Stage of Growth for Mowing or Rotation Grazing

Species	Harvest Periods	Rotating Grazing	Hay or Silage	Min. Height after cutting or grazing
Bluegrass	All	Begin when 4-5 inches high	Not generally used as such	1 to 2 inches
Orchardgrass	First	Begin when about 8 inches high and again between boot-early head stage	Boot to early head stage	2 to 3 inches
	Second	After 8-10 inches recovery growth	After 8-10 inches recovery growth	2 to 3 inches
Red and Alsike Clover	First	1/4 to 1/2 bloom	1/4 to 1/2 bloom	2 inches
	Second and later	1/4 bloom	1/4 bloom	2 inches
Timothy and Reed Canary-grass	First	Before jointing and between early to full head	Early to Full Head	2 to 3 inches
	Second and later	Before jointing and again when new basal sprouts appear at the soil surface	When basal sprouts appear at the soil surface	2 to 3 inches

JOB SHEET MA-111 3.

Stage of Growth for Mowing or Rotation Grazing (contd.)

Species	Harvest Periods	Rotating Grazing	Hay or Silage	Min. Height after cutting or grazing
Alfalfa	First	bud. to 1/10 bloom	Full bud. to 1/10 bloom	1 to 2 inches
	Second and later*	1/2 bloom or after a 5-6 weeks recovery period	1/2 bloom or after a 5-6 weeks recovery period	1 to 2 inches
Birdsfoot Trefoil	First	1/4 bloom	1/4 bloom	2 to 3 inches
	Second and later	1/4 bloom or after a 6-8 weeks recovery period	1/4 bloom or after a 6-8 weeks recovery period	2 to 3 inches
Ladino Clover	First	1/4 to 1/2 bloom or 8-10 inches high	1/4 to 1/2 bloom or 8-10 inches high	2 inches
	Second and later	1/4 to 1/2 bloom or 8-10 inches high. Rest for last grazing until 1/4 to 1/2 bloom and then graze after the first hard freeze.	Same as for grazing	2 inches

*Do not cut or graze between September 1 and October 15.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Cooperator's Name: L. STEVENS
Assisted by: DU. COUNTY

FORAGE BALANCE SHEET

MA-ECS-2
Rev. April 1982

TABLE 1 - Rotation Grazing

NUMBER OF ANIMAL UNITS PER ACRE OF PASTURE PER YEAR AND PER MONTH
(Decrease production by 1/3 for continuous grazing)

Type of Pasture	Total	Apr. Per A.	May Per A.	June Per A.	July Per A.	August Per A.	Sept. Per A.	Oct. Per A.
Permanent Pasture								
Poor	1.49		.45	.45	.3	.15	.1	.04
Average	3.27		1.1	1.1	.5	.3	.2	.07
Good	4.73		1.5	1.6	.8	.4	.3	.13
Ladino and Grasses								
Poor	4.35		1.1	1.4	.9	.4	.4	.15
Average	6.10		1.5	1.8	1.2	.6	.7	.3
Good	8.90		2.1	2.4	2.0	1.0	1.0	.4
Alf, Grass, Clover Mix								
Poor	2.75		.6	1.0	.4	.3	.3	.15
Average	4.65		1.2	1.5	.7	.4	.6	.15
Good	6.30		1.6	1.8	1.1	.6	.9	.3
Hay Aftermath								
Poor	0.75		-	-	-	.3	.3	.15
Average	1.50		-	-	.3	.4	.5	.3
Good	2.20		-	-	.5	.6	.7	.4
Sudan Grass								
Poor	2.20		-	-	.6	1.2	.4	-
Average	4.00		-	-	1.0	2.1	.9	-
Good	5.90		-	-	1.5	3.0	1.4	-
Rye								
Poor	1.8	.6	1.2	-	-	-	.15	.3
Average	2.7	.9	1.8	-	-	-	.3	.6
Good	3.6	1.2	2.4	-	-	-	.4	.9

Planned Pasture Production 1/

Field No.	Ac.	A	M	J	J	A	S	O
1	2		1.5 / 3.0	1.5 / 3.0	.9 / 1.8	.5 / 1.0	.5 / 1.0	.5 / 1.0
4,5,6	5½		1.5 / 8.3	1.5 / 8.3	1.0 / 5.5	.5 / 2.8	.5 / 2.8	.5 / 2.8
7	2		3.0	3.0	2.0	1.2	1.4	.6
Avail. A.U.M.			3/15.8	3/15.3	1.9/10.3	1.9/5.1	2/11.0	2/5.5
Avail. H.E. (AUM x 0.5)			1.8/6.4	1.5/26	.9/5.1	.5/2.5	.3/2.0	.1/1.3
Req. H.E. 2/								
Difference								

Total **

→ To show 'Now' and 'Future' figures, split box.

1/ Multiply pasture acres by appropriate factor from Table 1.

2/ For total H.E./m., divide total H.E./yr. by 12.

CROP ROTATION SCHEDULE & PRODUCTION

Field No.	Acres	Rotation	Years* 19__	19__	19__	19__	19__	19__
			NONE					
Tons of Silage Prod.								
Silage HE Factor (X)			.33	.33	.33	.33	.33	.33
Silage Hay Equiv.								
Hay Prod. (Tons)								
Total Prod. HE								

** Pasture	
Now	Futur

*Use top of box for crop and bottom for yield; i.e. C / 20 T

CURRENT AVAILABLE FEED & FORAGE

Source	Hay	Silage 1/ T/3 = HE	Pasture 2/ AUM/2 = HE	Total HE Available
HE Available			Now / Future	
JAN.			0	
FEB.			0	
MAR.			0	
APR.			0	
MAY			1.5 / 6.4	
JUNE			1.5 / 7.6	
JULY			.9 / 5.1	
AUG.			.5 / 3.5	
SEPT.			.3 / 3.0	
OCT.			.1 / 1.3	
NOV.			0	
DEC.			0	

CURRENT LIVESTOCK COUNT (NUMBER OF ANIMALS)

Animal	Horse & 15 Sum 10 Cat			Total HE Needed	Surplus or Deficiency
HE Needed 3/					Now / Future
JAN.	2.0			2.0	-2.
FEB.	2.0			2.0	-2
MAR.	2.0			2.0	-2
APR.	2.0			2.0	-2
MAY	3.2			3.2	-1.7 / 4.2
JUNE	3.2			3.2	-1.7 / 4.4
JULY	3.2			3.2	-2.3 / 1.9
AUG.	3.2			3.2	-2.7 / -.7
SEPT.	3.2			3.2	-2.9 / -.2
OCT.	2.0			2.0	-1.9 / -.7
NOV.	2.0			2.0	-2
DEC.	2.0			2.0	-2

1/ 3 tons of silage can be substituted for one ton of good legume hay. (It is generally best not to replace hay entirely with silage.)

2/ One animal unit month (AUM) equals approximately 1/2 ton hay equivalent (HE).

One animal unit equals a 1000 lb. dairy cow or its equivalent.

One AUM is a measure of forage or feed required to maintain one animal unit for one month.

3/ Divided total HE needs per year per animal unit by 12 to get HE needed per month.

Notes:

Animal Units and Hay Equivalent Needs Per Year

Kind of Livestock	Animal Units	Total HE Needs Per Yr. (Tons)
Beef cow (with or without calf at side)	1.00	4.0
Dairy cow, dry (1000 lb.)	1.00	3.0
Dairy cow, producing milk	1.50	5.0
Bull - mature	1.00	2.0
Calf - weaned	.60	1.0
Steer - 1 yr. old	1.00	2.0
Horse, grown	1.25	2.5
Sheep	0.20	0.3

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AMHERST, MASSACHUSETTS

INFORMATION SHEET MA-78
May 1983

INOCULATING LEGUMES

General

Legume plants and certain bacteria have the ability to live in harmony for their mutual benefit. The legumes provide "room and board" for the bacteria and the bacteria take nitrogen from the air and make it available to the legumes for better growth. However, no one species of bacteria is compatible with all legumes and they may not be present in the soil where legumes are to be grown. The partners must often be introduced. The introduction consists of inoculating the legume seed with a culture of bacteria. While no one species of bacteria is suitable for all legumes, some can inoculate several. A few legumes such as alfalfa and crown-vetch, are benefited only by specific strains of bacteria which are of no value to other legumes. Extra care must be used to insure that the right inoculant is used on each legume.

Inoculant

The bacteria must be fresh. Some seeds are sold "pre-inoculated." The bacteria on these seeds are apt not to be viable depending on the time and condition of storage. It is better to do your own inoculation. Each package of inoculant has an expiration date printed on it and the inoculant should be used before the date specified. The inoculant must be mixed thoroughly with the seed. Usually, the seed is moistened and the inoculant is then added as the seed is stirred. Small amounts of seed can be treated readily by gently shaking the seed and inoculant together in a jar or other small container. Large amounts can be mixed in tubs or drums.

Procedure

The following are some hints to insure better results when inoculating legume seeds:

Be sure that you have plenty of the right inoculant. Inoculant is cheap. Order it with your seed.

The use of a "sticker" agent to moisten the seed helps. Skim milk, thin syrup, soft drink, or starch solutions are often effective. Care should be taken not to add too much moisture and make the seed wet.

Plant the seed as soon as possible after inoculating it. Avoid a delay of more than a few hours after treating the seed. When inoculated seed must be stored, store it in a cool, dry, dark place. Small amounts of seed can be stored in a refrigerator (but not a freezer!) for several days. If in doubt, reinoculate treated seed that has been stored.

In an emergency, soil that is growing (or has recently grown) a legume may be used as an inoculant providing the two legumes are in the same cross inoculation group. Use soil from the root zone. Results from this method are not as certain as those from a commercial inoculant.

Avoid combining inoculated seed with lime, superphosphate, or mixed fertilizer except where it is necessary to use a one pass operation with a hydroseeder. In these cases, inoculated seed may be combined with lime and fertilizer but the seed should not remain in the hydroseeder longer than four hours.

When seeding legumes with a hydroseeder, use four times the normal amount of inoculant.

Be sure that adequate amounts of lime and fertilizer have been applied to the soil. High nitrogen fertilizers should be avoided as they inhibit the ability of bacteria to "fix" nitrogen from the air. A pH close to neutral (6.5 to 7.0) is also important for good fixation.

The following table lists the legume inoculation groups.

LEGUME CROSS INOCULATION GROUPS

Alfalfa Group

Alfalfa
Sweetclovers:
  White
  Yellow

Clover Group

Alsike clover
Crimson clover
Red clover
White clover
Ladino clover

Cowpea Group

Cowpeas
Lespedezas:
  Common
  Korean
  Sericea

Field Pea and Vetch Group 1/

Field Peas
Garden peas
Vetches:
  Common
  Hairy

Bean Group

Garden beans
Navy beans
Kidney beans

Lupine Group

Blue lupine
White lupine
Yellow lupine

Soybean Group

All soybean varieties 1/

Specific Strain Group 2/

Birdsfoot trefoil
Big trefoil
Crownvetch
Black locust

1/ Some varieties of peas and soybeans show a variety preference. Specify the variety when ordering the inoculant for these legumes.

2/ Each legume in this group requires a different strain of bacteria. The strain for one legume is not suitable for another legume.

ORDER THE RIGHT INOCULANT WITH YOUR SEED.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AMHERST, MASSACHUSETTS

JOB SHEET MA-101
FEBRUARY 1976

SEEDING FORAGE CROPS

Good forage consists of a dense stand of adapted grasses and legumes which produce high yields of quality feed. Forage crops may be seeded in the early spring or late summer.

SPRING SEEDING

DESCRIPTION: Seedbed preparation is done in early spring and the seeding is made in late April or early May.

BENEFITS: Takes advantage of spring moisture, especially on land that is droughty. Usually a companion or nurse crop of oats is planted in the spring with the seeding. This can be harvested by cutting or pasturing.

SUMMER SEEDING

DESCRIPTION: Seedbed preparation is done during the summer months and the seeding is made in August.

BENEFITS: Weeds and unwanted grasses are more easily controlled. Especially suited to land too wet in spring for tillage operations.

JOB SHEET MA-101 2.

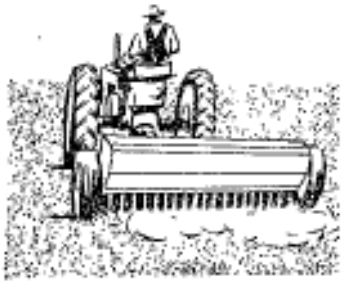
HOW TO DO IT

1. Make sure your fields have enough lime. Legumes, especially alfalfa, will not thrive on acid soil conditions. Fields may be tested for lime by sending or taking samples to: DUKES CO. EXTENSION

   Where lime is needed, apply it after plowing and harrow it in.

2. Prepare a good seedbed. Plowing, followed by harrowing is probably cheapest and best on non-stony fields that are level to gently sloping. On hilly or rough stony fields, use a bog harrow on the contour. This will keep the old vegetation at the surface as a mulch and will reduce soil and water losses. Start cultivation early enough to kill existing vegetation.

3. Apply adequate plant food by putting on 1400 lbs. of 10-10-10 per acre. Barnyard manure, if available, worked into the soil at least 10 tons per acre, is very valuable, especially on poorer fields.



4. Make a good seeding. Seed during 5 DAYS BEFORE JUNE 1 AUGUST 1 - SEPTEMBER 15 Seed shallow - on top of the ground is good. Inoculate all legume seeds. Cultipack or roll after seeding.

Seeding Mixtures

Field Nos. ALL ERO. - HEAVY WEAR AREAS		Field Nos. 1, 3, 4, 5, 6, 7, 9	
20 lbs/ac	KENTUCKY TALL FESCUE	10 lbs/ac	KENTUCKY BLUEGRASS
4 lbs/ac	CREEPING RED FESCUE	6 lbs/ac	TIMOTHY
3 lbs/ac	REDTOP	1 lbs/ac	LADINO CLOVER
2 lbs/ac	DUTCH WHITE CLOVER	lbs/ac	
5	DOMESTIC RYEGRASS		

JOB SHEET MA-101 3.

5. Protect the seeding. Keep livestock out until the ground has firmed the following year. Topdress steep areas with manure or other mulch material to reduce losses by erosion.

6. Maintain the seeding. Good production of desirable forage will require careful management.

   a. Apply 600 lbs. of 10-10-10 fertilizer annually as follows: SPLIT IN TWO APPLICATIONS, SPRING AND FALL

   b. Maintain 4"-6" of top growth by rotating pastures; supplementing pastures with hay or silage, as needed.

   c. Control weeds by clipping.

Prepared by: Technical Materials Committee, SCS, Amherst, Massachusetts.

Sheet #1

WOODLAND MANAGEMENT

SPECIES

The area is currently supporting a hardwood stand consisting primarily of red oak family and white oak trees. These species are acceptable growing stock suitable for continued growth and management on these soils.

SAMPLE TRANSECTS

Primary Stand

White Oak, Red Oak Family: 25 to 60% and 40 to 75% respectively

Diameter Range 4" - 8"

Secondary Stand

1" to 4" diameter, oak and beech at a moderate density

Understory: Huckleberry, blueberry and ferns in a dense growth pattern

TREATMENT

In the vicinity of transect 1 (T_1 on Plan Map) stand is overstocked by approximately 280 trees per acre, 377 trees per acre near T_2, 178 trees per acre near T_3 and 100 trees per acre near T_4. A thinning cut is recommended to bring the stand down to optimum density leading to an average spacing of 12 to 13 feet between adjacent trees. Remove doubles growing in clumps, diseased, dead and damaged trees as described on enclosed sheet entitled "Thinning Forest Stands".

Reduce stand to recommended density in two cuts removing half of totals recommended in each cut.

	present trees per acre	recommended trees per acre	surplus trees per acre
T_1	538	258	280
T_2	681	304	377
T_3	436	258	178
T_4	360	258	102

U.S. Department of Agriculture
Soil Conservation Service
Amherst, Massachusetts

Planning Guide Sheets
Woodland Interpretations
February 1983

Woodland Suitability Group 5s1

Woodland Suitability Group Description

In this group are deep, excessively drained and somewhat excessively drained, non-stony and stony, sandy and gravelly soils on slopes less than 45 percent. These soils have a poor productivity for woodland crops, but white pine and red pine will produce substantially more volume than will the hardwoods.

Management Problems and Hazards

Seedling mortality is a severe problem due to the droughty nature of these soils. On slopes over 15 percent, there is a moderate problem in the use of equipment, particularly timber-harvesting equipment.

Management and Treatments

Thinning, pruning, and weeding are desirable practices for white pine and red pine, but are not recommended for other tree species. Tree planting and site preparation for natural regeneration are desirable practices.

Suitability of Existing Trees and Trees to Plant

Trees that are preferred in naturally established stands are: White pine and red oak. Red pine plantations are desirable also.

Species of trees recommended for planting are: White pine.

Protection

Protection of tree stands from fire and grazing is a desirable practice. Firebreaks, access roads, the development of sources of water for fire-fighting, and livestock exclusion are desirable woodland protection measures.

Productivity Potential

The site index is: 1/

White Pine	-	50-60
Red Pine	-	50-60
Upland Oak	-	45-55

1/ Site Index is a measure of productivity that is expressed as height of dominant and co-dominant trees in fully stocked stands at age 50.

Soils in this Group are:

U.S. Department of Agriculture
Soil Conservation Service
Amherst, Massachusetts

Planning Guide Sheets
Woodland Interpretations
February 1983

Woodland Suitability Group 3o1

Woodland Suitability Group Description

In this group are very deep, well drained and moderately well drained, non-stony and very stony, acid soils on slopes less than 15 percent. They are among the most productive soils for woodland products. The soils do not have major limitations to restrict them for woodland management.

Management Problems and Hazards

These soils have only slight limitations for woodland management, but there is a moderate problem of plant competition when these soils are used for growing coniferous trees. Frost heaving may be a problem on some soils.

Management and Treatments

Because of the high productivity of these soils, intensive woodland management is justified. Thinning and weeding are necessary to insure high production of quality sawtimber. Pruning is desirable for white pine and red pine.

Suitability of Existing Trees and Trees to Plant

Trees to favor in management are: White pine, red oak, sugar maple, white ash, yellow birch, and hemlock.

Trees suitable for planting are: White pine, white spruce, red spruce, and hemlock.

Protection

Protection from fire and grazing is necessary for maximum production.

Productivity Potential

The site index is: 1/

White Pine	-	70-80
Upland Oak	-	65-75 a/
Northern Hardwoods	-	59-66

1/ Site Index is a measure of productivity expressed as height of dominant and co-dominant trees in fully stocked stands at age 50.

a/ 45-55 on Enfield soils.

Soils in this Group are:

Thinning Forest Stands

Why Thin

Desirable young stands develop when trees grow reasonably close to one another, encouraging straight stems, small side branches and natural pruning.

On the other hand, excessive competition between trees results in a poor stand with too many stems and individual trees that grow too slowly. Nature thins forest stands, but with no control over the kinds of trees which survive—their quality and numbers. Also, the trees which die are not harvested.

Artificial thinnings are recommended in immature forest stands: (1) to increase the growth rate of the remaining trees, (2) to improve stand quality by removing the crooked and coarse trees, (3) to reduce losses by natural mortality, and (4) to harvest more and better quality wood.

When To Thin

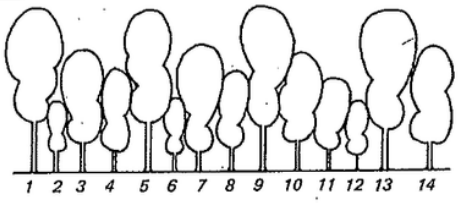
Start as soon as crop trees can be recognized and before live crowns have been reduced to less than 40 percent of tree height. Most stands need a first thinning when trees reach 5 to 8 inches in diameter, often before they are large enough for saw timber use.

In well-stocked stands on loamy soils, the first thinning should be made when the stand is 25 to 30 years old. Then thin every 5 to 10 years until final harvest.

What To Thin

Thin immature even-aged and uneven-aged stands or even-aged groups in uneven-aged stands. Take out trees to reduce crowding and, when possible, concentrate on removing: (1) trees with defects—rot, disease, insect damage, large heavy limbs, (2) trees of poor form—crooked, forked, or trees with thin, narrow crowns which may damage the remaining trees, (3) trees of inferior species.

Thinning is not just the removal of poor trees, however. Stands, or parts of stands consisting solely of good species and trees of good form may still require thinnings. In such cases, spacing and tree vigor are the primary factors.



CROWN CLASSES

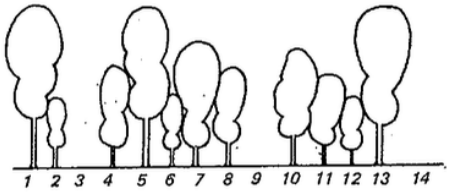
Dominant	*1, 5, 9, 13*
Co-dominant	*3, 7, 10, 14*
Intermediate	*4, 8, 11*
Suppressed	*2, 6, 12*

Thinning Methods

Crown Thinnings: The principle here is to thin from the top down, removing poorer trees in the more dominant crown classes to favor other stems that have better form and will become more desirable crop trees. Look up—not down. Many stands have some coarse, dominant trees containing merchantable material which will not mature into high-quality stems. These should be removed to stimulate growth of neighboring trees of better form.

Advantages: (1) The final crop will be of higher quality, (2) Some of the final crop trees will be larger, (3) First thinnings will be of bigger material, and will be more profitable than if thinned by the low thinning method, (4) Fewer stems have to be removed to benefit those remaining.

NOTE: This method may convert an even-aged stand to an uneven-aged stand.

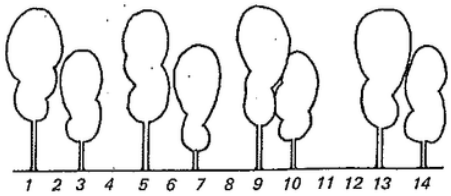


Stand remaining after a crown thinning. Trees 3, 9 and 14 have been removed.

Low Thinnings: With this method, the stand is thinned from the bottom up, removing overtopped trees and smaller, less dominant trees of the main crown canopy which are being crowded out. Overtopped trees are eliminated first, but when heavier thinnings are warranted (as is usually the case), less aggressive trees in the upper crown classes are also taken, leaving the strongest, thriftiest trees to form the crop.

Advantages: (1) Less damage results when smaller trees are removed, (2) Less skill is required to select trees for removal, (3) This method may eventually lead to even-aged management, which may or may not be an advantage.

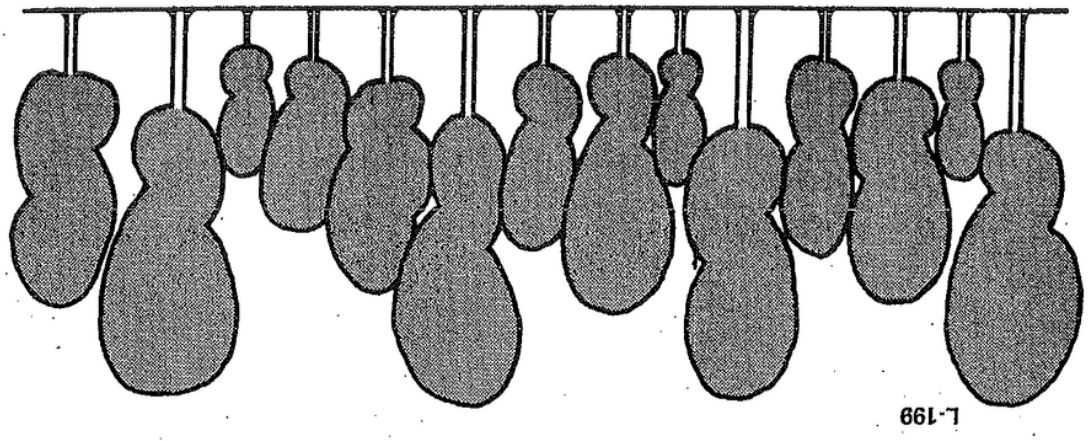
Disadvantages: (1) Early thinnings may not yield merchantable products, (2) Low thinning is not well adapted to stands with numerous, coarse, poor-quality dominants.



Stand remaining after a low thinning. Trees 2, 4, 6, 8, 11 and 12 have been removed.

Cooperative Extension Service, University of Massachusetts, United States Department of Agriculture and County Extension Services cooperating.

Thinning Forest Stands



L-199

What To Leave

Good trees of high-value species.

Good trees of less valuable species when high-value ones are not present.

"Fillers," to maintain adequate stand density.

It may not be possible to select final crop trees at the first thinning, but it is always possible to leave better trees after any thinning.

How To Thin

Examine the stand tree by tree, and decide which are the more desirable stems. Then cut or kill those trees which seriously interfere with the better trees.

Do not reduce the stand to the final crop in one cutting early in its life—use a series of cuttings over a period of years.

As there is no good rule for the spacing of trees, thinning should be done on the basis of space available for crown development. Thin so that sunlight penetrates between the tops of trees remaining in the stand. Thinning so that crowns will close in 5 to 10 years will restrict the development of heavy limbs in remaining trees. When crowns have closed, thin again.

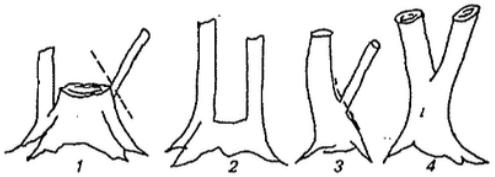
When a stand contains pruned trees, thin to favor them. Heavier thinnings are desirable when trees have been pruned.

In thinning practice:

Favor seedlings over sprouts.

Favor single rather than multiple sprouts.

Favor sprouts from small rather than large stumps.



1. Favor the low sprout—cut the high one.
2. On low union sprouts, cut the poorer.
3. On high union forks, stems less than 3 inches in diameter be removed with a flush cut.
4. On high union forks with all stems over 3 inches in diameter, cut all or none.

Tools For Thinning

The axe and chain saw are both useful tools for thinning. Herbicide chemicals may also be used when trees are to be killed but not removed. Be sure to check current state regulations and chemical labels before using herbicides. Current information is available from: Pesticide Board, Department of Food and Agriculture, 100 Cambridge Street, Boston, MA 02202.

Expected Returns

First thinnings made in young stands of small trees often result in no financial returns, but they insure a faster-maturing and more valuable crop later. However, the rising cost of fuelwood has made many thinnings merchantable.

Subsequent thinnings should yield merchantable material and return a profit.

The final crop will also attain maturity more quickly, and trees will be larger and of better quality. The total volume of wood harvested during the life of the stand will be increased by 30 to 40 percent, and income will be realized periodically over the years, rather than only at the time of final harvest.

Further Assistance

Check with your local County Extension agent or Service Forester for additional information on thinning and markets for thinnings.

Available to the Public without Regard to Race, Color or National Origin

Issued by the Cooperative Extension Service, R.S. Whaley, Director of Extension, in furtherance of the Acts of May 8 and June 30, 1914; University of Massachusetts United States Department of Agriculture and County Extension Services cooperating

Revised, 1979, by Richard J. Meier, Extension Forester Department of Forestry and Wildlife Management

J769: 5/80—5M

U. S. Department of Agriculture
Soil Conservation Service

MA-ENG-23
Revised October 1977
(File Code ENG-11)

WATERWAY OR DIVERSION DATA SHEET

Calculated CG & WMW, 8/ /93 Landuser Stevens

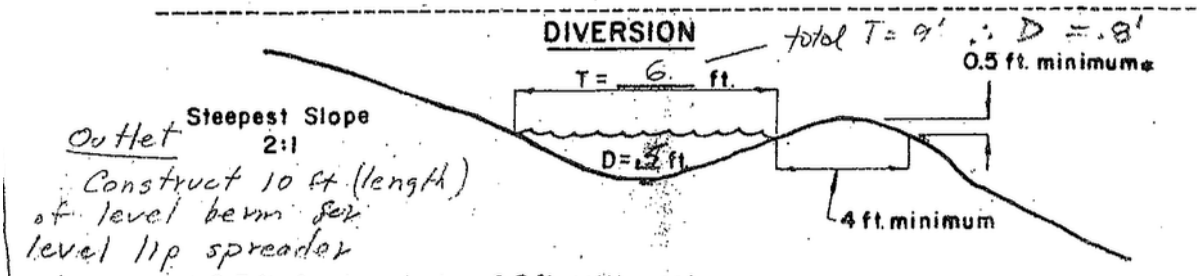
Checked _____, / / Location Oak Grove

Approved WMW, 8/30/93 Field _____

Stations	From ------				
	To ------				
Length, ft. ----------					
Soils – Evesboro Loamy Sand H.S.G. = A - use curve 60	Q_{10} = 1.5 CFS				
Permissible velocity (fps) (Table 9-2, EFM) ----------	1.5 FPS				
Design slope (S) (%) ---------- end @ 7.00 / 2 = 155 ft. begin 4.44 / 155 = .016	1.6 %				
Required design capacity (Q) (cfs) (From RTSC-NE-ENG-230) ----------	1.5 cfs				
Top width (T) (ft.) ----------	6				
Depth (D) (ft.) ----------	0.5	+.3' freeboard added 3' in ...			
Velocity (fps) ----------	1.5				

DESIGN CROSS-SECTIONS

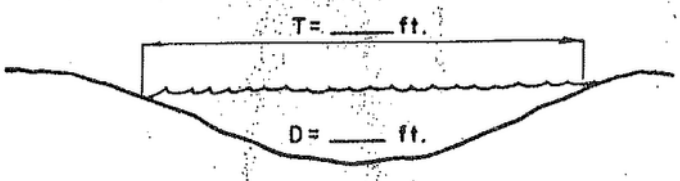
DIVERSION



Outlet Construct 10 ft (length) of level berm for level lip spreader

*0.3 ft. freeboard plus 0.2 ft. settlement

VEGETATED WATERWAY

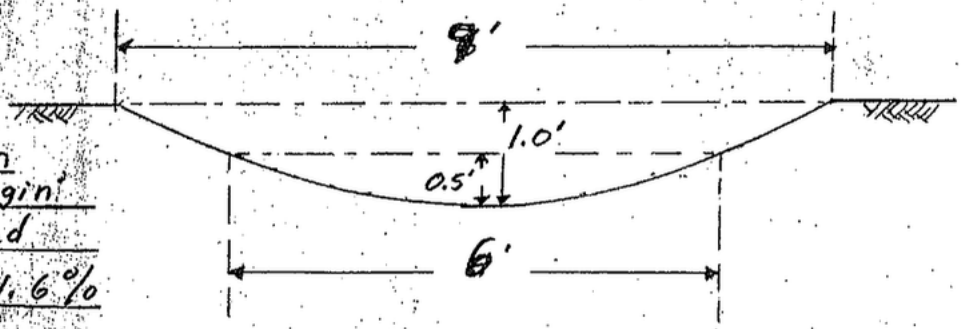


(See design chart on reverse side)

Location Map

Design Data

Drainage Area 1.0 acre
Design Storm 10yr/24hr
Design Discharge 1.3 c.f.s.
Channel Slope.
maximum 4.5 %
minimum 0.25%
Design Slope = 1.6%



Station
From Begin'
To End
Slope 1.6%

Typical Cross Section

Top Width 6'
Depth 1.0'

Install Level Lip Spreader at End. See Sheet 2

Lynn Stevens
Farmstead Diversion

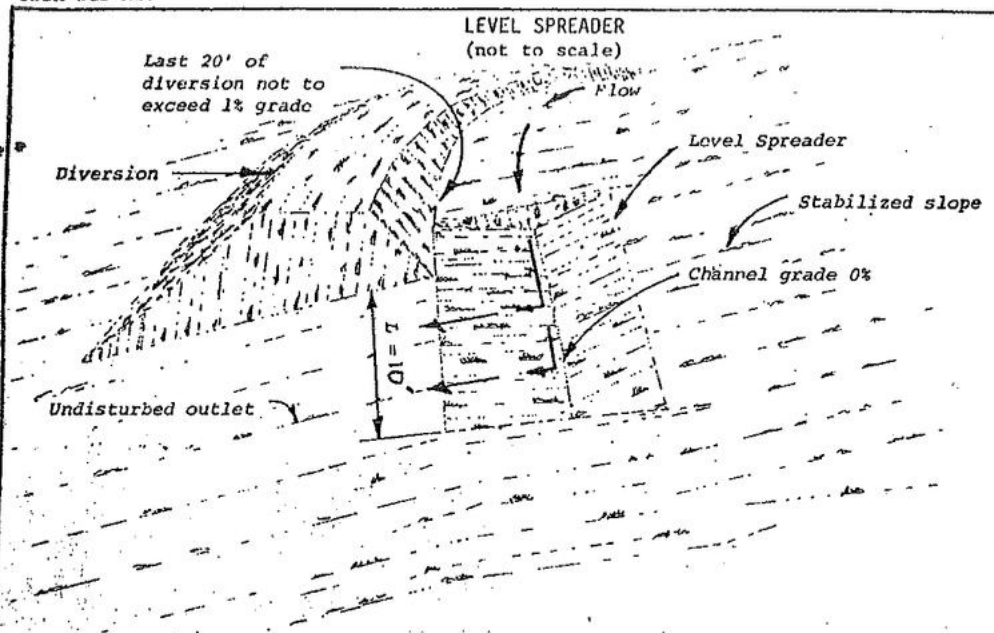
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

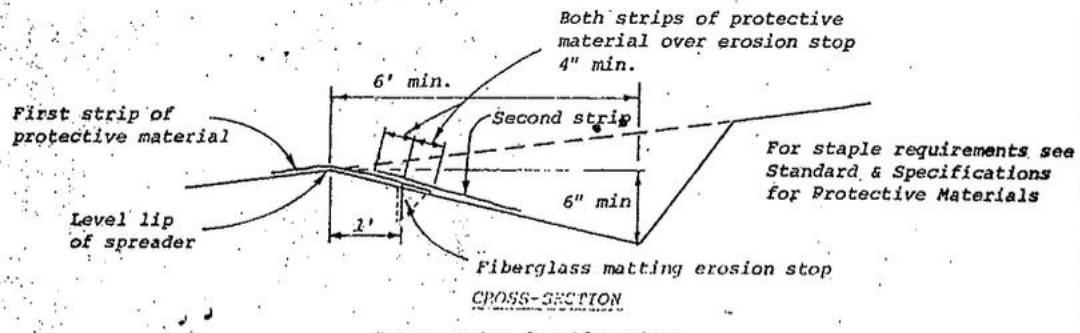
Date
Designed
Drawn
Traced
Checked
Approved by
Title
Sheet No. 1 of 2
Drawing No.

Construction Specifications Attached

USDA-SCS-Md. July 1975

LEVEL SPREADER
(not to scale)





CROSS-SECTION

Construction Specifications

1. Level spreaders shall be installed under the direct supervision of the Engineer.
2. Construct level lip on zero percent grade to insure uniform spreading of sediment-free runoff (converting channel flow to sheet flow).
3. Level spreader shall be constructed on undisturbed soil (not on fill).
4. A fiberglass matting erosion stop shall be placed vertically and at least six inches deep in a slit trench one foot back of the level lip and parallel with the lip. This erosion stop shall extend the entire length of the level lip and shall be trimmed after backfilling with tamped soil so that the upper edge is flush with the soil surface.
5. The entire level lip area shall be protected by placing two strips of jute or excelsior protective material as shown in the Standard Drawing LS-1.
6. The entrance channel shall not exceed a 1% grade for at least 20 feet before entering spreader.
7. Storm runoff converted to sheet flow shall outlet onto stabilized areas. Water shall not be reconcentrated immediately below the point of discharge.
8. Periodic inspection and required maintenance shall be provided.

Standard Symbol L=10'

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	LEVEL SPREADER	Standard Drawing LS-1

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AMHERST, MASSACHUSETTS

INFORMATION SHEET MA-21 (Rev. 1)
FEBRUARY 1976

DIVERSIONS

Diversions are broad shallow channels built across sloping land to catch surface water. Like a gutter on a roof, they intercept water running down a slope and lead it across the slope to an outlet where it can do no damage.

BENEFITS: Diversions protect soil, water, and plant resources by:

1. Preventing excessive loss of soil, seed, and fertilizer by erosion.
2. Improving drainage on land below the diversion.
3. Protecting property and facilities from flooding.
4. Conserving water.
5. Preventing siltation caused by erosion.
6. Preventing pollution.

USES: Farmers, landowners, and developers have found many uses for diversions including:

1. Breaking up long slopes to prevent excessive accumulation of run-off water.
2. Protecting steep areas from gullying by intercepting water from the slopes above.
3. Protecting low-lying land from run-off water from surrounding slopes.
4. Protecting buildings, roads, and other property from damage by run-off water from surrounding slopes.
5. Increasing or decreasing the amount of water flowing to ponds.

INFORMATION SHEET MA-21 (Rev.) 2.

CONSTRUCTION

Diversions can be built with a tractor and plow on gentle slopes. It is better to use a bulldozer or grader on steeper slopes.

Diversions have a broad shallow channel with a low, wide dike on the downhill side. The depth, width, and grade of the channel depend on the amount of water it is required to carry. The grade in the channel is very flat so water will flow slowly and not erode the channel bottom. They are generally spaced about 200 to 400 feet apart, depending on local conditions.

PROTECTING THE DIVERSION

A filter strip of sod 35 feet in width above the centerline of the channel should be established and maintained. This filter strip, the channel, and the dike should be limed, fertilized and seeded as soon as possible after construction is completed. Annual fertilization of the sod to maintain a good cover will protect the diversion from soil which might be washed down the slope from the areas above.

THE OUTLET

A stable outlet for the diversion is needed. Sometimes a grassed waterway or draw is available. A permanent pasture or ungrazed woods sometimes makes a good place to spread the water. If necessary to construct an outlet, it should be built and seeded with sod-forming grasses about a year before the diversion is built.

MAINTAINING THE DIVERSION

The diversion should be protected from damage by livestock, people and/or equipment.

Farm roads crossing a diversion should be carefully planned so that the water in the channel is not obstructed. Stone paving or bridges may be needed.

The diversion should be mowed to control brush and weeds that may impede flows.

For further assistance and details, contact the technicians assisting your Conservation District.

Prepared by: Technical Materials Committee, SCS, Amherst, Mass.

USDA-SCS
SCS-CONS-68
REV. 7-72

RECORD OF COOPERATOR'S DECISIONS
AND PROGRESS IN APPLICATION

COOPERATOR Lynn Stevens
ASSISTED BY W.M.Wilcox
DATE August 1983

FIELD NO.	PLANNED AMOUNT	PLANNED YEAR	APPLIED AMOUNT	APPLIED MONTH AND YEAR	LAND USE AND TREATMENT
1			3 AC.		PASTURE 14.5 AC.
2			1/2 AC.		These fields will be managed for production of forage for horses. The fields are currently supporting a stand of fescue, bluegrass, some white clover and native grass species.
3			1/2 AC.		
4			3/4 AC.		
5			3/4 AC.		
6			2 AC.		
7	2 AC.				Pasture Management
9	5 AC.				Rotate stock among fields to reduce overgrazing Mow for weed and brush control and to promote uniform grazing. Mow a strip every few days for most uniform use of pastures.
					Drag pastures to break up droppings to reduce parasite problem and encourage uniform grazing.
					Top dress the pastures regularly with lime and fertilizer as indicated by soil test. See sheet Ma 101 for recommended fertilizer applications in lieu of soil test. Manure may be top dressed in lieu of chemical fertilizer.
					Pasture Planting
					Fields are drouthy with slopes ranging up to 8 percent. See alternatives section for recommended treatment.
					Re-seed areas around gates, along fences and other heavily used areas as described on attached sheet Ma 101.
					Use unpalatable grasses to maintain a strong stand.
					CRITICAL AREA PLANTING
2	1/2 AC.				This area currently receives runoff from HQ area and is washing. Re-seed with a wear resistant erosion control mixture as described on attached sheet Ma 101.
					DIVERSION AND GRASSED WATERWAY 200 feet
HQ					Provide a runoff diversion to direct water away from Field 2. See attached Sheet Ma-ENG-23 entitled Waterway or Diversion Data Sheet for description. Contact this office for layout assistance when ready to proceed.
					WOODLAND MANAGEMENT 8.5 acres
8	8.5 AC.				This field currently supports a pole stand of black oak family and white oak trees.The stand is currently overstocked and would benefit

DUKES CONSERVATION DISTRICT

Box 1013 Edgartown, Massachusetts 02539

COOPERATIVE AGREEMENT

I am interested in conserving the natural resources on my property. I therefore desire assistance in establishing conservation measures which will accomplish these objectives.

I will cooperate with the Dukes Conservation District in establishing recommended measures which will be based on the characteristics of the land itself and my particular needs.

The District governing body agrees to furnish consulting technical assistance in order for the landowner to carry out the above-mentioned objectives.

The furnishing of the technical assistance will be dependent upon the manpower resources available to the District and the operating policies of the District.

This agreement will remain in effect unless terminated in writing by either party and will be automatically canceled in case of sale or death.

William Stevens
Landowner

25
Acreage

RFD Barnes Rd V.H.
Island Address

Same
Winter Address

Date March 9, 1981

Elida R. Smith
District Chairman

Appendix G: Soils

inch thick. The subsoil is about 26 inches thick. The upper 10 inches of the subsoil is strong brown loamy coarse sand, and the lower 16 inches is brownish yellow coarse sand. The substratum is light yellowish brown coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Eastchop, Haven, Klej, and Riverhead soils. Also included are soils that have a subsoil and substratum of gravelly coarse sand and small areas of soils with slopes of 3 to 8 percent. Included areas make up about 20 percent of this unit.

The permeability of this Carver soil is very rapid throughout. Available water capacity is very low. This soil is droughty in late summer. The depth to the seasonal high water table is more than 6 feet.

Most areas of this soil are in woodland. Some areas are in cropland, and some are in residential development.

This soil is poorly suited to cultivated crops and hay and pasture because of the very low available water capacity. Mixing crop residue and manure into the surface layer helps to retain the limited available water, maintain tilth, and increase the organic matter content. The use of proper stocking rates and deferred and rotational grazing help to maintain desirable pasture plant species.

This soil is poorly suited to woodland productivity because of droughtiness. Thinning crowded stands, especially those that contain undesirable species, will help to increase growth of desirable species. The common trees on this soil are pitch pine, scrub oak, scarlet oak, black oak, and white oak.

This soil has few limitations for use as a site for buildings with or without basements. The droughtiness of this soil is a limitation for lawns, shallow-rooted trees, and shrubs. Adding a layer of topsoil and frequent watering during dry periods will help to overcome this limitation. In some areas this soil does not adequately filter effluent from septic tank absorption fields, causing a hazard of pollution to ground water. Low density housing reduces the volume of effluent, thus lessening the pollution hazard.

This soil is in capability subclass IVs.

CeB—Carver loamy coarse sand, 3 to 8 percent slopes. This soil is very deep, gently sloping, and excessively drained. It is in large, broad areas on the outwash plain and terminal moraines, mostly in the northern, central, and eastern parts of Martha's Vineyard. The areas of this soil are irregular in shape and range from 5 to 1,000 acres. They make up about 15 percent of the survey area.

Typically, the surface layer is dark grayish brown loamy coarse sand about 3 inches thick. The subsurface layer is light brownish gray loamy coarse sand about 1 inch thick. The subsoil is about 26 inches thick. The upper 10 inches of the subsoil is strong brown loamy coarse sand, and the lower 16 inches is brownish coarse sand. The substratum is light yellowish bro coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small area Eastchop, Haven, Klej, and Riverhead soils. Also included are soils that have a subsoil and substrat gravelly coarse sand and small areas of soils with of 0 to 3 percent and 8 to 15 percent. A few small generally at the base of swales, have a redder sub and substratum than this Carver soil has. Included make up about 20 percent of this unit.

The permeability of this Carver soil is very rapid throughout. Available water capacity is very low. Tl is droughty in late summer. The depth to the seasc high water table is more than 6 feet.

Most areas of this soil are in woodland. Some ar are in cropland, and some are in residential development.

This soil is poorly suited to cultivated crops and I and pasture because of the very low available wate capacity. Mixing crop residue and manure into the surface layer helps to retain the limited available wa maintain tilth, and increase the organic matter cont The use of proper stocking rates and deferred and rotational grazing help to maintain desirable pasture plant species.

This soil is poorly suited to woodland productivity because of droughtiness. Thinning crowded stands, especially those that contain undesirable species, v help to increase growth of desirable species. The common trees on this soil are pitch pine, scrub oak scarlet oak, black oak, and white oak.

This soil has few limitations for use as a site for buildings with or without basements. The droughtine this soil is a limitation for lawns, shallow-rooted tree and shrubs. Adding a layer of topsoil and frequent watering during dry periods will help to overcome th limitation. In some areas this soil does not adequate filter effluent from septic tank absorption fields, cau a hazard of pollution to ground water. Low density housing reduces the volume of effluent, thus lessen the pollution hazard.

This soil is in capability subclass IVs.

CeC—Carver loamy coarse sand, 8 to 15 perce slopes. This soil is very deep, strongly sloping, and excessively drained. It is on small hills and ridges or moraines and on the side slopes of swales on the outwash plain. Most areas are in the northern and eastern parts of Martha's Vineyard. The areas of thi are irregular in shape and range from 5 to 200 acres They make up about 7 percent of the survey area.

Typically, the surface layer is dark grayish brown loamy coarse sand about 3 inches thick. The subsu layer is light brownish gray loamy coarse sand abou inch thick. The subsoil is about 26 inches thick. The upper 10 inches of the subsoil is strong brown loam

coarse sand, and the lower 16 inches is brownish yellow coarse sand. The substratum is light yellowish brown coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Riverhead and Klej soils. Also included are soils that have subsoil and substratum of gravelly coarse sand and small areas of soils with slopes of 3 to 8 percent and 15 to 30 percent. Some small areas, generally at the base of swales, have a redder subsoil and substratum than this Carver soil has. Included areas make up about 25 percent of this unit.

The permeability of this Carver soil is very rapid throughout. Available water capacity is very low. This soil is droughty in late summer. The depth to the seasonal high water table is more than 6 feet.

Most areas of this soil are in woodland. Some areas are used for pasture and hay, and some are in residential development.

The very low available water capacity, slope, and a hazard of erosion make this soil generally unsuitable for cultivated crops and hay and pasture.

This soil is poorly suited to woodland productivity because of droughtiness. Thinning crowded stands, especially those that contain undesirable species, will help to increase growth of desirable species. The common trees on this soil are pitch pine, scrub oak, scarlet oak, black oak, and white oak.

Slope limits the use of this soil as a site for buildings; land shaping is generally needed. Establishing plant cover as soon as possible helps to control erosion on slopes at construction sites. This soil is limited as a site for septic tank absorption fields because of the slope and because in some areas the soil does not adequately filter the effluent, making pollution of ground water a hazard. Low density housing reduces the volume of effluent, thus lessening the pollution hazard. Installing septic tank distribution lines on the contour or in areas that were graded during construction will help to overcome the slope.

This soil is in capability subclass VIIs.

CeD—Carver loamy coarse sand, 15 to 25 percent slopes. This soil is very deep, moderately steep, and excessively drained. It is on hills and ridges on moraines and on the side slopes of swales on outwash plains. The areas of this soil are irregular in shape and range from 5 to 50 acres. They make up about 2 percent of the survey area.

Typically, the surface layer is dark grayish brown loamy coarse sand about 3 inches thick. The subsurface layer is light brownish gray loamy coarse sand about 1 inch thick. The subsoil is about 26 inches thick. The upper 10 inches of the subsoil is strong brown loamy coarse sand, and the lower 16 inches is brownish yellow coarse sand. The substratum is light yellowish brown coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are areas of Riverhead, Klej, Pompton, and Berryland soils. Also included are areas of soils that have a subsoil and substratum of gravelly coarse sand and soils with slopes of 0 to 3 percent and 8 to 15 percent. Included areas make up about 25 percent of this unit.

The permeability of this Carver soil is very rapid throughout. Available water capacity is very low. This soil is droughty in late summer. The depth to the seasonal high water table is more than 6 feet.

The very low available water capacity, slope, and a severe hazard of erosion make this soil generally unsuitable for cultivated crops and hay and pasture.

Most areas are wooded, but the soil is poorly suited to woodland productivity because of droughtiness. Thinning crowded stands, especially those that contain undesirable species, will help the growth of desirable species. The hazard of erosion is a management concern, particularly in disturbed areas such as skid trails, landings, and access roads. Constructing access roads and trails at a slope of 2 to 10 percent and installing water bars will help to prevent erosion. The common trees on this soil are pitch pine, scrub oak, scarlet oak, black oak, and white oak.

Slope limits the use of this soil as a site for buildings; land shaping is generally needed. Establishing plant cover as soon as possible helps to control erosion on slopes at construction sites. This soil is limited as a site for septic tank absorption fields because of the slope and because the soil in some areas does not adequately filter the effluent, making pollution of ground water a hazard. Low density housing reduces the volume of effluent, thus lessening the pollution hazard. Installing septic tank distribution lines on the contour or in areas that were graded during construction will help to overcome the slope.

This soil is in capability subclass VIIs.

ChB—Chilmark sandy loam, 3 to 8 percent slopes. This soil is very deep, gently sloping, and well drained. It is on small hills and knolls in the western part of Martha's Vineyard. The areas of this soil are irregular in shape and range from 3 to 50 acres. They make up less than 1 percent of the survey area.

Typically, the surface layer is very dark grayish brown sandy loam about 8 inches thick. The subsoil is yellowish brown and strong brown sandy loam about 27 inches thick. The substratum extends to a depth of 60 inches or more. It consists of multicolored, firm layers of silty clay, sandy clay loam, and silty clay loam.

Included with this soil in mapping are areas of Eastchop, Nantucket, and Moshup soils. Also included are small areas of soils with slopes of 0 to 3 percent and 8 to 15 percent. Included areas make up about 25 percent of this unit.

The permeability of this Chilmark soil is moderately rapid in the subsoil and slow in the substratum. Available

slopes of 3 to 8 percent. In a few areas stones and boulders cover 1 to 3 percent of the surface. Included areas make up about 30 percent of this unit.

The permeability of this Ridgebury Variant soil is slow to moderate in the subsoil and slow or very slow in the substratum. Available water capacity is high. A seasonal high water table is at or near the surface in late fall, in winter, in spring, and after periods of heavy rainfall.

Most areas of this soil are in woodland. Some areas are used for pasture.

This soil is suited to cultivated crops. The seasonal high water table is the main limitation. Surface drainage, diversions, or tile drains or a combination of those practices will help to remove the excess water. Conservation tillage and mixing crop residue and animal manure into the soil will help to improve tilth.

This soil is suited to grasses and legumes for hay and pasture. Because of the seasonal high water table, drainage generally is needed and water-tolerant plants are generally more suitable. Using proper stocking rates, rotational grazing, and prevention of grazing when the soil is wet help to maintain desirable plant species and prevent surface-layer compaction.

This soil is poorly suited to woodland productivity. The seasonal high water table causes a high rate of seedling mortality. Low soil strength limits the use of equipment and restricts equipment use to periods when the soil is dry or frozen. The common trees on this soil are red maple and tupelo.

The seasonal high water table limits the use of this soil as a site for dwellings and septic tank absorption fields. The permeability in the substratum further limits the soil as a site for septic tank absorption fields.

This unit is in capability subclass IVw.

RsA—Ridgebury Variant fine sandy loam, 0 to 3 percent slopes, very stony. This soil is nearly level, very deep, and poorly drained and somewhat poorly drained. It is in depressions and low-lying areas adjacent to drainageways in the western part of Martha's Vineyard. Stones and boulders cover 1 to 3 percent of the surface area. The areas of this soil are irregular in shape and range from 5 to 40 acres. They make up less than 1 percent of the survey area.

Typically, the surface is covered with a 3-inch-thick layer of undecomposed and decomposed leaves and twigs. The surface layer is very dark gray fine sandy loam about 2 inches thick. The subsurface layer is light gray fine sandy loam about 5 inches thick. The subsoil is light olive brown, mottled silt loam about 5 inches thick. The substratum is light brownish gray and light olive brown, mottled, firm silty clay loam to a depth of 60 inches or more.

Included with this soil in mapping are areas of Whitman Variant and Moshup soils. Also included are areas of soils in which the upper part is loamy sand, sand, and gravelly material and small areas of soils with slopes of 3 to 8 percent. In a few areas stones and boulders cover 3 to 15 percent of the surface. Included areas make up about 30 percent of this unit.

The permeability of this Ridgebury Variant soil is slow to moderate in the subsoil and slow or very slow in the substratum. Available water capacity is high. A seasonal high water table is at or near the surface in late fall, in winter, in spring, and after periods of heavy rainfall.

This soil is poorly suited to cultivated crops and to hay and pasture. The seasonal high water table and the stones and boulders on the surface are the major limitations.

Most areas of this soil are wooded, but the soil is poorly suited to woodland productivity. The seasonal high water table causes a high rate of seedling mortality. Low soil strength limits the use of equipment and restricts equipment use to periods when the soil is dry or frozen. The common trees on this soil are red maple and tupelo.

The seasonal high water table limits the use of this soil as a site for dwellings and septic tank absorption fields. The permeability in the substratum further limits the soil as a site for septic tank absorption fields.

This unit is in capability subclass VIIs.

RvA—Riverhead sandy loam, 0 to 3 percent slopes. This soil is very deep, nearly level, and well drained. It is in large, broad areas on outwash plains in the central and southern parts of Martha's Vineyard. The areas of this soil are irregular in shape and range from 4 to 20 acres. They make up about 8 percent of the survey area.

Typically, the surface layer is dark grayish brown sandy loam about 4 inches thick. The subsoil is 20 inches thick. The upper 12 inches of the subsoil is yellowish brown sandy loam, and the lower 8 inches is yellowish brown loamy sand. The substratum is brownish yellow coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Carver, Haven, Klej, and Tisbury soils. Also included are small areas of soils with slopes of 3 to 8 percent. Included areas make up about 20 percent of this unit.

The permeability of this Riverhead soil is moderately rapid in the subsoil and very rapid in the substratum. Available water capacity is moderate. The depth to the seasonal high water table is more than 6 feet.

Most areas of this soil are in woodland. Many areas are in grassland, and some areas are in cropland. A few areas are used as homesites.

This soil is well suited to cultivated crops and to hay and pasture. Good tilth is easily maintained in cultivated areas, but the soil is droughty during periods of low rainfall. Incorporating crop residue into the soil and adding manure to the surface layer increase the organic matter content of the soil. The use of proper stocking rates, deferred grazing during wet periods, and rotational

grazing help to maintain the desirable pasture plant species.

This soil is well suited to woodland productivity. Removal or control of competing vegetation will help the survival rate of seedlings. The common trees on this soil are white oak, eastern white pine, scarlet oak, black oak, and red pine.

This soil is generally suitable as a site for buildings with or without basements. The soil in some areas does not adequately filter the effluent from septic tank absorption fields, causing a hazard of pollution to ground water. Low density housing reduces the volume of effluent, thus lessening the pollution hazard.

This soil is in capability subclass IIs.

RvB—Riverhead sandy loam, 3 to 8 percent slopes. This soil is very deep, gently sloping, and well drained. It is on broad, undulating areas and small hills on outwash plains in the central and southern parts of Martha's Vineyard. The areas of this soil are irregular in shape and range from 4 to 100 acres. They make up about 2 percent of the survey area.

Typically, the surface layer is dark grayish brown sandy loam about 4 inches thick. The subsoil is 20 inches thick. The upper 12 inches of the subsoil is yellowish brown sandy loam, and the lower 8 inches is yellowish brown loamy sand. The substratum is brownish yellow coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Carver, Haven, Klej, and Tisbury soils. Also included are a few areas of soils with slopes of less than 3 percent or 8 to 15 percent. Included areas make up about 20 percent of this unit.

The permeability of this Riverhead soil is moderately rapid in the subsoil and very rapid in the substratum. Available water capacity is moderate. The depth to the seasonal high water table is more than 6 feet.

Most areas of this soil are in woodland. Many areas are in grassland, and some areas are used for cropland. A few areas are used as homesites.

This soil is well suited to cultivated crops and to hay and pasture. Good tilth is easily maintained, but erosion is a hazard and the soil is droughty during periods of low rainfall. Incorporating crop residue into the soil and adding manure to the surface layer increase the organic matter content of the soil. The use of proper stocking rates, deferred grazing during wet periods, and rotational grazing help to maintain the desirable pasture plant species.

This soil is well suited to woodland productivity. Removal or control of competing vegetation will help the survival rate of seedlings. The common trees on this soil are white oak, eastern white pine, scarlet oak, black oak, and red pine.

This soil is generally suitable as a site for buildings with or without basements. The soil in some areas does not adequately filter the effluent from septic tank absorption fields, causing a hazard of pollution to ground water. Low density housing reduces the volume of effluent, thus lessening the pollution hazard.

This soil is in capability subclass IIs.

RvC—Riverhead sandy loam, 8 to 15 percent slopes. This soil is very deep, moderately sloping, and well drained. It is on small hills and ridges in the central and western parts of Martha's Vineyard. The areas of this soil are irregular in shape and range from 4 to 50 acres. They make up less than 1 percent of the survey area.

Typically, the surface layer is dark grayish brown sandy loam about 4 inches thick. The subsoil is 20 inches thick. The upper 12 inches of the subsoil is yellowish brown sandy loam, and the lower 8 inches is yellowish brown loamy sand. The substratum is brownish yellow coarse sand to a depth of 60 inches or more.

Included with this soil in mapping are small areas of Carver, Eastchop, Haven, Klej, and Tisbury soils. Also included are a few areas of soils with slopes of 3 to 8 percent or 15 to 30 percent. Included areas make up about 25 percent of this unit.

The permeability of this Riverhead soil is moderately rapid in the subsoil and very rapid in the substratum. Available water capacity is moderate. The depth to the seasonal high water table is more than 6 feet.

Most areas of this soil are in woodland. Some areas are in grassland, and some areas are in cropland. A few areas are used as homesites.

This soil is suited to cultivated crops and to hay and pasture. Good tilth is easily maintained, but erosion is a hazard and the soil is droughty during periods of low rainfall. Incorporating crop residue into the soil and adding manure to the surface layer increase the organic matter content of the soil. The use of proper stocking rates, deferred grazing during wet periods, and rotational grazing help to maintain the desirable pasture plant species.

This soil is well suited to woodland productivity. Removal or control of competing vegetation will help the survival rate of seedlings. The common trees on this soil are white oak, eastern white pine, scarlet oak, black oak, and red pine.

Slope is a limitation of this soil as a site for buildings, and land shaping is generally needed. Establishing plant cover as soon as possible helps to control erosion on slopes at construction sites. This soil is limited as a site for septic tank absorption fields because of the slope and because in some areas the soil does not adequately filter the effluent, making pollution of ground water a hazard. Low density housing reduces the volume of effluent, thus lessening the pollution hazard. Installing septic tank distribution lines on the contour or in areas that were graded during construction will help to overcome the slope.

This soil is in capability subclass IIIe.

Appendix H: Martha's Vineyard Commission Decision

Featherstone Farm
Appendix H

May 14, 1998

THE MARTHA'S VINEYARD COMMISSION

BOX 1447 • OAK BLUFFS
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Martha's Vineyard Commission Decision
Southern Woodlands District of Critical Planning Concern

Section 1.00 General

As authorized by Chapter 831 of the Acts of 1977, as amended (the Act), the Martha's Vineyard Commission (the Commission) hereby designates as a District of Critical Planning Concern (the District), the specific geographical areas hereinafter described, to be known as the Southern Woodlands District of Critical Planning Concern.

The Commission held a public hearing at 7:30 p.m. on April 23, 1998 at the Oak Bluffs Elementary School, Oak Bluffs, Massachusetts, on the proposed Southern Woodlands District after due public notice to the municipality, publications and notice required under the Act and Massachusetts General Laws, Chapter 30A, Section 2. The public hearing was held as required under the Act to permit the Commission to receive testimony relating to whether it should designate the proposed District as a District of Critical Planning Concern.

The Commission received a nomination by taxpayer petition from Theophilus Nix and others for inclusion of geographic areas into a District. At its March 19, 1998 meeting, the Commission voted to accept for consideration the nominated area.

Copies of the nomination and documents relating thereto and the area accepted for consideration are on file at the Commission Offices, Olde Stone Building, New York Avenue, Oak Bluffs, Massachusetts.

On Thursday, May 14, 1998, the Martha's Vineyard Commission voted to designate the nominated area as a District of Critical Planning Concern. Sections 8 through 11 of the Act provide the process for amending the boundaries, adoption of development guidelines and regulations of the District to which development must conform.

Section 2.00 Area Designated

Upon consideration of information submitted to it, the Commission's familiarity with the lands and waters of the District, oral and written testimony, and pursuant to the Act and the Commission's Standards and Criteria for Districts of Critical Planning Concern ("the Qualifications") adopted under the Act and appended hereto, the Commission makes findings herein and hereby designates the Southern Woodlands District with Defined Boundaries as follows:

All land and water included within and bordered by a line beginning at the southeasterly corner of the lands of the Town of Oak Bluffs located approximately 1,945 + or - feet from the intersection of County Road and the Edgartown-Vineyard Haven Road, thence northerly 2,293.4 + or - feet to the northeasterly corner of Lot 53, Map 43; thence westerly along the property line of said lot 1,340 + or - feet to the northwesterly corner of said Lot 43; and thence southerly 59 + or - feet; and thence northwesterly along the bounds of Lot 2, Map 42, 2,597.23 + or - feet; and thence southwesterly 729.53 + or - feet along the westerly bound of Lot 2, Map 42; and thence westerly along the southerly bound of Lot 7.7 some 213 + or - feet; and thence southerly along the westerly bound of Lot 10, Map 36 some 436 + or - feet; thence westerly along the northerly bound of Lot 2, Map 42 some 1,357 + or - feet; and thence southerly 240.16 + or - feet along the easterly bound of Lot 13, Map 36; and thence southwesterly along the bound of said Lot 13 some 131.96 + or - feet; and thence westerly along the southerly bound of said Lot 13 some 242.76 + or - feet to an intersection with the easterly bound of the R.O.W. of Barnes Road; and thence southerly 2,996 + or - feet along the easterly bound of said R.O.W. to the southwesterly bound of Lot 5, Map 41; and thence easterly along the southerly bound of said Lot 5 some 215 + or - feet to a juncture of said bound with Old Holmes Hole Road, so called; and thence easterly along said Old Holmes Hole Road, so called, to the intersection of the westerly bound of Lot 15, Map 49; and thence northeasterly along the northwesterly bound of Lot 15, Map 49 some 1,092.61 + or - feet; and thence southeasterly along the southwesterly bound of the lands of the Town of Oak Bluffs to the point of origin.

(Lot and Map refer to Assessors Maps 1998, Town of Oak Bluffs)

The Commission has prepared a descriptive map appended hereto as Appendix A for the general information of the public and the municipality. The boundaries of the Southern Woodlands District, as set forth above in this Decision, shall prevail over any map.

The Southern Woodlands District boundaries conform to Qualification Section 1.20. The Commission finds that the lands and waters therein reasonably belong within the Southern Woodlands District; that the lands and waters within the District are a critical area and that this area needs the protection afforded by the Act. The areas designated are a logical planning area and are suitable for the adoption of coordinated regulations for the District as a whole. Finally, the Commission finds that the boundaries of the Southern Woodlands District, as established, are both convenient and recognizable.

Section 3.00 Why the Area Has Been Designated

When designating a District, Section 8 of the Act requires the Commission to specify why the area is of critical concern to the region, the problems associated with uncontrolled or inappropriate development, and the advantages to be gained by the development of the area in a controlled manner. In designating a District, the Commission must also consider the need for designation, as required by Section 1.10 of the Qualifications. Information available to the Commission supports a finding that the Southern Woodlands District is of

regional importance, that there may exist problems of uncontrolled or inappropriate development within the District which would affect areas outside the District, and that there are advantages to be gained by development of the area in a controlled manner. The Commission specifically finds that controlled development of lands and waters within the Southern Woodlands District is necessary for the prevention of pollution of ground and surface waters in and around the District and the water quality of nearby bodies of water. In addition, lands and waters within and around the District support and affect important wildlife habitats and contribute substantially to the Island's wildlife, natural, scientific and ecological resources.

In considering the problems of uncontrolled or inappropriate development within the Southern Woodlands District, the Commission finds that so important are the values that these lands create and support, that to maintain and enhance the health, safety and general welfare of Island residents and visitors, and for present and future generations, special development controls within the District must be adopted.

In considering the advantages to be gained by development in a controlled manner, the Commission finds that development which conforms to the regulations to be established pursuant to the guidelines adopted by this Decision, will contribute much to solving any problems of inappropriate development.

The Qualifications require the Commission to address itself to the need for designation. To that end the Commission finds that there exists a regional need for special regulations and planning to protect the Island and its people from damage and loss resulting from inappropriate development. The Commission also finds after its review that present private and public regulations in the District cannot assure protection, and that damage to the Southern Woodlands District land and waters will be a substantial loss to the region or to two or more towns on the Island.

Section 4.00 What Kind of District

Section 8 of the Act permits the Commission to designate a District only in accordance with the Standards and Criteria approved under the Act. Such a District may be designated only for:

(a) an area which possesses unique natural, historical, ecological, scientific or cultural resources of regional or state-wide significance;

(b) an area which possesses marginal soil or topographic conditions which render it unsuitable for intense development; or

(c) An area significantly affected by, or having significant impact on an existing or proposed major public facility or other area of major public investment.

The Southern Woodlands District qualifies under the Specific Qualifications: Section 2.10, Section 2.40, Section 2.50 and Section 2.80 of the Standards and Criteria ("the Specific

Qualifications"). The Commission finds that the Southern Woodlands District meets Specific Qualifications as described herein.

Specifically, with respect to the first element of Section 8 of the Act, concerning unique, natural, historical, ecological, scientific, or cultural resources of regional or statewide significance, the Southern Woodlands District meets the Specific Qualifications of Section 2.10, the Drinking Water Resource District; Section 2.40, Wildlife, Natural, Scientific or Ecological Resource District; Section 2.50, Cultural or Historic Resource District; and Section 2.80, Hazardous District.

Section 4.10 Compliance with Standards and Criteria

Section 4.11 Drinking Water Resource District

Information presented at the public hearing and submitted with the nomination papers for the Southern Woodlands District indicates that the District overlays a segment of the Island's sole source aquifer and contains the zones of contribution[1] of two of the Town's major wells; the easterly third of the District lies within the zone of contribution for the Farm Neck well while a lesser portion of the westerly part of the District lies within the zone of contribution[2] of the Lagoon Pond well. As set forth in the Water Management Act of 1985, local water districts, such as the Oak Bluffs Water District, are required to make a good faith best effort to encourage towns to adopt by-laws that meet the drinking water standards and requirements that are set forth in said Act[3]. The purpose of these standards and requirements would be to protect the zones of contribution from pollution.

Section 4.12 Wildlife, Natural, Scientific or Ecological Resource District

While the Southern Woodlands have not been formally recognized by established environmental organizations as a unique wildlife or ecological region, it does contain a wide variety of animal and bird life in a relatively concentrated area. The large tracts of woodland contain habitat for forest interior bird species including woodthrush, oven bird, scarlet tananger and several hawk species. Among the mammals found in the area are deer and the ubiquitous skunk[4]. Development around and abutting the Southern Woodlands District has already altered and shrunk the habitat areas normally associated with species as found in the Southern Woodland District.

Section 4.13 Cultural or Historic Resource District

Testimony presented at the public hearing and other information available to the Commission suggests the significance of the Southern Woodlands in terms of the historic resources present, or potentially present. The District is laced with old trails ("ancient

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[1] Whitman and Howard, 1994, Zone II for Farm Neck well
[2] Whitman and Howard, 1995, Zone II for Lagoon Pond well
[3] Wm. Wilcox, 1998, personal communications
[4] Mammals on Martha's Vineyard, 1969, A. Keith, D.C.H.S.

ways" being the term used on the Island) that are remnants of the traveled ways that linked settlements in the colonial and pre-colonial eras. Among those which can be found are Chaise Road, the Road to Farm Neck and Old Holmes Hole Road. Such ways offer opportunities for travel from one location to another even today.

The Oak Bluffs Open Space Plan discusses the concern of the residents of the Town for these features and indicates an interest in the preservation of "ancient ways as a means of providing public access through the natural environment and further, an interest in securing public rights to a "cross Oak Bluffs Trail" which would connect the M.V. State Forest and several feeder trails with the downtown and harbor of the town[5].

According to the records of the Massachusetts Historical Commission, Native Americans were known to have had a settlement at the Head of Lagoon Pond which may have included a portion of the western part of the District[6].

Also there are indications that there may be animal or insect populations of historical or regional significance along or adjacent to the southerly bound of the District according to the records of the Massachusetts Natural Heritage Program[7].

Section 4.16 Hazardous District

The soils within the District are of such a composition as to be highly permeable and of low water capacity. Due to the droughtiness of this type of soil, particularly in late summer, the conditions are poorly suited for numerous activities, including cultivation of crops, woodland productivity, lawns, shrubs and shallow rooted trees[8]. The terrain ranges from gently sloping to pockets of moderately sloping land and as such requires careful consideration when placement of man-made structures is attempted.

The District is divided roughly one-third-two thirds by the watershed divides of the Lagoon Pond and Sengekontacket Pond. The western-most portion lies within the Lagoon Pond watershed while the remaining two-thirds, the easterly portion rests within the Sengekontacket Pond watershed. The potential impacts from improper development within the District could have an impact upon those surface water bodies in areas of high sensitivity, namely the poorly flushing thread of the Lagoon and the Major's Cove area of Sengekontacket.

Section 5.00 Guidelines

The Commission adopts the following guidelines ("the Guidelines") for the development of the Southern Woodlands District. In adopting the Guidelines, the Commission has

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[5] Town of Oak Bluffs, 1996, Open Space Plan
[6] Massachusetts Historical Commission, 1996
[7] Massachusetts Natural Heritage Program, 1988
[8] Soil Conservation Service, 1986, Soil Survey of Dukes County, Mass.

evaluated each of the considerations enumerated by Section 8 of the Act and, in addition, has considered other relevant matters.

The Town shall, in the manner required by the Act, adopt Regulations which at a minimum comply with these Guidelines for the development of the Southern Woodlands District. The Town may adopt such regulations under zoning, subdivision, health, general by-law, or any combination of such authorities that it deems best suited for the purposes of regulating developments within the District. The Commission draws the attention of Town officials to Section 10 of the Act which in part provides: "In adopting such regulations, the Town shall have all of the powers it otherwise had under the General Laws."

Goal

To permit the Town to evaluate the potential impacts of a proposed development for the purposes of creating a stewardship that makes careful use of the resources of the District in order to provide opportunities for appropriate development while maintaining water quality, prevention of pollution, promotion of habitat and maintaining and enhancing recreational and other uses of the District.

Section I Establishment of Guidelines

1. As used herein, the terms "development", "permit" and "regulations" shall have the same meaning as in the Act.

2. The Town shall adopt regulations of the types described in the Act, as appropriate to conforming to these Guidelines to control development within the Southern Woodlands District.

3. In appropriate cases, after notice and public hearing, the Martha's Vineyard Commission may permit a town to adopt regulations which are less restrictive than these Guidelines if the Commission finds that such regulations will carry out the purpose of the Act and the intent of these Guidelines for the District.

4. These Guidelines may be amended by the Commission after notice to the Towns and notice and a public hearing in the manner required by the Act.

5. Unless otherwise stated in these Guidelines, the regulations adopted pursuant to these Guidelines in no way alters the process for referral and review of Developments of Regional Impact according to the Act and the Standards and Criteria for Developments of Regional Impact of the Commission.

Section II. General Guidelines for the Southern Woodlands District

1a. The Town of Oak Bluffs shall develop a Resource Management Plan for the District within one year from the date of this Decision.

b. The Town shall appoint a committee, to include representatives of the Planning Board, Conservation Commission, Parks Department, citizens and any other committee or organization it deems appropriate to develop said Plan.

c. The Resource Management Plan for the Southern Woodlands shall, among other things, address the best means of permitting development to occur while assuring the continued viability and protection of the resources present and identified in the Plan. Specific issues to be addressed by the Plan are:

1. assessment of the natural and cultural resources of the District;
2. protection of drinking water and adjacent surface water resources;
3. identification and preservation of cultural and historical sites and values;
4. enhancement of recreational opportunities of both an active and passive nature;
5. consideration of the preservation of woodland landscape and habitat fragmentation issues as well as other land use impacts to habitats;
6. recognition of construction and landscaping limitations inherent in the soils and topography of the District;
7. consideration of alternative methods of development including flexible siting and cluster development in order to meet the goals of the District.

d. In conjunction with and as a part of the Resource Management Plan, the Board of Health, Planning Board, Conservation Commission and Board of Selectmen shall develop, where appropriate, regulations for the control of developments in the District; said regulations shall be consistent with the Resource Management Plan and the Guidelines contained herein.

2. Site Review Committee

a. By regulation the Town of Oak Bluffs shall establish a Site Review Committee whose membership shall be comprised of members taken from the Planning Board, Board of Health, Conservation Commission, Trails and By-ways Committee plus any other boards, committees, groups, or citizens that the Town deems appropriate.

b. Said Site Review Committee may, at its discretion, also consult with any or all of the following:

- Nature Conservancy
- Mass. Natural Heritage Program
- Mass. Historical Commission
- Conservation Coalition or any individual member groups thereof

- Land Bank
- member(s) of the Martha's Vineyard Commission

c. The regulations adopted shall provide that:

1. The Site Review Committee shall review all permit applications and accompanying information submitted by applicants seeking permits.

2. The Site Review Committee shall hold meetings with applicants and other interested parties, and shall report its findings and recommendations to the permit granting authority.

3. The regulations shall establish time limits in which the Site review Committee shall meet and act. The time within which the Site Review Committee shall meet and render its report may vary as to activity or use being reviewed.

4. The Site Review Committee shall advise the ~~permit~~ granting authority on those matters the permit granting authority is required to act upon. Such regulations shall also provide that failure of the Site Review Committee to have adopted a report within a specific timeframe shall be construed as a recommendation of approval. A report by the Site Review Committee, shall be filed in the Office of the Town Clerk, within the time specified.

5. The report of the Site Review Committee shall, among other things, advise the permit granting authority as to those issues enumerated in the Goals for the District and in the Resource Management Plan.

6. Membership terms shall be staggered and regulations shall provide for the filling of vacancies as they occur.

By vote of the Martha's Vineyard Commission
May 14, 1998

Linda B Sibley

Linda Sibley, Chair

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July 28, 1999

Adam R. Moore
Land Superintendent
Martha's Vineyard Land Bank Commission
P.O. Box 2057
Edgartown, MA 02539

ADAM,

Dear Mr. Moore:

Thank you for providing EOEA with the Draft Management Plans for the three MVLB Preserves at Wapatequa Woods, Featherstone Farm, and Chappy Five Corners. It is my pleasure to inform you that after review by the several EOEA agencies, I here-by approve these plans.

In the course of the review process, the Division of Fisheries and Wildlife's Natural Heritage Program noted the possibility at the Wapatequa Woods Preserve of more common wildlife or vegetation not identified in the NHESP records as rare or exemplary natural communities which might be adversely affected by the development of this site.

The Department of Environmental Management notes that DEM and DFWELE would benefit from a sharing the data being gathered on MVLB properties, including for example sharing of information with the Mass. Herpetological Atlas due out in October. Other areas of collaboration on the fine work being done within MVLB properties could include issues such as methods of monitoring of threatened plant and animal communities such as the Cedar Swamp complex. I attach here the comment letters of the reviewers for your information and use.

I look forward to the 1999 Annual Report on the accomplishments of the Land Bank Commission.

Very truly yours,

Bob Durand

ADAM, Thanks Again the governor is still talking about the great event on the island!

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