WORKING DRAFT NOVEMBER 2007

STEFANS FARM
LAND STEWARDSHIP PLAN




Prepared by:

Upton Land Stewardship Committee
(A Subcommittee of the Upton Conservation Commission)

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1. INTRODUCTION

The Stefans Farm property was purchased by the Town of Upton in 2003. This lovely parcel of land has a broad range of natural and historic features that make it a treasure for town residents and as such should be maintained, preserved and enjoyed. The farm consists of 126 acres located off Mechanic Street and Orchard Street (Figure 1). To partially defray costs of the purchase, 4 frontage lots (10 acres total) on Orchard Street are being sold for house lots.

The Land Stewardship Committee (LSC) is a subcommittee of the Upton Conservation Commission. The committee was established in 2006 to mange Upton conservation land and other town owned land as designated by the Upton Board of Selectmen. Committee members are recommended by the Conservation Commission and appointed by the Upton Board of Selectmen.

In November of 2006 the Board of Selectmen asked the Land Stewardship Committee to develop and implement a plan for the utilization of the Stefans property. This resulting plan is intended to guide stewardship of the property for the next 5 years.

2. GOAL

Develop a plan that enhances passive recreation, protects natural and historic resources, respects the historic character of the Stefans Farm landscape, and promotes good forest stewardship. The plan shall consider input from other town boards, including the Historical Commission, Recreation Commission, Board of Selectmen, and the public. It should be a measured plan that can be implemented by volunteer boards without excessive financial expenditures.

3. EXISTING RESOURCES AND LAND USE

This section provides an overview of what is known about resources on the site. Additional inventory work is needed to fully describe the resources.

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3.1 **General**

The current working name of the town--owned parcel is The Stefans Farm. It is located in northern Upton off Mechanic Street and Orchard Street (Figure 1). The area is within the Warren Brook Watershed and the Miscoe, Warren, Whitehall Watershed Area of Critical Environmental Concern (MWWW ACEC).

Stefans Farm consists of two parcels: A 112.6 acre parcel located to the west of Mechanic Street and a 8.5 acre parcel located east of Mechanic Street. A deeded access to the western parcel is provided by a 60 ft right of way on Mechanic Street and a 60 ft right of way on Orchard Street. The east parcel is accessible from Mechanic Street.

The west parcel is on George Hill, one of the highest hills in Upton. The top of George Hill is located on private property, just west of the Stefans property. The parcel is primarily upland wooded with deciduous vegetation. Much of the land has a slight to moderate slope. Five fields, with a total acreage of about 8 acres are present on the west parcel (Photograph 1 and Figure 2). The fields were last mowed in the fall of 2006 to clear encroaching trees and shrubs. They are vegetated primarily th grasses and herbaceous vegetation. Review of old aerial photographs indicate that about 1/2 of

Photograph 1: 2006 Pictograph of Stefans Fields (from Dodson Associates)

fields and pasture present in 1938 are now overgrown with trees ands shrubs (Photograph 2 and Figure 3). Approximately 5 acres of the western parcel is wetland according to MA DEP wetland maps (Figure 4). There are two potential vernal pools on the western parcel and several intermittent streams that ultimately flow into Warren Brook.

The eastern parcel is primarily field vegetated with grass (~3.5 acres). The parcel is fairly flat near Mechanic Street but is steeply sloped towards Warren Brook Most of the parcel is between Mechanic Street and Warren Brook, but a small portion is on the east side of the brook. Wetland and Riverfront resource areas occur on the parcel near Warren Brook. Warren Brook is a perennial stream and the riverfront zone extends 200 ft. from the normal high water mark.

3.2 **Geology and Soils**

George Hill is composed of bedrock overlain with glacial till. A USGS surficial geology map indicates the about half the western parcel is underlain by thin deposits (< 10-15 ft.) and half by deeper till deposits (Figure 5). Bedrock outcrops occur on the property, especially within the southern portion of the eastern parcel. Coarse glacial deposits (sands and gravels) underlay the eastern parcel.

Glacial deposits along Warren Brook are mapped as an aquifer (Figure 6). Water which infiltrates through the soil at Stefans recharges the Warren Brook aquifer and ultimately supports the Town of Upton Glen Avenue well field.

Soils as mapped by the NRCS are shown in Figure 6 and described in Table 1. Soils in the west parcel are primarily Paxton and Canton fine sandy loams. Soils in the east parcel are Canton fine

sandy loams, Hinckley sandy loams, and Swansea mucks. Most of the soils are very stoney and poorly suited for agriculture. The east parcel was used as a staging area during construction of a waterline and topsoil near Mechanic street was severely degraded.

Photograph 2: 1938 Aerial Photograph of Stefens Farm

3.3 **Biological Resources**

The Stefans farm provides habitat for a variety of plant and animals (see Appendix A for species list) Animals known or likely to occur on the Western parcel include coyote, white tailed deer, wild turkey, and eastern box turtle. The fields and edges provide breeding habitat for a variety of songbirds, including blue-winged warbler and indigo bunting. The fields also provide habitat for numerous butterflies, including the Baltimore Checkerspot (photo) and Pearl Crescent. Vernal pools provide habitat for wood frog and spotted salamander.

Forests are vegetated primarily with hardwoods, including red maple, oaks, ash, hickory, and aspen. White pine is also common. The site was logged in 2000 prior to its sale to the town. There are several large "wolf" trees, including one approximately 4' diameter white oak. Additional fieldwork is required to inventory the fauna and flora.

Fields are vegetated primarily with cool season grasses and herbaceous species. Species noted growing in the fields include common milkweed, sensitive fern, poison ivy (add more). Aside from a 5-acre field at Glen Echo, which is expected to be developed as a soccer field, the Stefans fields are the only fields currently owned by the town of Upton.


Wolf Tree

Invasive species are common. Multiflora rose is common in fields. Other invasives noted include bittersweet, glossy buckthorn, euonymous, autumn olive, honeysuckle and barberry.

The eastern parcel is primarily grass. A beaver dam is present on the brook within the parcel and beavers have thinned trees in the riparian zone and flooded a few thousand square feet of the parcel. The eastern parcel is mapped by the NHESP as habitat for wood turtle. They may use the fields for nesting and for foraging during the summer and early fall. Painted turtle and snapping turtle also occur in the brook and likely nest on the property.

The eastern portion of the Stefans farm is mapped as rare wildlife habitat by the Massachusetts Natural Heritage and Endangered Species Program (Figure 8). Two state listed special concern species (Wood turtle and Eastern box turtle) are known to occur on the property. The entire parcel is mapped as supporting natural habitat by the Massachusetts BioMap (MANHESP, 2003).

3.4 **History of the land and Historic Resources**

Stefans Farm is on one side of George's Hill, one of the highest hills in Upton. George's Hill was named for George Miscoe. Miscoe is a Nipmuc word referring to large hill. (Indian Names of Places in Worcester County, 1905, Lincoln N. Kimicutt). It is right on the Grafton border.

The Nipmuc Indians were caretakers of the land for thousands of years. Nipmuc is a term referring to fresh water fishermen. The practice of burning hillsides was established to purify the water supply. This practice kept the hillsides free of trees. (The Pond Dwellers by Kelly Savage, 1996)

The two Nipmuc villages to the north of the farm were called Hassanamiscoe and Hassanemessit and the names referred to being places where there were many small stones. This area is the beginning place of many rivers; Blackstone to the south, The Charles to the east, and the Merrimac to the northeast, and this area was considered the place of leadership within the Nipmuc tribe. It was a part of the Great Trail which was a footpath leading from the ocean shores of Boston to the inland lake of Quabog (Webster Lake today) and on to the Connecticut River north of Hartford. There was also a Nipmuc village south of Pratt Hill and a trail going from this village north to Marlboro.

From 1651-1674 John Eliot and Daniel Gookman set out to bring Christianity to the Native people. Besides writing a bible using the Nipmuc language, they went about creating praying villages based

on locations given by the local shamans. Stefans farm at one point would have been a part of the praying village of Hassanamessit that was established in 1654. These areas were set aside as places that were not to be settled by the English. A later map shows the farm right beside the boundary of the praying village. Hassanamessit became known as the place where religious leaders for other praying villages were trained.

In 1674 Hassanamesit was the home of Wattascompanum and the center of Nipmuc government.

During King Phillip's War (1675-1676) residents of the praying villages were sent to Deer Island in Boston Harbor, and most died. After King Phillip's War the land of the praying villages began to be sold off to the English settlers.

In August of 1686 there was a land agreement between ten Englishmen and eight Native Americans. The agreement was in part between John Wampum and Edward Pratt.

Edward Pratt of London later sold his one-tenth share to some Sutton land speculators. In 1721 the land was surveyed. The land we know today as Stefans Farm would have been part of this survey. This portion of Sutton that would eventually become Upton settled rapidly from 1723 on by people moving in from towns such as Rowley, Wenham, Bradford, Chelmsford and Concord.

In 1730 the farm would be a part of the new town of Upton that was incorporated with land from Sutton as well as Mendon and Hopkinton and Uxbridge.

The Stefan farmhouse was built around 1848 by Levi Batchelor, a farmer. Levi was born in 1798 and died in 1854. The house remained with the Batchelor heirs until the end of the 19th century.

Levi Batchelor's valuation in 1848 for a house, a barn, and other buildings and 92 acres was $2020.

In 1849 it was recorded that Levi Batchelor had a house, a barn and 72 acres. The value of the property was $2300.

Chandler Batchelor bought from Levi Batchelor's estate in 1864.

Charles T. Potter bought from Nettie E. Jones and Ella M. Batchelor in 1905.

Charles E. Gordon bought from Gertrude M. Potter in 1919.

Lena Gorton bought from Charles E. Gorton in 1929.

Maurice M. Hall bought from Lena M. Gorton in 1929.

Maurice Hall bought from Ann E. Hennigan in 1950.

Joseph S. Stefans bought from Aurora B. Hall in 1952.

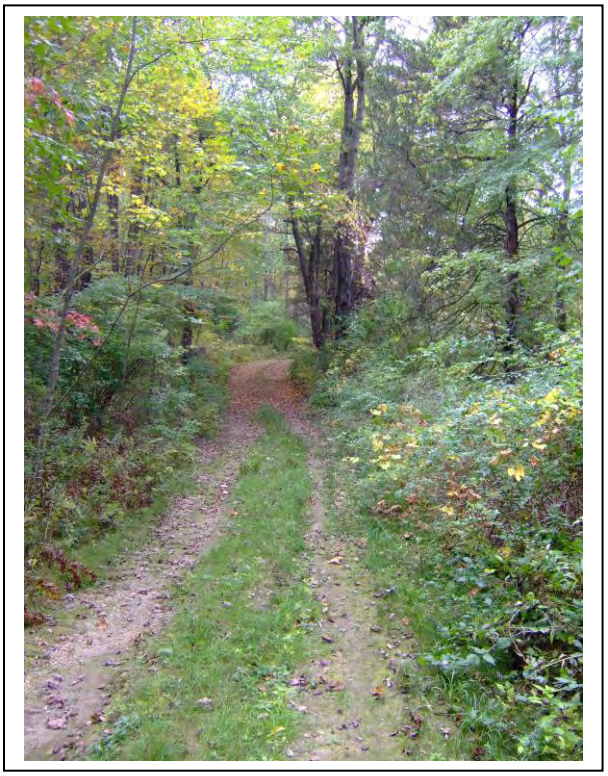
The property was a working farm for many decades prior to its purchase by the town. Prior to its sale to the town some interior stone walls were removed, apparently mostly from hedge rows. Hundreds of feet of stone wall remain however, including some that are in excellent condition. There is also at least one large stone mounds on the property. There are also the remnants of an old cart

path that once paralleled the fields. The path is overgrown but clearly shows on the 1938 aerial photograph. The eastern parcel may contain remnants of an old boot shop. Old farm equipment dots the property.

The Land Stewardship Committee plans on requesting help from current Upton residents for oral histories concerning their interactions with the farm.

3.5 **Trails and Recreational Use**

Access to the site is currently provided by a cart path that runs from Mechanic Street to Field G and continues on to Field E (Figure 3). Near Mechanic Street the path is on property retained by the Stefans family, not the town owned property. The path provides suitable access for farm equipment, trucks and other vehicles with moderate clearance. Access to the town property is restricted by a farm gate located on Stefans property. The town has keys to this gate and permission to use the cart path from the Stefans family. The cart path includes a long wetland crossing that is flooded much of the winter and early spring. The path continues up through fields D and B and ends in the woods on the edge of field B. The path through the fields is sloped, was badly eroded, and functions as an intermittent stream. There is some off road vehicle use but there is no direct connection between the Stefans cart path and the heavily used ORV trails on the adjacent power line easement land.



No off street parking is available and visitors park on Mechanic Street and access the site via the cart path. There are some existing hiking trails on the west parcel, but no established trail heads.

The area is informally used by hikers, hunters, horseback riders, and off road vehicles. The farm offers an excellent view of Pratt Hill from the upper field (Field B). No trail maps are currently available to the public.

The Land Stewardship Committee with help from Bob Henderson recently regraded the path in Fields B, D and E. Deep ruts were filled in June and since that time work has begun to divert the water. Three water bars have been placed and the area has been seeded to prevent erosion. Despite recent heavy rains it is holding up well. Additional water bars will be placed if needed.

4. CHALLENGES AND OPPORTUNITIES

Based on review of existing information and site conditions the LSC identified a number of challenges and opportunities. These are described in the following sections along with recommended solutions.

4.1 **Public Access**

Parking

4.1.1 Challenge/Opportunity No off street parking is available. There is limited parking (3-5 vehicles) on the shoulder along Mechanic Street near the power lines, but safety is a concern.

Recommendation: Construct gravel parking lot on East Parcel for 15 cars. It should be maintained year round by Upton DPW to allow for winter use of the property. The lot should be ringed with a boulder barrier to prevent people from driving onto the rest of the parcel. A gate should be included to allow equipment access to the East Parcel. We also recommend constructing a small (2 car) seasonal parking lot at the Orchard Street right-of way.

Vehicular Access

4.1.2 Challenge/Opportunity Vehicular access must rely on permission by the Stefans family to utilize the cart path to access the west parcel off Mechanic Street (access is routinely granted and has never been denied). This is necessary for use by emergency and maintenance vehicles.

Recommendation: Currently the Stefans family grants the town access via the cart path. Eventually the town may need to construct a vehicular access on the Mechanic Street right of way. Given steep slopes, however, this will be an expensive undertaking and is not needed so long as the

Stephens cart path remains an option for the town. Constructing a road from Orchard Street to the fields was evaluated. The 1200 foot long road would require several wetland and stream crossings and significant grading in some areas. Continued use of the Stefans cart path, so long as it is available to the town, is preferred from both an environmental and cost standpoint.

A farm gate has been placed on Stefans private property along Mechanic Street to limit vehicular access to the west parcel. Steve Foye, a member of the Stefans family, has verbally stated that he doesn't have a problem with foot traffic or with allowing the town to use the road to gain access for maintenance and emergencies. Keys to the gate have been provided to the Police and Fire Departments.

4.2 Recreation

The land is well suited to many uses including a picnic area, sledding and play areas (swings/volleyball/basketball/tennis), trails for hiking, cross-country skiing, horseback riding and bird watching. It is ideal for use by school and scouting groups for natural resource education.

Hiking, walking, cross country skiing and show shoeing trails

4.2.1 Challenge/Opportunity Currently no trails access the property via the two town owned right of ways.

Recommendation: Establish hiking trails to access property via the Mechanic Street and Orchard Street right of ways.

4.2.2 Challenge/Opportunity Existing trail system is very limited and lacks loop trails and access from Orchard Street. Access from Mechanic Street is via the cart path. Several hundred feet of the cart path is flooded during the winter and spring making it nearly unusable for winter hiking and cross country skiing.

Recommendation: Construct a trail system (see Figure 9 for a concept plan). This work would include placement of culverts and fill to making it passable year round by hikers and rehabilitation of an ancient cart path that parallels Field B. (see below).

4.2.3 Challenge/Opportunity A broader segment of the public could be served if there was a Fitness Trail.

Recommendation: Create a Fitness Trail consisting of exercise stations along a jogging/walking path.

4.2.4 Challenge/Opportunity On-site information regarding the natural and historic highlights is not available. Many of these features are not obvious.

Recommendation: Trails have been identified which have features of natural and historic interest; some of these are identifiable and others will need to be cleared. Initially one or two loop trails could be cleared and maps made for distribution in the parking area. A guide would be made available which would include maps and remarks about what is on the land. Maps and information would also be featured on the town web-site.

4.2.5 Challenge/Opportunity The site is used by hunters during deer season and turkey season. Potential for conflict between recreational users and hunters exists since site lines in fields are obscured by hedge rows.

Recommendation: Signage and public education to alert hunters and hikers of the risk during hunting season. Apply Conservation Commission treestand guidelines to the property.

Picnic Area

4.2.6 Challenge/Opportunity There is no designated seating or picnic area. Having an accessible and inviting space for family and group events near parking with easy access to trails would increase use and enjoyment.

Recommendation: Construct and install a number of picnic tables on the east parcel near the proposed parking, playground and community garden. This area provides scenic views of Pratt Hill and a wetland area of Warren Brook and is near proposed trails. On the west parcel, field F is also well suited for a picnic area.

Play Ground

4.2.7 Challenge/Opportunity Town residents have made it known that recreation facilities are needed. As the population grows the demand for more play areas grows too.

Recommendation: A fenced in playground could be sited on the east portion of the property. There is a suitable, relatively flat area near proposed parking and picnic areas.

Tennis/Basketball/Volleyball

4.2.8 Challenge/Opportunity Sports facilities are needed as the town grows.

Recommendation: The Recreation Commission has identified a suitable, relatively flat area near proposed parking and picnic areas. The Recreation Commission proposes tennis courts which could have hoops for basketball, and with a change of net be made a volleyball court. Should water be available the courts could be converted for skating in winter. A 60'x 120' area could accommodate one court, 120'x 120' would fit two. Fields on the western parcel are sloped and too remote to be developed for active recreation.

Sledding

4.2.9 Challenge/Opportunity There is no town designated sledding area.

Recommendation: One of the meadows on the east parcel has enough of a slope and plenty of space for sledding.

Bird watching

4.2.10 Challenge/Opportunity The diverse environment which exists on this parcel, including open meadow and forest, provides equally diverse habitats for birds. Some of the species observed include wild turkey, American woodcock, eastern bluebird, wood thrush, indigo bunting, and yellow, blue-winged and chestnut-sided warblers With appropriate land management other species may be drawn to the area.

Recommendation: Viewing areas could be established in sites that birds are known to inhabit. Benches placed in these sites provide for viewing opportunities in addition to being available for rest or reflection.

The meadows and shrub land would need to be managed to maintain nesting and feeding habitat suitable for many songbird species seen on the property. Bird nesting boxes may be placed along the meadow edges to attract bluebirds and tree swallows. Other bird boxes may be provided in wooded areas for other birds (screech owl, common flicker, chickadee ...).

Horseback riding

4.2.11 Challenge/Opportunity Existing trail system is very limited and lacks loop trails and access from Orchard Street. Access from Mechanic Street is via the cart path and only a short portion of this is suitable for horseback riding.

Recommendation: Construct a trail system which accommodates the height and width of a rider on horseback. Enlist the support of Bay State Trail Riders.

Viewing areas

4.2.12 Challenge/Opportunity While there are numerous features of interest throughout the property they are identified only on the map. It would draw attention to the features as well as providing stops for rest, observation and contemplation if benches were placed at key sites.

Recommendation: Benches could be placed at sites which offer views of Pratt Hill, the wolf tree, vernal pool, pond and Meadow F.

Regulations

4.2.13 Challenge/Opportunity. Currently the town has no land use regulations which apply to the property.

Recommendation: Request permission from Selectmen to apply Con Com Land use regulations to the property (see Appendix E).

4.3 Natural Resources:

4.3.1 Challenge/ Opportunity The property includes riparian, vernal pool, wetland, meadow, and forested habitats. Some information is available about wildlife and plants inhabiting the area (see species list provided in Appendix A) but more work is needed to thoroughly document the biodiversity of the property.

Recommendation: Identify and protect the most sensitive habitats. Establish trails and viewing points which allow for observation without encroachment or damage to sensitive natural resource areas. Balance other uses (agricultural, forestry, and active recreation), with protection of natural resources.

4.3.2 Challenge/Opportunity: The property has not been thoroughly inventoried for some taxonomic groups and rare species.

Recommendation: Conduct additional surveys of the property for fungi, plants, butterflies, dragonflies, moths and vertebrate wildlife species. The focus should be on rare and state listed species. Vertebrate species of particular interest including eastern box turtle, marbled salamander, 4-toed salamander, and green snake. Some of this work may be done by town volunteers while other surveys may be best done by professional biologists. The Stewardship Committee should keep a log book to record incidental reports of unusual species observed on or near the property.

4.3.3 Challenge/ Opportunity: Comparison of aerial photos from 1938 and 2005 show that approximately half the fields and pasture present in 1938 are now forested (Figure 3). The remaining fields are vulnerable to encroachment by trees, shrubs and vines and will require constant maintenance to prevent reversion to forest. The town of Upton has preserved very little field or meadow habitat. Other major town holdings (Peppercorn and Warren Brook) have no fields. The National Grid power line right of way to south of Stefans does provide a substantial linear block of old field habitat.

Recommendation: Maintain existing fields and restore some of those lost to encroaching forests since 1938. Further evaluation of the fields to determine which offer the best restoration opportunity is needed. Based on existing information, fields x and xx may hold the most promise. Restoration could be funded through the Community Preservation Act (CPA) and grants from MA Department of Fish and Wildlife. Some trees could be left in cleared fields, giving them the look of a savannah landscape (this was recently done by the National Park Service along the battle Road in Lincoln, MA) (Photograph x). Maintenance of fields designated as meadow habitat will require mowing every 2-3 years.

4.3.4 Challenge/Opportunity: Fields and hedgerows provide habitat for breeding birds, butterflies, and potentially rare species such as green snake and eastern box turtle. There is need to balance agricultural use of the property with maintaining some of the fields and hedgerows primarily for habitat. The fields are currently colonized by invasive species and these will remain a long-term concern. While they provide habitat, hedgerows block views and should be removed or thinned to restore the historic farm landscape. Maintenance of fields as meadow habitat conflicts with continued use of the farm for agriculture.

Recommendation: Maintain some fields as meadow habitat and license others for active agriculture (most likely hay production). It may be possible to stipulate maintenance of meadows as part of the lease agreement. Meadows should be mowed every 2 – 3 years. Continue volunteer efforts to control multiflora rose, barberry, and other invasive plants that will not be eradicated by periodic mowing. Thin hedgerows and keep openings in hedgerows between fields.

4.3.5 Challenge/Opportunity: There is no quantitative data available concerning use of property by breeding bird and butterfly. Such data is needed to monitor population trends and access the impacts of management practices.

Recommendation: Develop a standardized plan for surveying property for breeding birds and butterflies. The survey methods should conform to exiting professional practices and be repeatable to allow assessment of long-term trends. Monitoring breeding bird and butterflies populations every 2 - 3 years is recommended.

4.3.6 Challenge/Opportunity: Wood turtles are likely to inhabit the field on the east side of the property from early summer through mid fall. They are vulnerable to mortality from mowing.

Recommendation: No mowing of lower field until after October 15 when wood turtle have likely returned to Warren Brook. Mower height should > 6".

4.3.7 Challenge/Opportunity: While some significant nature features have been mapped, the entire property has not been thoroughly inventoried.

Recommendation: Survey property and GPS location of vernal pools, large trees, interesting geological features (outcrops, glacial erratics), and other features. Route trails past some of these features.

4.3.8 Challenge/Opportunity: Several pieces of old farm equipment, automobiles, a dog house, wire fencing, and other items in need of disposal are present on the property.

Recommendation: Engage a scrap material dealer to remove unwanted items. Old farm equipment with interpretive/historic value should be retained and displayed. Remove barbwire fencing.

4.3.9 Challenge /Opportunity To attract wildlife and beautify the area.

Recommendation: Selective planting of native species. Construct turtle nesting habitat on east parcel.

4.4 Historic Resources

4.4.1 Challenge/Opportunity There are stone walls throughout the property. One area in particular has been identified as a cart path with stone walls on either side. This path was likely used as an early access route to the fields and may have been part of a network of paths throughout Upton.

Recommendation: Restore historic cart path. This will require removal of growth and restoration of the stone walls. Clear vegetation from other stone walls where possible.

4.4.2 Challenge/Opportunity The details of life on a farm are quickly being lost. Farm life in Massachusetts has shaped the landscape, the Stefans property is a prime example of this. Working farms are giving way to other land uses, so the remains of what, until recently, was a working farm has historical significance.

Recommendation: An oral history project could inform us about life on the farm and in Upton. A number of people who remember the farm from their growing up here still live in the area and could be interviewed. This would be a valuable addition to Upton's historical archives and information gathered could be added to materials available on site.

4.4.3 Challenge/Opportunity: While some significant historic features have been mapped, the entire property has not been thoroughly inventoried.

Recommendation: Survey property and GPS location of stone walls, stone piles, and other historic resources. Route trails past some of these features.

4.5 Agriculture and Forestry

4.5.1 Challenge/Opportunity: As discussed above the former Stefans farm had a long history as a working farm and this legacy should be maintained. There are competing uses for fields, however, and the challenge is to find a balance between the multiple uses. Loss of fields to forest encroachment provides an opportunity to restore some fields and pastures.

Recommendation: Identify fields which may be suitable for hay production. Lease some fields for agricultural production while maintaining others as meadow habitat. The most likely use of the fields is for hay, but use to produce row crops, or for community supported agriculture should be investigated. Use of the smaller fields (i.e. Field F) as a tree nursery or orchard should also be investigated. The nursery could be used to grow trees for local use. Leasing field A as nursery site to the American Chestnut Society is also a possibility.

4.5.2 Challenge/Opportunity: Hedgerows and forested areas designated for restoration as field need to be cleared of trees and shrubs.

Recommendation: Hold periodic fuel wood lotteries for town residents to facilitate clearing of hedgerows and other forested areas as recommended in a forest stewardship plan.

4.5.3 Challenge/Opportunity: The property is about 80% wooded and was last logged in 1998. There is currently no forest stewardship plan for the property.

Recommendation: Hire a professional forester to preparer a forest stewardship plan for the property. The emphasis should be production of forest resources on a sustainable basis, with care taken to protect habitat features (e.g. wolf trees, habitat trees, vernal pools, stone walls). The next forest cutting is expected to take place in 15 – 30 years. Revenue gained for forest cutting would go to the town of Upton. Attempts may also be made to implement old growth restoration.

4.5.4 Challenge/Opportunity There are residents and community groups in Upton who do not have access to plots of land with which they could engage in gardening. These residents could utilize a community garden by growing vegetables for their own families, planting a flower "cutting" garden, which could to be used for town events or fundraisers or by providing a source of fresh seasonal vegetables to local area food banks. Boy and Girl Scout groups will find a community

garden a very useful resource, which can be utilized to earn merit badges. A community garden would also be a resource available to Upton's public schools whereby the science and social studies curriculums could be enhanced through use of experimental agriculture plots and historical farming practices. Community garden plots are typically awarded through a plot lottery whereby the awardee is given a 2 to 3 year lease of the plot.

Another use would be to lease this portion of land as a whole for the purposes of developing a CSA (community supported agriculture). CSA's provide subscribing members fresh, local, organically grown, produce throughout the growing season. Members of a CSA pay the farm manager a fee and contribute a few hours of farm labor each month in exchange for a share of the farm's harvest. CSA's benefit even those who are not members by helping to preserve the small amount agricultural land that is left in the state and by reducing the demand for imported produce that must be transported long distances in order to be delivered to markets.

Recommendation: Community garden space could be provided on the east side of the parcel adjacent to the proposed parking area. In addition, a water spigot would need to be installed and a small garden tool shed. In order to make the garden plots more desirable to potential gardener-lessees, the town may opt to provide garden fencing around the perimeter. This would provide a level of security from vandals and would help protect the garden from wildlife intruders. The installation of fencing and the building of a tool shed could be accomplished through volunteer hours in order to offset the cost to the town. A community garden would not only be a way to carry on the traditional use of this parcel, but also provide the citizens of Upton the opportunity to experience the many rewards that come from creating a garden, by growing their own flowers, fruits and vegetables, by learning through experience, by enjoying the outdoors, and by networking with other gardeners to improve their agricultural practices.

4.6 Visitor Education

Natural resource education

4.6.1 Challenge/Opportunity The property has an array of natural features. Because of the wide range of features there is a great teaching opportunity here for students, scouting groups and the general public.

Recommendation: Education and outreach programs could be implemented which focus on the local ecosystem. Community participation could be encouraged through organized nature and history walks. Other possibilities are to invite school and scouting groups to explore natural and historic resources, and to involve groups as well as individuals in regular wildlife inventories.

4.6.2 Challenge/Opportunity: There is no information about the area on site.

Recommendation: Create an interpretive trail. Place signage and kiosks throughout the property which identify significant features. Handouts with maps and information about features would be made available. An interpretive trail with numbered markers corresponding to information in a flyer could provide details about plants, animals, landscape and history.

4.7. Other Issues

4.7.1 Challenge/Opportunity. The town is expected to manage the property for open space purposes for many years, and perhaps in perpetuity. The composition of the Land Stewardship Committee will change over time. It will be essential to keep good records to document how the project was managed to guide future management decisions and to help people in the future understand and appreciate the history of the farm.

Recommendation: Keep good operational records to document property management, use and resources.. The record should describe management activities, document public use, and contain results of historic and biological inventories and studies.

4.7.2 Reporting/Coordination with BOS and Community Outreach

Most activities described in the stewardship plan will be accomplished without further coordination with Board of Selectmen, Conservation Commission, or community meetings. Major infrastructure or land management actions will be coordinated in advance with the BOS, Conservation Commission, and the public. These include construction of parking areas, community gardens, active recreation facilities, field restoration, agricultural licenses, and timber harvests. A summary of all activities will be prepared each year by the LSC for inclusion in the Town Report.

4.7.3 Name and Designation of the Property

The town needs to decide the permanent name for the property. At some point the town may wish to formally designate the property as a conservation area.

5. IMPLEMENTATION

5.1 Implementation Plan

The Land Stewardship Committee is proposing a three-phase implementation plan. Key features of each phase are listed below and illustrated in Figures 10 – 12. Table 2 provides a more detailed timetable.

Phase I

Short-term plan 2007-2008

- Create parking area on Mechanic Street
- Remedy erosion problems
- Establish and mark first trail loop
- Create maps
- Provide minimal signage (e.g. dusk/dawn policy, deer tick, dogs on leash – coyote)

Phase II

Intermediate plan 2008-2010

Expand trails
Put up signage and information kiosk
Control invasive plants
Establish sledding area
Establish picnic and viewing areas
Develop community garden and facilities for active recreation in east parcel.

Phase III

Long term plan 2010 +

Field restoration and maintenance
Education and outreach
Forest management
Control of invasive plants
Restore historic cart path.
Create vehicle access on town owned ROW

5.2 Routine Maintenance

The following routine maintenance activities will be conducted on an ongoing basis:

Maintain parking areas (including snow removal)
Maintain trails (remove tree falls, branches)
Re mark trails
Restock trail maps
Invasive species control
Maintain operational record.

5.3 Plan Updates

This plan would be reviewed and updated periodically, with the next scheduled formal update scheduled for 2012.

6. Efforts Completed to Date

The following efforts have been completed to date by the LSC and volunteer efforts.

Date	Description	Approx. Cost
November 2006	All fields on West Parcel mowed by Cook Land Clearing.	$1500
June - October 2007	Eroding cart path passing through Fields B and C graded and seeded. Water bars installed by LSC. Grading effort donated by Bob Henderson.	$60
July – August 2007	Invasive species control. Trial application of cut stump herbicide treatment technique to control multiflora rose in Field B.	$10
October 2007	Bounds for 60 ft. Mechanic Street ROW installed by Surveyor.	$900
	Total	**$2470**

7. Funding

To date, approximately $2470 has been spent on maintenance. Approximately 100 hours of volunteer time has been contributed to maintenance projects.

Additional support may include the following: grants, volunteer efforts, scouting projects and local businesses.

8. References/Links

American Community Gardening Association. http://www.communitygarden.org/

Local Harvest http://www.localharvest.org/csa/

MAGIS. Data layers for water resources, aquifers, soils, and rare species habitat. (assessed October 2007)

Natick Community Organic Farm. http://natickfarm.org/plot.html

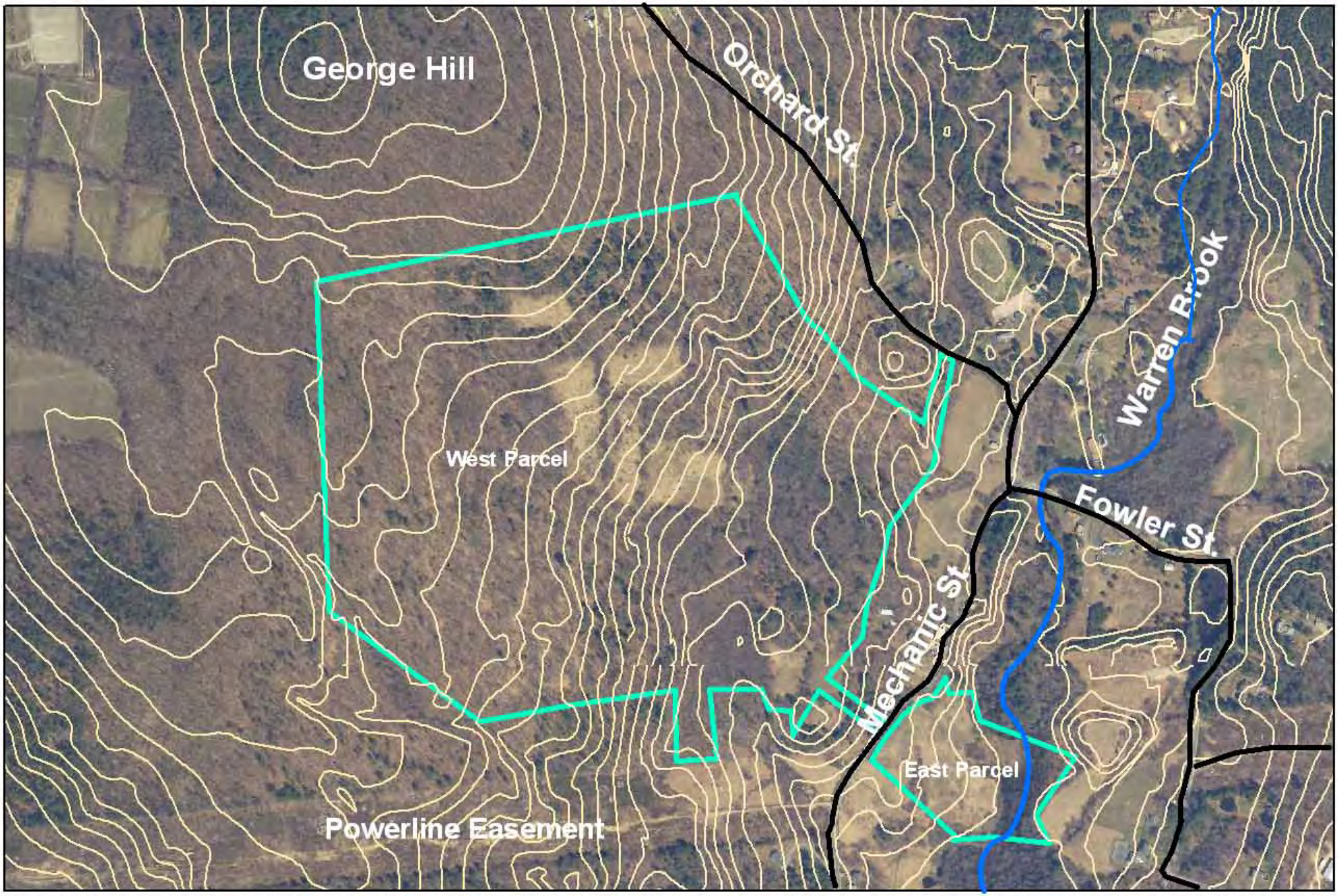
USDA, 1998. Soil Survey of Worcester County, Massachusetts, Southern Part

USGS, 2006. Surficial Geologic Map of the Clinton-Cocord-Grafton-Medfield 12-quadrangle area in East Central Massachusetts.

FIGURES

Figure 1: Stefans Farm

Upton Land Stewardship Committee



N

0 125 250 500 750 1,000

Feet

Figure 2: Topographic Features

Upton Land Stewardship Committee

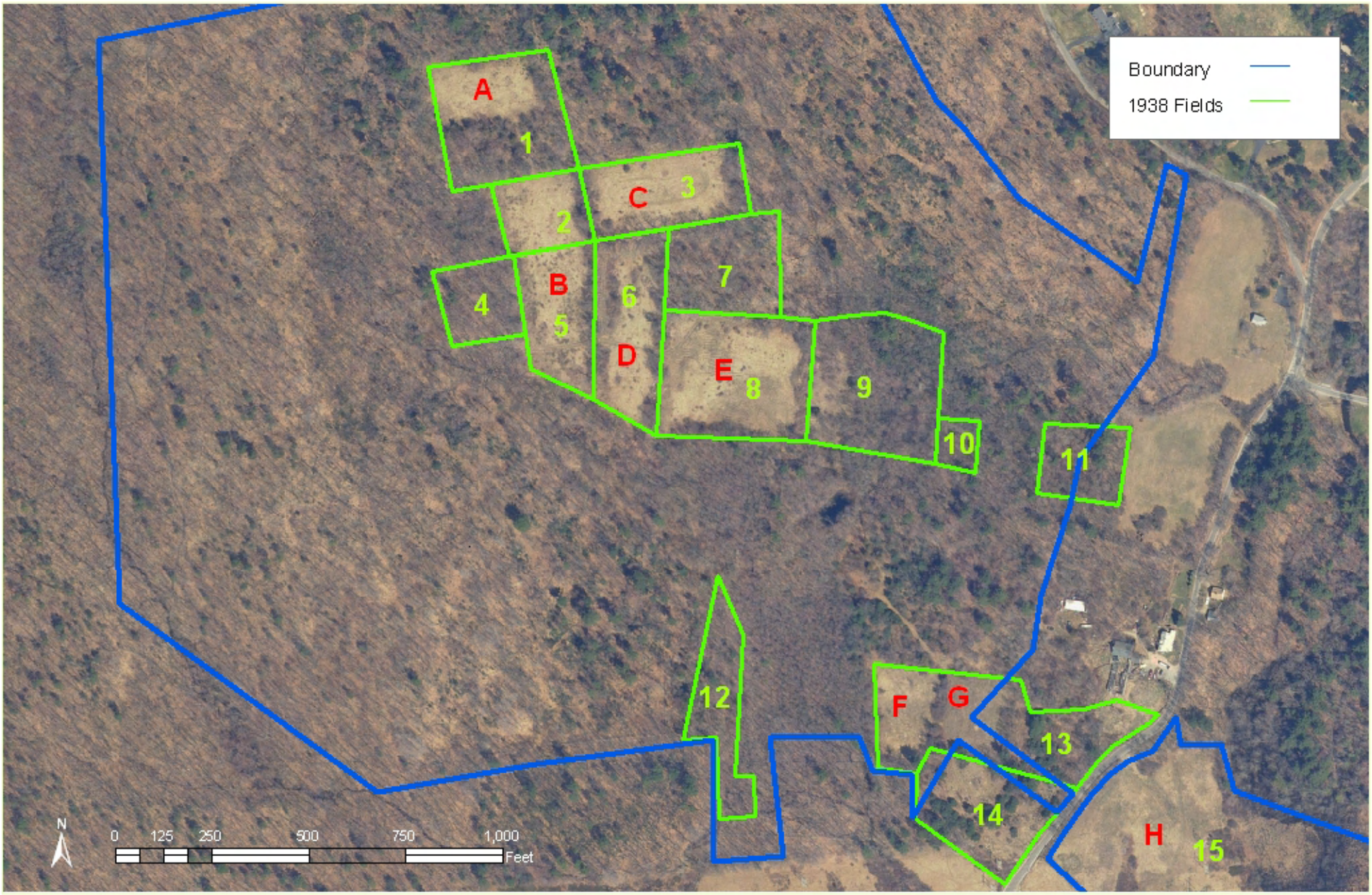


Figure 3:: Stefans Farm Fields in 1938 and 2005

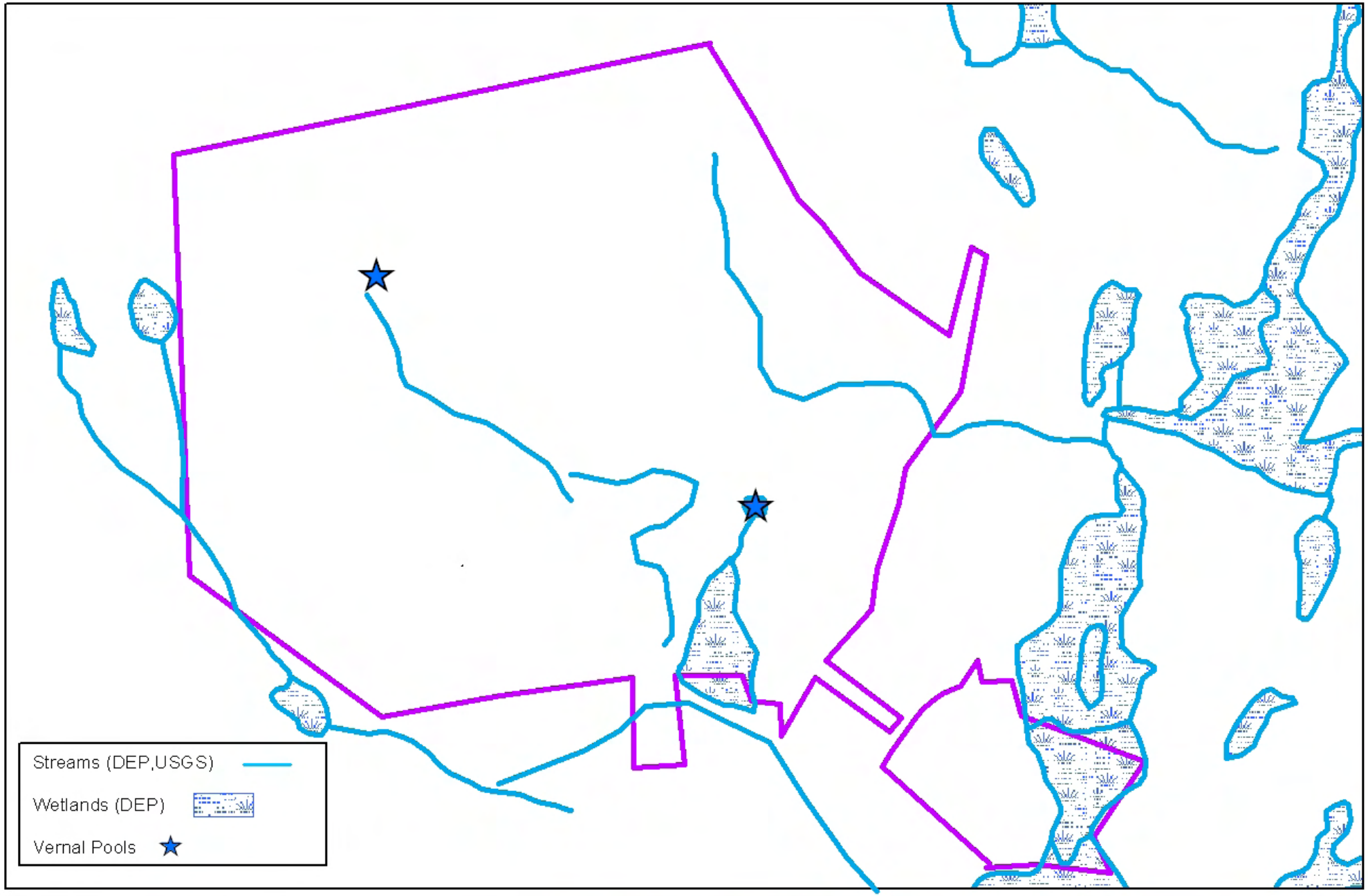


Figure 4: Water Resources

Upton Land Stewardship Committee

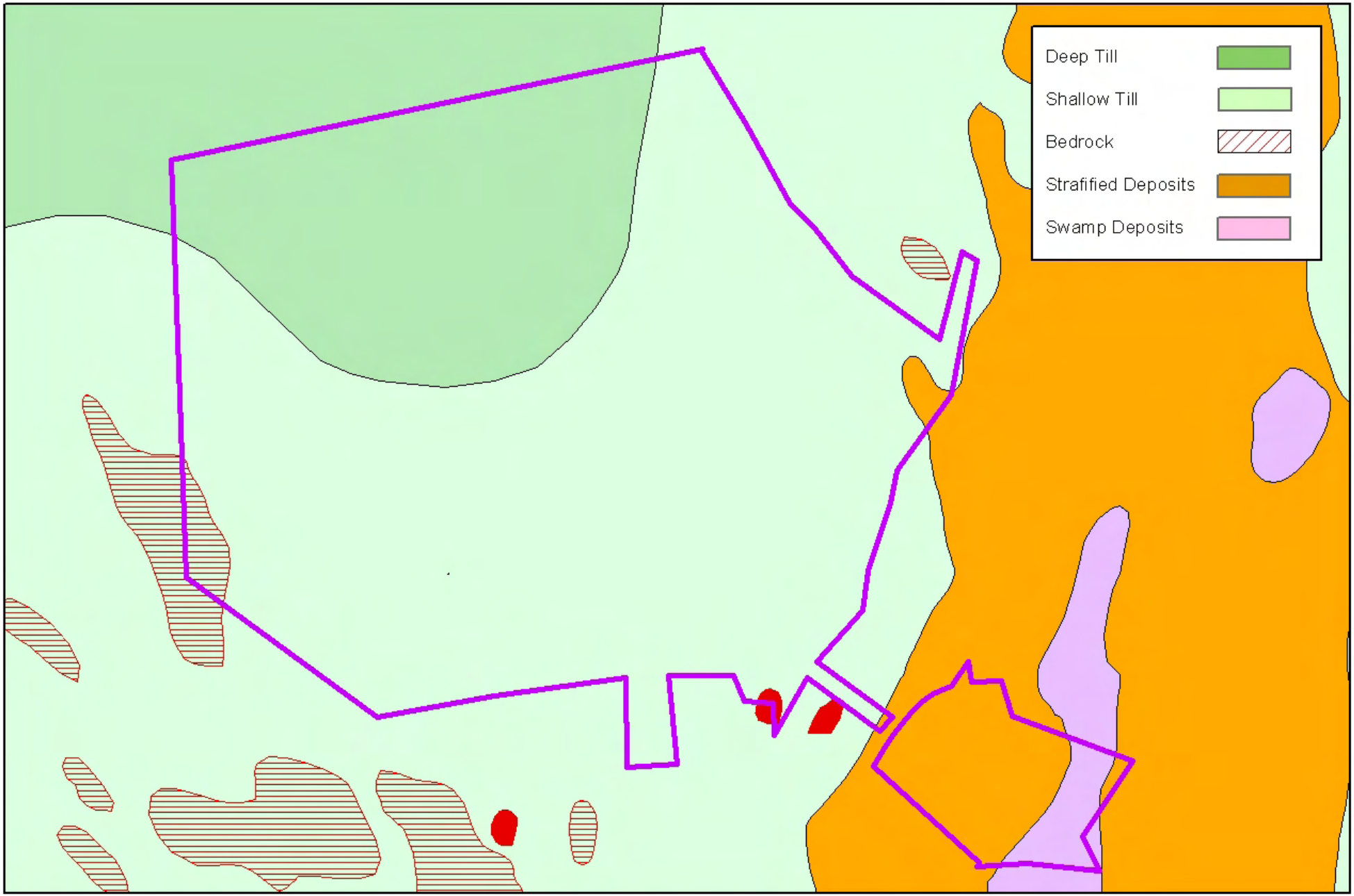
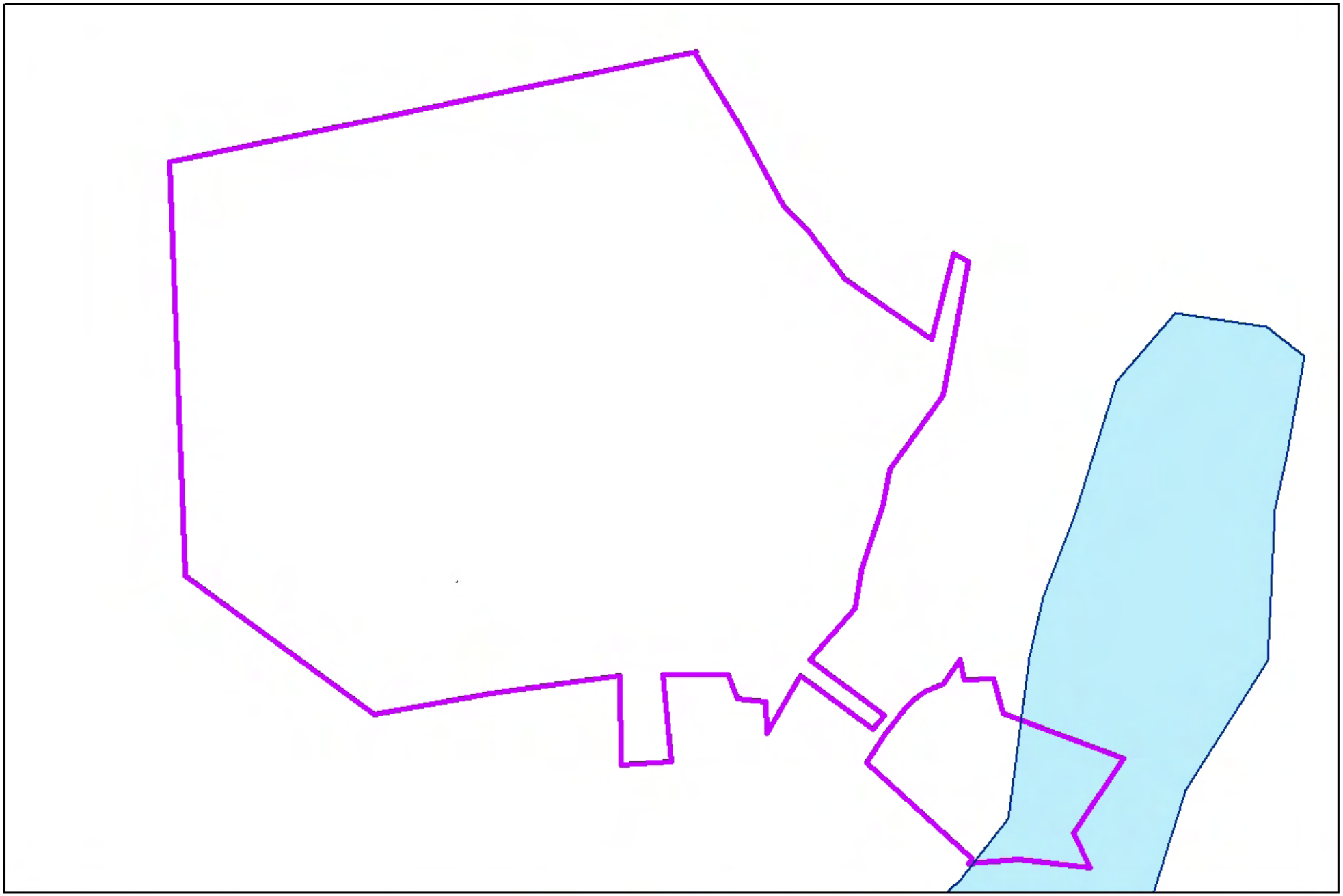


Figure 5: Surficial Geology



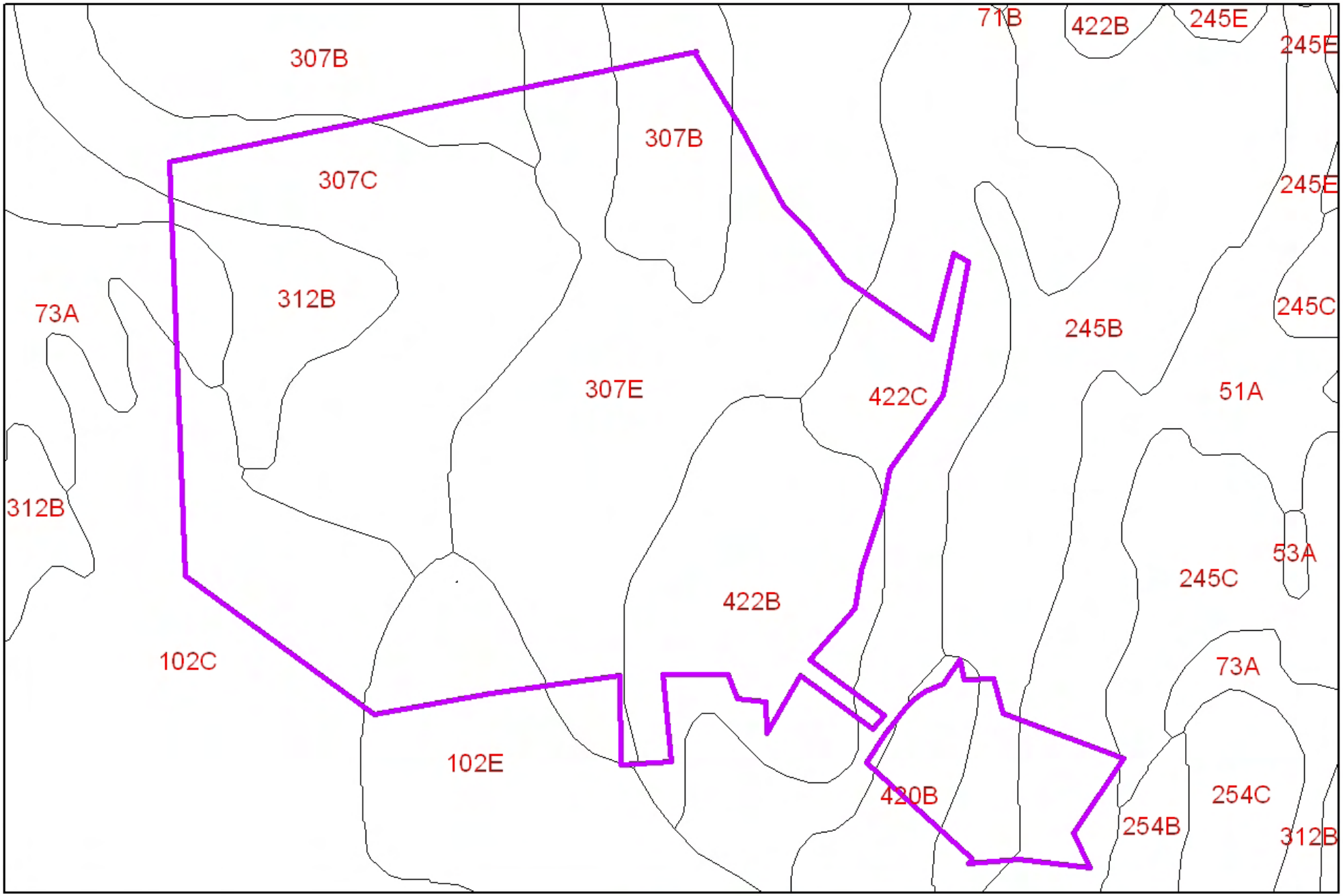
N

0 130 260 520 780 1,040

Feet

Figure 6: DEP Mapped Aquifers

Upton Land Stewardship Committee



N

0 130 260 520 780 1,040

Feet

Figure 7: Soils

(see Table 1 for soil descriptions)

Upton Land Stewardship Committee

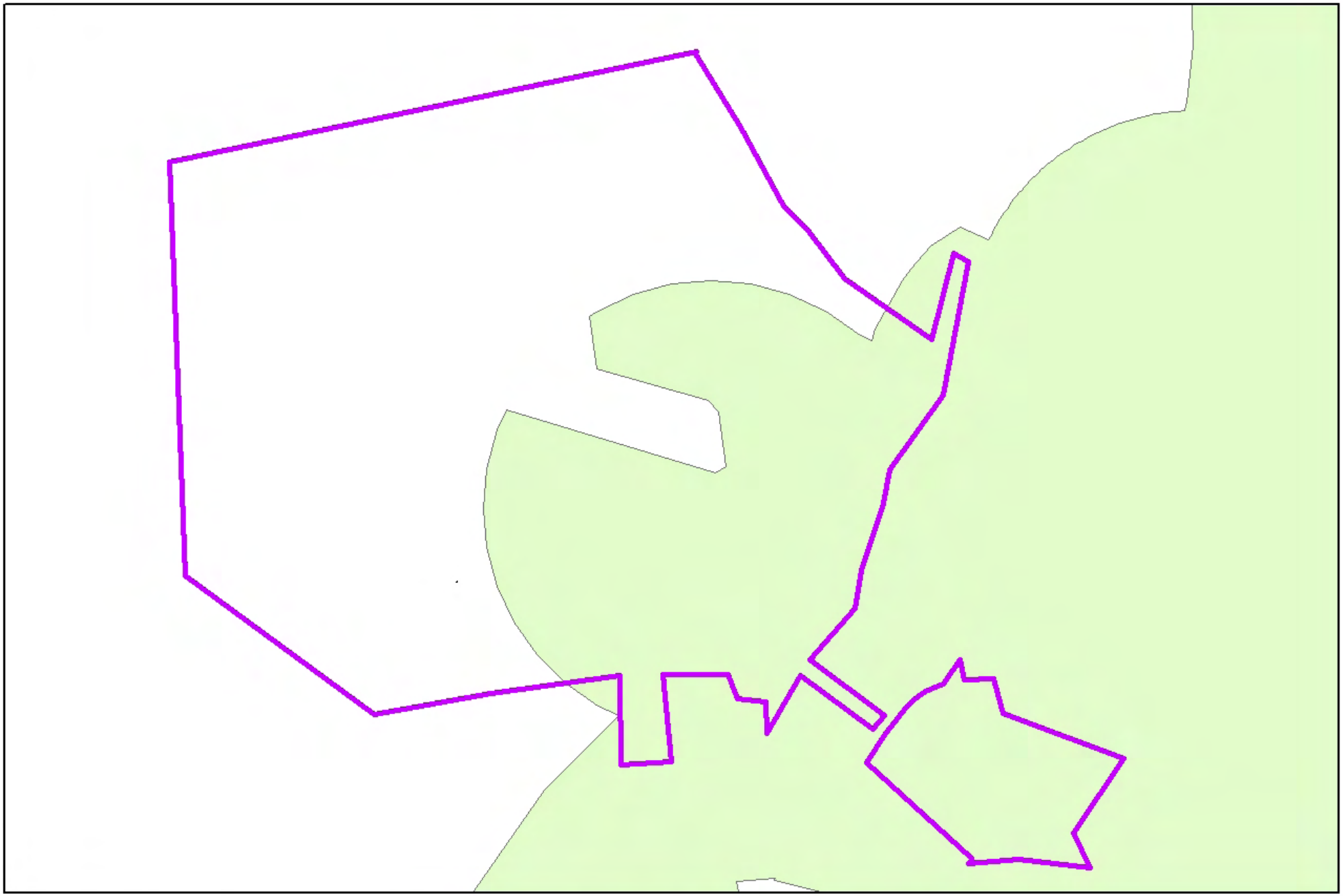


Figure 8: NHESP Rare Wildlife Habitat

Figure 9: Concept Plans for the East Parcel

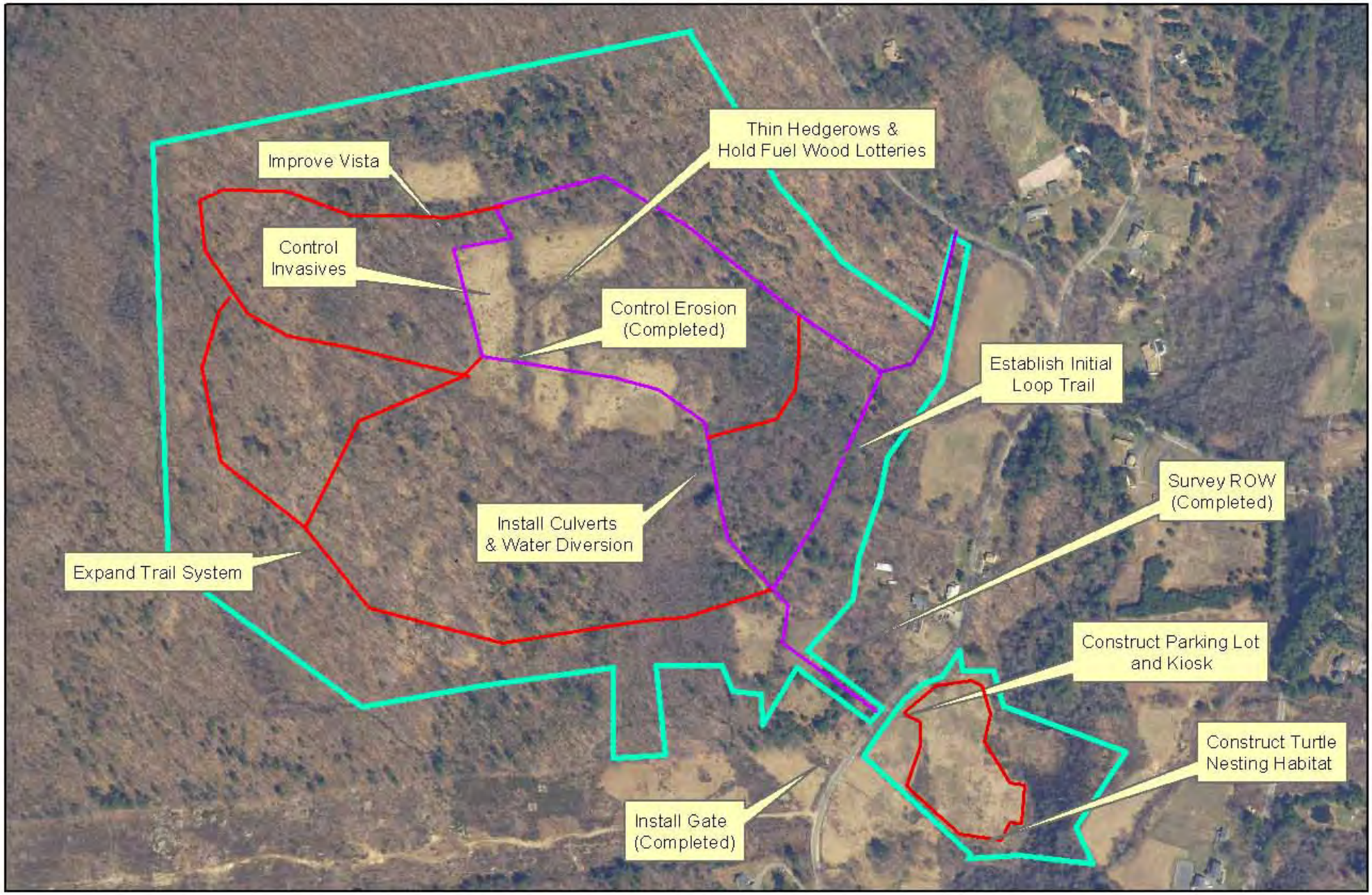


Figure 10: Stefans Farm Action Plan - Phase 1

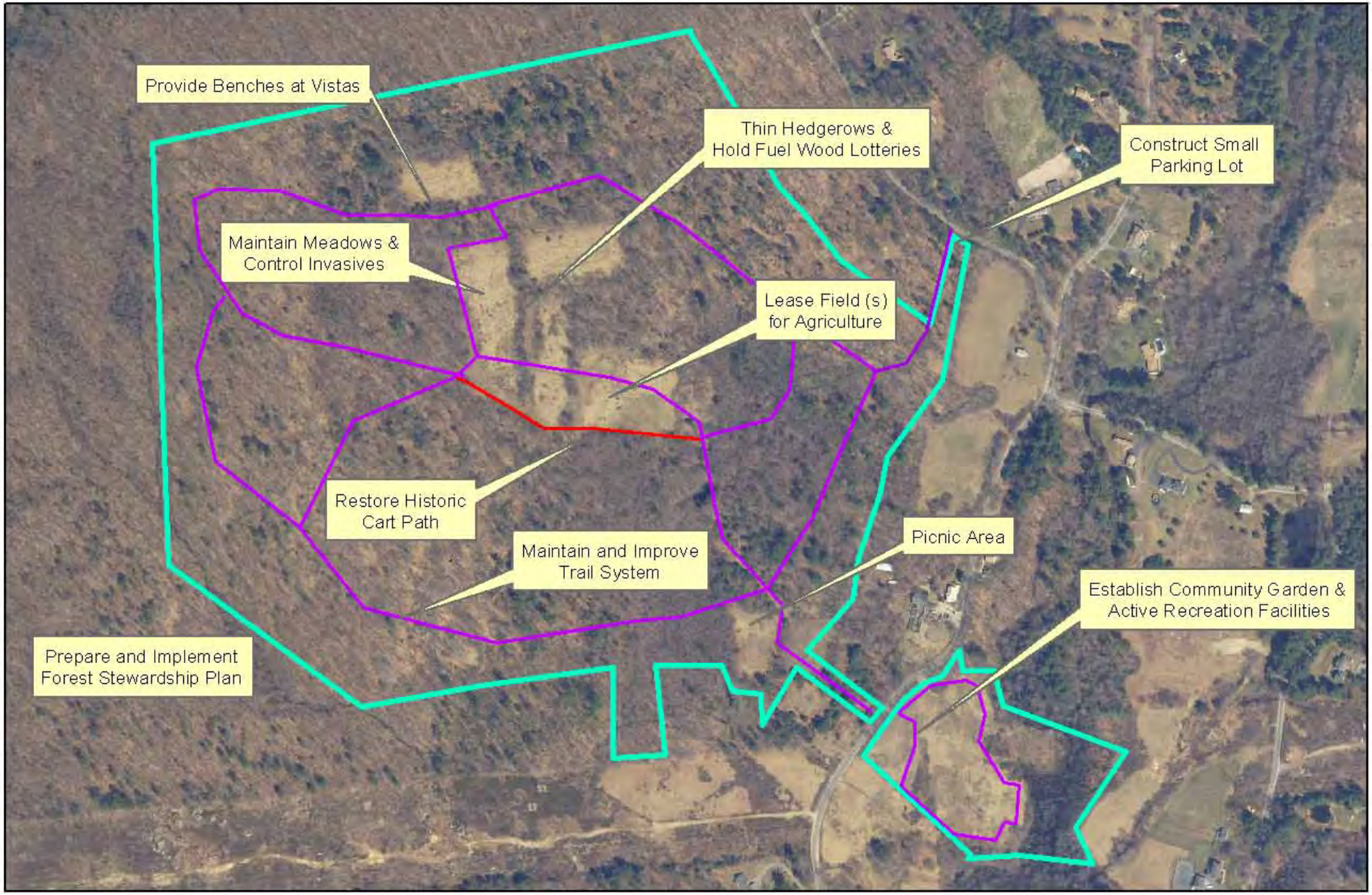


Figure 11: Stefans Farm Action Plan - Phase 2

Figure 12: Stefans Farm Action Plan - Phase 3

TABLES

Table 1: Implementation Plan

			Phase I		Phase II		Phase III
Category	**Item**	Ref #	07	08	09	10	>=2011
Public Access	Construct parking lot on east parcel	4.1.1		X			
	Construct vehicular access to west parcel on town land from Mechanic St	4.1.2					X
	Construct parking lot on Orchard Street.	4.1.2				X	
Visitor Information & Education	Install basic signage (policies)		X				
	Install signage and kiosk	4.6.2		X			
	Develop education and outreach programs – nature and history walks	4.6			X	X	X
Recreation	Hiking trails – establish first loop trail	4.2.1	X				
	Expand and improve trail system	4.2.1		X	X	X	X
	Establish fitness trail	4.2.2			X		
	Design/update trail map	4.2.2	X	X	X	X	X
	Develop vista areas	4.2.12		X			
	Provide benches along trails and at vistas	4.2.12			X		
	Construct picnic area, picnic tables	4.2.6			X		
	Construct playground	4.2.7				X	
	Construct tennis/basketball/volleyball court	4.2.8				X	
	Establish sledding area (east parcel)	4.2.9			X		
	Establish trails for winter recreation	4.2.1		X			
	Establish opportunities for nature observation	4.2.10	X				
	Establish trails for horseback riding	4.2.11		X			
Natural Resources	Document biodiversity	4.3.1		X	X	X	X
	Conduct surveys for rare and state-listed species	4.3.2		X	X	X	X
	Conduct standardized surveys for birds and butterflies (long-term monitoring program)	4.3.2		X		X	X
	Maintain existing fields and meadows; thin hedgerows	4.3.4	X	X	X	X	X
	Control invasive plants	4.3.4	X	X	X	X	X
	Remedy erosion and water problems		X	X			
Historic Resources	Restore historic cart path and stonewalls	4.4.1			X	X	X
	Conduct an oral history of farm	4.4.2		X	X		
Agriculture & Forestry	License one or more fields for agriculture	4.5.1		X	X	X	X
	Chestnut tree nursery/orchard and/or town nursery	4.5.1					X
	Restore one or more historic fields	4.5.1				X	X
	Hold fuel wood lotteries for Upton residents	4.5.2		X	X	X	X
	Prepare forest stewardship plan	4.5.3			X		
	Implement forest stewardship plan	4.5.3				X	X
	Develop and operate community garden on east parcel	4.5.4			X	X	X
Routine Maintenance	Maintain parking areas (including snow removal from lot on east parcel); Maintain trails (remove tree falls, branches, refresh trail markers); Restock trail maps; Invasive species control, Maintain erosion controls (waterbars); Maintain operational record.	5.2		X	X	X	X

Table 2: Soils

To be added.

APPENDICES

Appendix A: Species Lists

Birds (45 species)

Red-tailed Hawk (Buteo jamaicensis)
Wild Turkey (Meleagris gallopavo)
American Woodcock (Scolopax minor)
Mourning Dove (Zenaida macroura)
Chimney Swift (Chaetura pelagica)
Northern Flicker, Yellow-shafted Flicker (Colaptes auratus)
Red-bellied Woodpecker (Melanerpes carolinus)
Downy Woodpecker (Picoides pubescens)
Hairy Woodpecker (Picoides villosus)
Eastern Wood-Pewee (Contopus virens)
Great Crested Flycatcher (Myiarchus crinitus)
Eastern Kingbird (Tyrannus tyrannus)
Red-eyed Vireo (Vireo olivaceus)
American Crow (Corvus brachyrhynchos)
Blue Jay (Cyanocitta cristata)
Barn Swallow (Hirundo rustica)
Tufted Titmouse (Baeolophus bicolor)
Black-capped Chickadee (Poecile atricapillus)
White-breasted Nuthatch (Sitta carolinensis)
House Wren (Troglodytes aedon)
Veery (Catharus fuscescens)
Wood Thrush (Hylocichla mustelina)
Eastern Bluebird (Sialia sialis)
American Robin (Turdus migratorius)
Gray Catbird (Dumetella carolinensis)
Northern Mockingbird (Mimus polyglottos)
European Starling (Sturnus vulgaris)
Cedar Waxwing (Bombycilla cedrorum)
Yellow Warbler (Dendroica petechia)
Common Yellowthroat (Geothlypis trichas)
Black-and-white Warbler (Mniotilta varia)
Ovenbird (Seiurus aurocapillus)
Blue-winged Warbler (Vermivora pinus)
Scarlet Tanager (Piranga olivacea)
Song Sparrow (Melospiza melodia)
Eastern Towhee, Rufous-sided Towhee (Pipilo erythrophthalmus)
Northern Cardinal, Red Cardinal (Cardinalis cardinalis)
Indigo Bunting (Passerina cyanea)
Rose-breasted Grosbeak (Pheucticus ludovicianus)
Red-winged Blackbird (Agelaius phoeniceus)
Baltimore Oriole (Icterus galbula)
Brown-headed Cowbird (Molothrus ater)
American Goldfinch (Carduelis tristis)
House Finch (Carpodacus mexicanus)
House Sparrow (Passer domesticus)

Insects (20 species)

Grasshoppers Crickets & Katydids (Orthoptera)
Backswimmers (Notonectidae)
Aphids (Aphis)
Meadow Spittlebug (Philaenus spumarius)
Red Milkweed Beetle (Tetraopes tetrophthalmus)
Lady Beetles, Lady Bugs (Coccinellidae)
Whirligig Beetles (Gyrinidae)
Lightningbugs, Fireflies, Flash Beetles (Lampyridae)
Mosquitoes (Culicidae)
Black Flies (Simulidae)
Deer Flies (Chrysops)
Crane Flies (Tipulidae)
Bumble Bees (Bombus)
Black Carpenter Ant (Camponotus pennsylvanicus)
Eastern Yellowjacket (Vespula maculifrons)
Daddy-long-legs (Phalangiidae)
A Velvet Mite genus (Trombidium)
Brown Dog Tick, Wood Tick (Dermacentor variabilis)
Eastern Deer Tick (Ixodes dammini (scapularis))
Water Strider (sp)

Insects - Butterflies (22 species)

Eastern Tiger Swallowtail (Papilio glaucus)
Clouded Sulphur (Colias philodice)
Cabbage White (Pieris rapae)
Eastern Tailed-Blue (Everes comyntas)
American Copper (Lycaena phlaeas)
Common Ringlet (Coenonympha tullia)
Baltimore Checkerspot (Euphydryas phaeton)
Red-spotted Purple (Limenitis arthemis COMPLEX)
Little Wood Satyr (Megisto cymela)
Pearl Crescent (Phyciodes tharos)
Red Admiral (Vanessa atalanta)
Painted Lady (Vanessa cardui)
American Lady (Vanessa virginiensis)
Hoary Edge (Achalarus lyciades)
Dusted Skipper (Atrytonopsis hianna)
Silver-spotted Skipper (Epargyreus clarus)
Juvenal's Duskywing (Erynnis juvenalis)
Hobomok Skipper (Poanes hobomok)
Long Dash (Polites mystic)
Peck's Skipper (Polites peckius)
Tawny-edged Skipper (Polites themistocles)
European Skipper (Thymelicus lineola)

Mammals (8 species)

Eastern Cottontail (Sylvilagus floridanus)
Red Squirrel (Tamiasciurus hudsonicus)
Eastern Gray Squirrel (Sciurus carolinensis)
Eastern Chipmunk (Tamias striatus)
American Beaver (Castor canadensis)
Coyote (Canis latrans)
Fisher (Martes pennanti)
White-tailed Deer (Odocoileus virginianus)

Reptiles and Amphibians (7 species)

Red-backed Salamander (Plethodon cinereus)
Common Gray Treefrog (Hyla versicolor)
Bullfrog (Rana catesbeiana)
Green Frog (Rana clamitans)
Wood Frog (Rana sylvatica)
Common Garter Snake (Thamnophis sirtalis)
Painted Turtle (Chrysemys picta)
Eastern Box Turtle

Plants - Trees and Shrubs (61 species)

Common Juniper, Pasture-juniper (Juniperus communis)
Eastern Red Cedar (Juniperus virginiana)
Pitch-pine (Pinus rigida)
White Pine (Pinus strobus)
Red Maple (Acer rubrum)
Staghorn-sumac (Rhus hirta)
Poison-ivy, Climbing Poison-ivy (Toxicodendron radicans)
Winterberry, Black Alder (Ilex verticillata)
Japanese Barberry (Berberis thunbergii)
European Barberry (Berberis vulgaris)
Speckled Alder (Alnus incana)
Yellow Birch (Betula alleghaniensis)
Black Birch, Sweet Birch, Cherry-birch (Betula lenta)
Paper-birch, Canoe-birch (Betula papyrifera)
Gray Birch (Betula populifolia)
American Filbert, American Hazelnut (Corylus americana)
Tatarian Honeysuckle (Lonicera tatarica)
Elderberry, species (Sambucus)
Maple-leaf Viburnum, Flowering Maple (Viburnum acerifolium)
Arrow-wood Viburnum (Viburnum dentatum)
Possumhaw Viburnum, Wild Raisin (Viburnum nudum)
Oriental Bittersweet (Celastrus orbiculata)
Winged Euonymus, Winged Burning Bush (Euonymus alata)

Sweet Pepper-bush, White Alder (Clethra alnifolia)
Pagoda-dogwood, Alternate-leaved Dogwood (Cornus alternifolia)
Silky Dogwood (Cornus amomum)
Gray Dogwood, White Dogwood (Cornus racemosa)
Autumn-olive, Oleaster (Elaeagnus umbellata)
Black Huckleberry (Gaylussacia baccata)
Sheep-laurel, Lambkill, Wicky (Kalmia angustifolia)
Mountain-laurel (Kalmia latifolia)
Swamp-azalea, Swamp-honeysuckle (Rhododendron viscosum)
Lowbush Blueberry (Vaccinium angustifolium)
Highbush-blueberry (Vaccinium corymbosum)
American Chestnut (Castanea dentata)
American Beech (Fagus grandifolia)
White Oak (Quercus alba)
Chestnut-oak, Rock Chestnut-oak (Quercus prinus)
Red Oak (Quercus rubra)
Witch-hazels (Hamamelidaceae)
Pignut, Pignut-hickory (Carya glabra)
Shagbark-hickory (Carya ovata)
Spicebush (Lindera benzoin)
Sassafras (Sassafras albidum)
Sweet Fern (Comptonia peregrina)
Black Gum, Sour Gum, Tupelo, Beetlebung (Nyssa sylvatica)
White Ash (Fraxinus americana)
Common Buckthorn (Rhamnus cathartica)
Downy Serviceberry (Amelanchier arborea)
Apple (Malus pumila)
Black Cherry, Wild Rum-cherry (Prunus serotina)
Multiflora Rose (Rosa multiflora)
Low Rose, Virginia Rose (Rosa virginiana)
Common Blackberry (Rubus allegheniensis)
Bristly Dewberry, Running Dewberry (Rubus hispidus)
Meadowsweet (Spiraea alba)
Big-toothed Aspen (Populus grandidentata)
Trembling Aspen, Quaking Aspen (Populus tremuloides)
American Elm, White Elm (Ulmus americana)
Summer Grape (Vitis aestivalis)
Common Greenbrier, Catbrier, Bullbrier (Smilax rotundifolia)

Plants - Flowers (53 species)

Wild Sarsaparilla (Aralia nudicaulis)
Common Milkweed (Asclepias syriaca)
Yarrow (Achillea)
Common Ragweed (Ambrosia artemisiifolia)
Daisy-fleabane, Whitetop, Sweet Scabious (Erigeron annuus)
King-devil (spp)
Oxeye-daisy, Marguerite (Leucanthemum vulgare)
Black-eyed Susan (Rudbeckia hirta)

Golden Ragwort (Senecio aureus)
Goldenrod, species (Solidago)
Common Dandelion (Taraxacum officinale)
Winter-cress, Yellow Rocket (Barbarea vulgaris)
White Campion, Evening Lychnis (Silene latifolia)
Common Stitchwort, Field-stitchwort (Stellaria graminea)
Palmate Hop-clover, Yellow Hop-clover (Trifolium aureum)
Red Clover (Trifolium pratense)
White Clover (Trifolium repens)
Bird-vetch, Cow-vetch, Tufted Vetch (Vicia cracca)
Common Yellow Wood-sorrel (Oxalis stricta)
Pokeweed, Pokeberry, Poke (Phytolacca americana)
Narrow-leaved Plantain, English Plantain (Plantago lanceolata)
Broad-leaf Plantain, Common Plantain (Plantago major)
Fringed Polygala, Gaywings (Polygala paucifolia)
Knotweed/Smartweed, species (Polygonum)
Red Sorrel, Sheep Sorrel (Rumex acetosella)
Curly Dock, Sour Dock (Rumex crispus)
Whorled Loosestrife (Lysimachia quadrifolia)
Starflower (Trientalis borealis)
Striped Pipsissewa, Spotted Wintergreen (Chimaphila maculata)
Tall Buttercup, Common Buttercup (Ranunculus acris)
Tall Meadow-rue (Thalictrum pubescens)
Rough-fruited Cinquefoil, Sulphur Cinquefoil (Potentilla recta)
Old Field Cinquefoil, Old Field Five-fingers (Potentilla simplex)
Field-madder, White Bedstraw (Galium mollugo)
Bluets, Quaker Ladies, Innocence, Churn-dasher (Houstonia caerulea)
Common Mullein, Common Flannel-plant (Verbascum thapsus)
Common Speedwell, Gypsyweed (Veronica officinalis)
Jack-in-the-Pulpit (Arisaema triphyllum)
Skunk-cabbage (Symplocarpus foetidus)
Northern Blue Flag, Wild Iris, Poison-flag (Iris versicolor)
Common Blue-eyed Grass (Sisyrinchium montanum)
Soft Rush, Common Rush (Juncus effusus)
Canada Mayflower, False Lily-of-the-valley (Maianthemum canadense)
Indian Cucumber-root (Medeola virginiana)
Pink Lady's Slipper, Moccasin-flower (Cypripedium acaule)
Deer-tongue, Riverside Panic-grass (Dichanthelium clandestinum)
Bur-reed, species (Sparganium)
Cow Wheat (Melampyrum lineare)
Ground Cedar (Lycodium complatum)
Sessile-leaved Bellwort
Aster (genus)
Wild Geranium
Carex (sp)

Plants - Mosses (2 species)

Haircap Moss (Polytrichum)

Sphagnum Moss, Peat (Sphagnum)

Plants - Ferns & Clubmoss (13 species)

Ground-pine, Princess-pine (Lycopodium obscurum)
Hay-scented Fern (Dennstaedtia punctilobula)
Bracken Fern (Pteridium aquilinum)
Lady Fern (Athyrium filix-femina)
Spinulose Wood-fern, Toothed Wood-fern (Dryopteris carthusiana)
Sensitive Fern (Onoclea sensibilis)
Christmas-fern (Polystichum acrostichoides)
Cinnamon-fern (Osmunda cinnamomea)
Interrupted Fern (Osmunda claytoniana)
Royal Fern (Osmunda regalis)
New York Fern (Thelypteris noveboracensis)
Marsh Fern (Thelypteris palustris)
Massachusetts Fern (Thelypteris simulata)

Appendix B: Public Input

1999 Land Use Survey for Stefans Property: This was a project-specific survey that the Conservation Commission sponsored for the 100-acre Stefans property, which the Town purchased with federal Land and Water Conservation funds made available through the State's Self-Help grant program. This was a random sample two-question survey where 150 active voters were chosen at random to receive the survey. The Commission received 47 returned surveys for a response rate of 31%. The major findings of this survey are as follows:

- When asked about how this property should be used, roughly 45% of the respondents chose the option that would preserve 80 acres as protected open space and the remaining 20 acres for municipal use, while roughly 43% of the respondents chose the option that would preserve 90 acres as protected open space and the remaining 10 acres for municipal use.

- When asked how they would like to see the municipal portion of the land used, roughly 60% of the respondents chose active recreation, 21% chose town cemetery, 15% chose limited development and 13% chose municipal buildings.

A public meeting to discuss the proposed plan is scheduled for November 19th, 2007

Discuss results….

Appendix C: 2000 Forest Cutting Plan/Sample Contract

Exhibit E

SALE AND CUTTING CONTRACT FOR STANDING TIMBER

AN AGREEMENT MADE **February 15, 2000** between

Joseph Stefans
120 Mechanic Street
Upton, MA 01568

(herein after referred to as the SELLER)

AND

TURNQUIST LUMBER CO., Inc.
180 Hartford Pike
Foster, RI 02825

(herein after referred to as the BUYER)

to wit:

IN CONSIDERATION OF **$96,872.25** , The SELLER hereby agrees to sell all rights, title, and interest in all trees marked with **YELLOW** paint amounting to an ESTIMATED **301,245** board feet (Int'l ¼"Log Rule) and **250** cords (128 cu.ft./cord) in log tops. Sale area boundaries are described on the map attached hereto.

The SELLER and the BUYER agree to abide by the following terms:

1) Only designated trees will be cut and the BUYER will pay as liquidated damages three times the stumpage value or volume for any reserved trees cut or negligently damaged , provided that he will not be liable for this penalty in felling or damaging any reserved trees in making necessary roads and landings.

2) The BUYER shall give to the SELLER or to the SELLER's AGENT one week's notice of intent to begin harvesting trees hereunder.

3) The BUYER shall have the right to enter upon the described property for the purpose of cutting and removing said designated trees and/or the forest products produced therefrom. Likewise, the SELLER agrees that the BUYER may use the necessary equipment to do the job of cutting, skidding, forwarding, and transporting said trees and/or forest products, and has the right to use any rights-of-way pertaining to said property.

4) The SELLER, through the SELLER's AGENT, reserves the right to restrict the size and type of logging equipment and the manner in which the equipment is operated by the BUYER, the BUYER's employees, or any subcontractors retained by the BUYER.

5) The BUYER agrees to conduct logging upon said property with as much care as possible, leaving no unnatural debris at the end of the operation. Unmarked trees and reproduction (seedlings, seedling sprouts, or small saplings) will be protected against unnecessary damage during harvesting, and main woods roads will be left clear of brush and tops. Logging will be carried out in complete compliance with all current forest cutting practices laws. Skid roads will be kept to a minimum number, and where there is any deep rutting or erosion problem, it must be corrected to the satisfaction of the SELLER's AGENT before leaving the job.

6) The BUYER shall leave all log loading and landing areas free of all forms of waste, including unmerchantable logs and/or portions of logs, which shall either be trucked away or buried. Said areas shall be smoothed and graded, and, if deemed necessary by the SELLER's AGENT, seeded to grass.

7) Stumps must be cut no higher than the root swell, and trees must be utilized in their tops to the smallest possible diameter for commercially salable material. All tops will be lopped and none left hanging in residual trees. Uprooted, broken, and spring trees must be cut to the ground. Slash must lie no higher than **2 (two)** feet from the ground.

8) In case of extreme fire or mud conditions, the SELLER, through the SELLER's AGENT, reserves the right to suspend this harvesting operation, and, if necessary, to extend the time for completion accordingly. However, the BUYER remains liable for any claims that may arise from forest fires that may be attributed to the BUYER's operation during the period in which the operation is in progress on the SELLER's property.

9) The SELLER and the BUYER agree that the logging/firewood contractor will be:

name address Lic.# telephone

10) The SELLER agrees that he/she has ownership and the right to sell all standing trees designated for cutting. Title for all timber/firewood remains with the SELLER until paid for in full!

11) The BUYER shall be deemed an independent contractor and in no way will the SELLER or the SELLER's AGENT be responsible for any injuries or unlawful acts committed by the BUYER.

12) The SELLER allows the BUYER until **12-31-2000** to remove all designated trees and/or the forest products produced therefrom from said property, after which time title for said trees or forest products will revert back to the SELLER.

13) The SELLER agrees to assume all liabilities for the accuracy of the property boundaries.

14) The SELLER grants to the BUYER the right of ingress and egress on his/her land for the purpose of removing the specified trees and/or forest products during the time of this contract, entirely at the BUYER's own risk and expressly excluding any representation or warranty as to the condition of the land over which the BUYER may pass regarding safety, accessibility, or use for any purpose.

15) Payment of monies is agreed to as follows: **10% ($9,687.23) herewith, and the balance of $87,185.02 due by June 1, 2000, OR, BEFORE cutting begins hereunder, which ever comes first.**

16) In consideration of the foregoing, the BUYER agrees to assume all liability for injury or damage to himself, his employees, and any and all persons acting by, through, at the invitation of, or on behalf of the BUYER, and to all property and equipment of the BUYER or any agent or other person, whether said property or equipment is owned by the BUYER or not!

17) The BUYER agrees to indemnify, defend, and hold the SELLER and the SELLER's AGENT harmless for any injury or damage to any person or property as a direct or indirect result of any aspect of the BUYER's operations, which undertakings shall survive the term of this contract.

18) The SELLER is not responsible for any theft of wood or equipment of the BUYER, or for vandalism to the BUYER's equipment.

19) There will be no subcontracting without the permission of the SELLER or the SELLER's AGENT.

20) The SELLER's AGENT is herein identified as Craig Masterman, dba YANKEE WOODLANDS, 332 Pleasant Street, Paxton, MA 01612 Telephone (508)799-5068

21) The BUYER shall furnish a performance bond in the amount of **$3,000** before harvesting begins. The bond will be held by YANKEE WOODLANDS as Agent for the SELLER until all contract terms have been complied with, at which time it will be released without interest to the BUYER.

22) It is understood and agreed by both the BUYER and the SELLER that assessments, if any, made against the performance bond will be based SOLELY and EXCLUSIVELY upon the determinations of YANKEE WOODLANDS as Agent for the SELLER regarding degree of compliance with any and all terms of this contract.

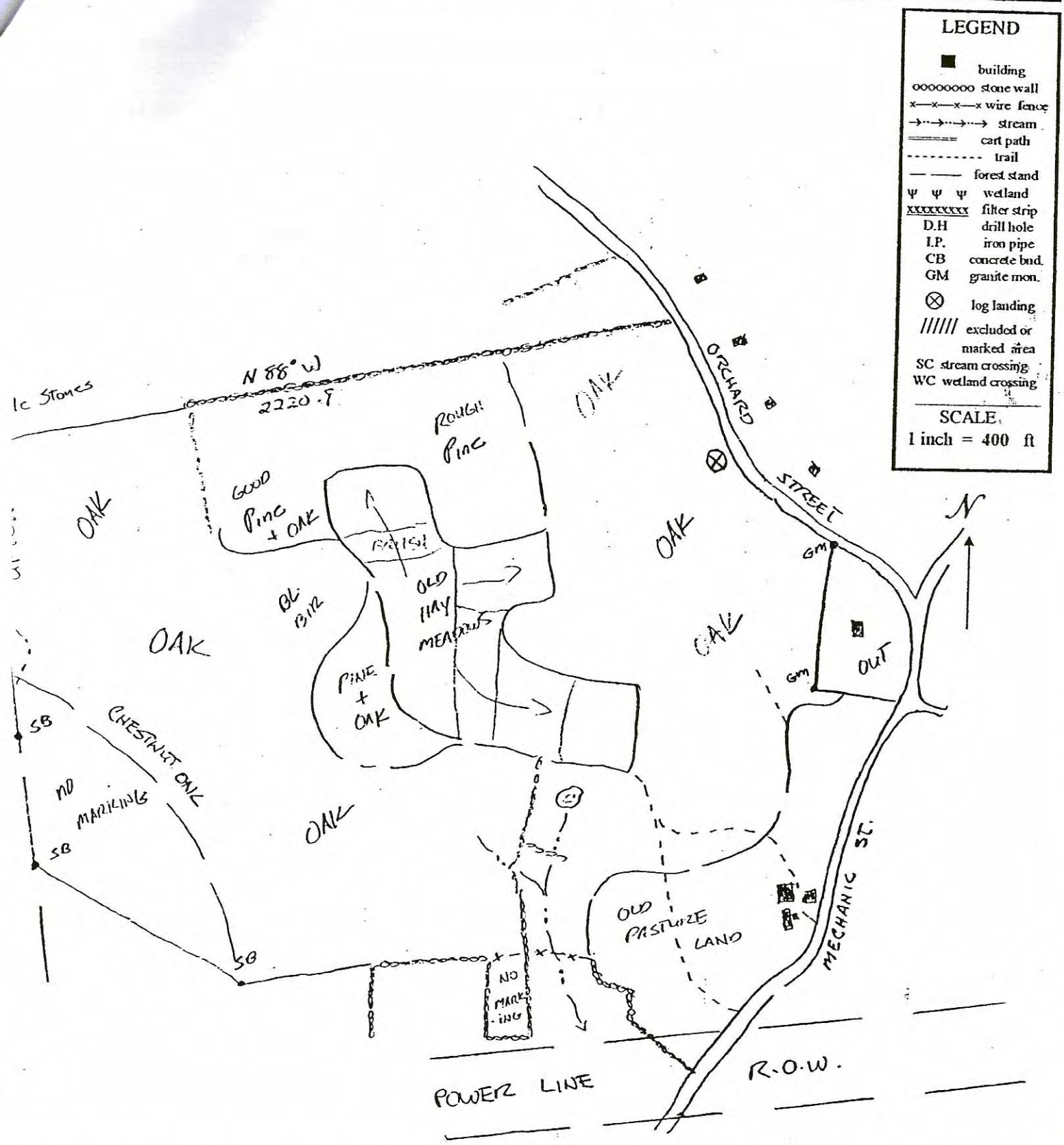
SPECIAL TERMS/ADDENDUM: **The logging contractor will furnish a certificate of insurance as evidence of current general contractor's liability coverage before harvesting begins hereunder. The BUYER will not be held responsible for any damage to the land or residual vegetation caused by the fieldstone removal contractor currently operating on the property of the SELLER.**

WITNESS: _____ BUYER: _____
Al Turnquist for Turnquist Lumber Co., Inc.

SELLER: _____
Joseph Stefans

owner: JOSEPH STEFANS
ress: 120 Mechanic Street, Upton, MA 01568
ocation of Property: SAME

Total Acreage: 129 Acres Marked: @ 90
Ch 61Acres: N/A
Stewardship Acres: N/A Date: Jan. 2000



pared by C.L. Masterman - YANKEE WOODLANDS
rces: Assessors map, aerial photo, surveyed plot plan, field recon.

Appendix D: Sample Agricultural License.

20.3.5 License for Agricultural Use of Conservation Land

A "lease" needs town meeting/city council authorization; a license may not. The difference is not totally clear. Counsel should be consulted in advance. A license must be approved by a vote of the Conservation Commission at a posted meeting. Leases and licenses are discussed in HB §8.4.2.

WHEREAS the licensor wishes to maintain and improve the soil fertility of land under its custody, to keep the land open for recreational use, to encourage wildlife habitat, to preserve open spaces and vistas important to the character of the area, and to promote agriculture; and

WHEREAS the licensee wishes to practice farming in a manner congruent with proper use of conservation land,

NOW THEREFORE the licensor and licensee agree:

1. The licensor is the [*name of municipality*] acting through its (Conservation Commission, selectboard, mayor).
   [Note: Municipal counsel should advise who should sign the license.]
2. The licensee is [ ] and her/his employees, without right of assignment or substitution.
3. The premises are: [ ] together with access as follows: [ ].
4. The agreement shall commence [ ] and shall terminate [ ] (one year later) and may be canceled by either party upon 60-days notice to the other.
5. The licensee shall pay the licensor the sum of [ ] per year, payable [ ]. Real estate taxes, if any, shall be paid by the licensee.
6. The licensee shall use the premises only for the purpose of farming and may clear, irrigate, cultivate and plant for that purpose [only in accordance with a plan approved by the Conservation Commission OR in accordance with a plan developed by NRCS and approved by the Conservation Commission OR *specifically describe areas to be left in their natural state and/or type of work to be permitted*]. The licensee shall use pesticides/herbicides/fertilizer [only as follows [ ] OR: in accordance with the NRCS conservation plan]. (*Optional*) The licensee shall not cut during bird-nesting season without Conservation Commission approval.
7. The licensee shall maintain soil pH and productivity, and shall maintain during the non-growing season ground cover adequate to prevent erosion.
8. The licensee shall erect no permanent structures (except) [ ] and shall not store farming equipment on the premises except in the (growing/harvesting) season.
9. Members of the public shall have access to the premises except as necessary to prevent damage to crops. The public shall have the full use of the land off-season subject to Conservation Commission regulations. The licensor may enter at reasonable times to enforce this agreement.
10. The licensee shall indemnify the licensor for any loss or damage incurred by the licensor on account of this agreement or any activity under it (and shall maintain insurance sufficient for this purpose).
11. The licensee hereby waives any claims arising during the term of this agreement for loss or damage suffered by the licensee or employees on account of acts or omissions of the licensor or public using the premises.

Licensee	[*Signature*]	[Date]
For the Conservation Commission	[*Signature of Representative*]	[Date]

Appendix E: Conservation Commission Land Use Regulations.

Land Use Regulations
Town of Upton Conservation Commission

The following rules are established on December 13, 2006 by a majority vote of the Upton Conservation Commission under its authority (Chapter 40, Section 8C) to regulate use of town conservation areas and other land managed by the Conservation Commission.

Upton's conservation lands are open to all for hiking, nature study, biking, cross country skiing, snowshoeing, horseback riding, camping, and other pursuits that do not damage the land or impair other people's enjoyment. These are your lands. Please enjoy them and take care of them.

1) Conservation lands are open daily from one hour before sunrise until one hour after sunset. After hours use may be permitted by the Conservation Commission.

2) Horses and mountain bikes and permitted except in certain areas to prevent damage to resources or trails. A list of restricted use trails is available from the Conservation Commission.

3) Motorized vehicles are permitted only when authorized by the Conservation Commission or on designated trails.

4) Dogs must be leashed or under control at all times. Dogs must be leashed from April 1 through June 30 in grassland areas to protect ground-nesting birds.

5) No alcoholic beverages are permitted.

6) No person shall cut, break, remove, deface, or defile any natural or manmade object. Plants may not be collected or removed unless authorized by the Conservation Commission. Non-game wildlife, including vertebrates and invertebrates, shall not be harassed, collected, or removed.

7) Hunting and trapping is permitted pursuant to Massachusetts Department of Fish and Wildlife regulations. Treestands are permitted without written approval from the Conservation Commission provided treestand guidelines are followed. The guidelines are available from the Conservation Commission and the town of Upton website.

8) Discharge of firearms except during hunting season by licensed hunters is prohibited. Discharge of paintball guns is prohibited.

9) No fires are permitted except under conditions stipulated in a camping permit**.**

10) No disposal of waste material of any kind is permitted. All trash must be packed out.

11) Overnight camping may be permitted at the discretion of the Conservation Commission to groups having an adult leader present at all times. All campsites must be at least 50 feet from established trails and 100 feet from wetlands, ponds, or streams. Use of portable stove and open fires are allowed with written permission from Upton Fire Department. All wastes must be packed out.

12) Group use of conservation land for private, non-commercial functions such as for weddings, is allowed with prior notification and approval of the Conservation Commission. Applications for other group events will be accepted only from non-profit and governmental organizations.

VIOLATIONS HEREOF are punishable by a fine of $50 for the first offense and $100 for subsequent offences. The Commission may also require restoration of damages.

if there are questions please contact the Upton Conservation Commission at 508-529-6286 or at concom@upton.ma.us.

Upton Conservation Commission Treestand Guidelines

These guidelines describe Conservation Commission policy concerning use of treestands on Town of Upton conservation lands and other lands managed by the Conservation Commission and Upton Land Stewardship Committee at the request of the selectmen. The guidelines do not apply to other land owned by the town of Upton, Upton State Forest, or privately owned land.

Hunters may install and use treestands without prior written Commission approval, subject to the following conditions:

1. No person shall construct, maintain, or use a permanent treestand. A permanent treestand is one which is constructed using nails, screws, or other fasteners which intrude into the wood of the tree.

2. Treestands must not be visible from mapped hiking trails. This is to reduce the risk that a person (non-owner) will locate a treestand, climb it, and suffer a climbing injury.

3. Treestands may be installed no earlier than 30 days prior to deer hunting season and must be removed within 30 days after deer hunting season closes. Treestands installed outside this interval are subject to removal by the Commission (owners of confiscated treestands may claim them at the Conservation Commission office).

4. No trees shall be cut down to improve sight lines. Trimming of small branches (maximum 1.5” diameter) is permitted.

Adopted: October 24, 2007

Effective: August 1, 2008

Appendix F: Conceptual Trail Map

Upton purchased the Stefans Farm property in 2003. At one time, the fields and meadows supported over 80 Holstein cows, heifers and a bull. The trails traverse areas that reflect land use patterns of the past 200 years.

A Pratt's Meadow Trail – This short trail loops around the perimeter of one of the main hay fields. Starting from the parking lot and walking north, you come along a section of scrub growth just off the road. This is believed to be the site of a boot shop A as shown on a map from 1851. The making of boots played an important role in Upton's growth. Close by, as you start walking down the hill, is a 3-sided stone enclosure. B Continue on the trail to a short spur (near power-lines) where there is a nice overlook C of a wetland system along Warren Brook. Great blue herons, mallards, wood ducks, and kingfishers are some of the birds that are seen in this area. There is evidence of beavers D, where a beaver lodge and dam, felled and dead trees, a small pond with newly emergent vegetation can be found. The beavers have appeared to move on after having consuming the available food at this location. The beaver continues along the edge of the field back to the parking lot.

B Farm Loop Trail – Cross Mechanic St from the parking lot along a short right of way to the main farm property. The trail passes through a couple hayfields and pasture and then comes along a farm pond E on the left. Joe Stefans dug this pond in the early 60's to provide water for his cows. The trail continues along the southern edge three more fields. There is a short trail to small vernal pool surrounded by a beautiful stand of mountain laurel G. Tracing back to the main trail, continue to a field opening F. There are good views to the southeast of the forested Pratt Hill. A short distance from here there are a few apple trees that were planted by the Hall's (previous owners). This is the highest point of this trail. Descending, the trail passes by a large (4'diameter) white oak tree H. It's spreading limbs (wolf tree) indicate it grew in an open area and that the area was once a field or pasture at one time. The trail passes through more forested areas and then retraces the trail back to the parking lot.

C Soggy Foot Trail – This is a short trail off of the Farm Loop Trail. It crosses over an intermittent stream through a grove of pines and then along the edge of wooded wetlands before returning to the Farm Loop Trail.

D Wolf Tree Trail – This trail can be taken as a short cut to the wolf tree and then follows the Farm Loop Trail to return. It provides a nice view of the main fields, crosses over a small intermittent stream before connecting to the Farm Loop Trail.

E George's Hill Trail – This trail provides a connection to an off-property trail that goes to the top of near-by George's Hill. Seek permission for use of this trail when off the town property.

F Orchard Street Trail – This trail connects into Orchard Street through a short right of way.

Proposed Trails

Town of Upton

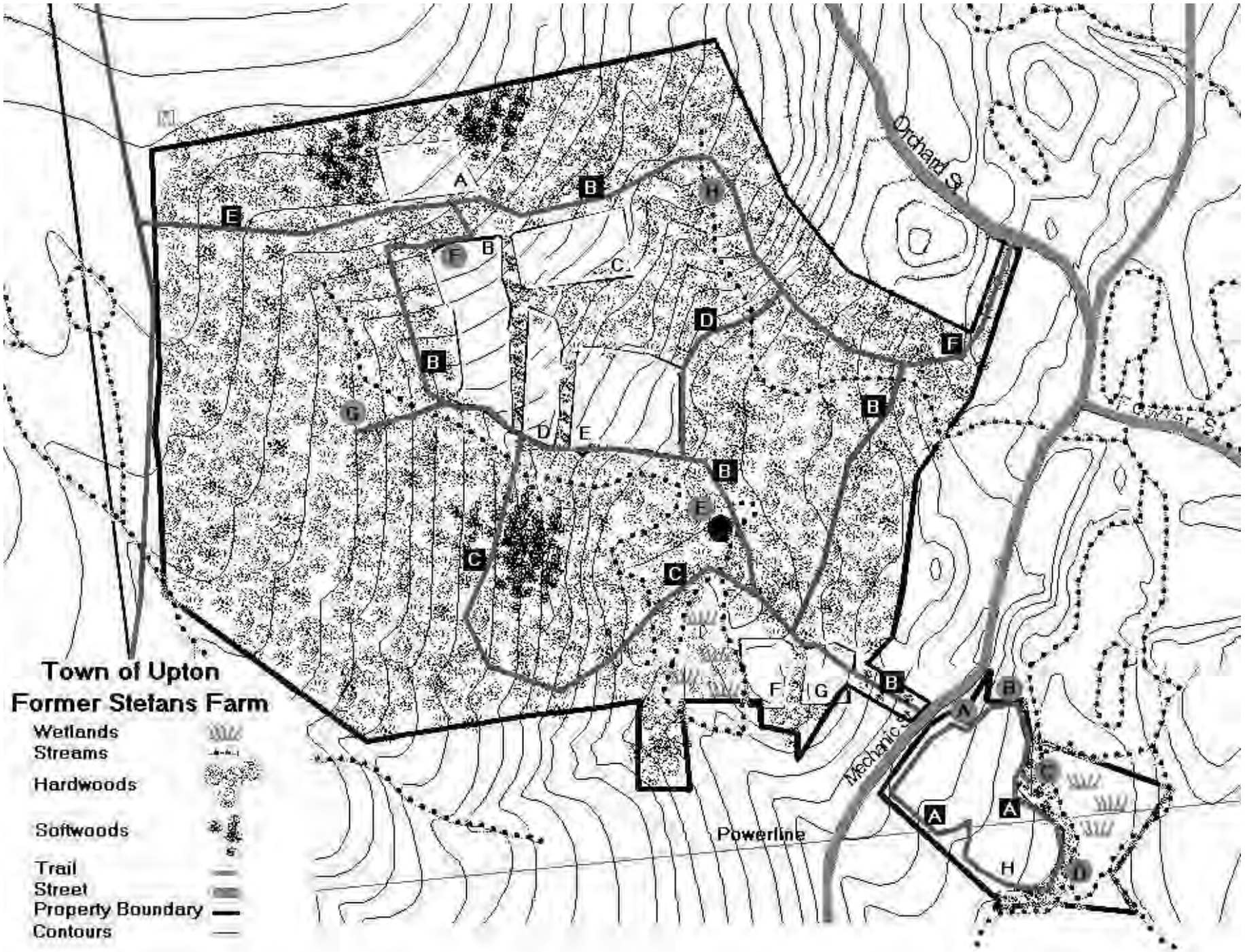
Former Stefans Farm

Trails (Symbol = A)

A – Pratt's Meadow Trail	~1/4 mile
B – Farm Loop Trail	~3/4 mile
C – Soggy Foot Trail	~1/4 mile
D –Wolf Tree Trail	~1/8 mile
E –George's Hill Trail	~1/8 mile
F –Orchard Street Trail	~1/8 mile

Features (Symbol = A)

A – Parking & Boot Shop
B – Stone Animal Pen
C – Pratt's Meadow Overlook
D – Beaver Dam lodge & dam
E – Joe's Farm Pond
F – Pratt Hill View & Maurice's Apples
G – Mountain Laurel Pool
H – Wolf Tree


Orchard St.
Mechanic St.
Powerline
Town of Upton
Former Stefans Farm
Wetlands
Streams
Hardwoods
Softwoods
Trail
Street
Property Boundary
Contours

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Appendix G: List of Preparers

Cathy Dodd
Tom Dodd
Scott Heim
Mike Penko
Marcella Stasa (Chair, LSC)
Cathy Taylor