V.6

Lawton Farm Invasive Plant Management and Monitoring Plan

Prepared for:

Scituate Conservation Commission

Scituate, RI

By:

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Certified Invasive Plant Manager,

and

Rob Bower, Scituate Land Trust Chair

January 2023

I. Purpose:

As presented in the 2019 Lawton Farm Land Management Plan (LFLMP), invasive plants can have a negative impact on native plant communities, and can interfere with any attempts at establishing regeneration of tree species and grasslands. Disturbed sites and exposed areas, such as the open fields and adjacent residential sites, and the disturbances created by timber harvesting, can often lead to problems with the spread of invasive plants.

There are significant amounts of invasive plants in the wooded areas of the Lawton Farm, as well as in the field edges. A detailed review of those plants, their locations, and control methods is provided in the Forest Management component of the LFLMP. See also the Invasive Plant Fact Sheets in Appendix VI of the LFLMP. The purpose of this plan is to lay forth the management and monitoring practices to be followed at the Lawton Farm property.

II. Introduction:

This Lawton Farm Invasive Plant Management Plan (the Plan) has been developed in conjunction with the LFLMP for the purpose of documenting invasive plants present at Lawton Farm, invasive plant management practices to date, and long term invasive plant management plans. The Scituate Conservation Commission (SCC) has been assigned management responsibility of the Lawton Farm and its resources by the Scituate Town Council. The SCC is a board of the Town, with volunteer commissioners and associates who, as part of their function, monitor several properties in town on behalf of the Town.

The Lawton Farm is a 54.4 acre parcel in the southeastern portion of the town of Scituate, with frontage on Seven Mile Road. It is owned by the Town of Scituate and most of the acreage is subject to a Conservation Easement (CE) granted to the State of Rhode Island. The Purpose of the CE on the Lawton Farm, as identified under Item 1 of the CE, is to "assure that the Premises will be retained forever in its open, natural, scenic, agricultural, ecological, or educational condition and to prevent any use of the Premises that will significantly impair or interfere with the conservation values of the Premises." The CE confines the use of the Premises to:

- Maintaining the open fields in farm production to provide nesting habitat for the Eastern Meadowlark and Bobolink;
- Managing the forest under a forest management plan;
- And such uses as are consistent with the purpose of the CE and the Management Plan . . . . to preserve the natural values, public access, and other matters. . .

III. Goals and Objectives:

The primary goal of the SCC in the management of the Lawton Farm is to protect the conservation values of the property in accordance with the CE. The LFLMP sets forth the SCCs mission and goals and provides guidelines and recommendations for the following Objectives:

- Continue the agricultural use of the farm's open fields in order to provide open grassland habitat for the Eastern meadowlark and the Bobolink, contribute to the local farm economy, and maintain the aesthetically valuable open nature of the landscape;
- Improve the productivity of the woodland areas for improved forest health and woodland habitat values;
- Provide public access for passive recreational purposes that are compatible with

protecting the integrity and diversity of the wildlife habitat communities.

To address these objectives, LFLMP includes the following components, which include recommendations for managing invasive plants:

- A Grassland Habitat Management Plan for the maintenance and improvement of the open fields that allows for grassland bird habitat;
- A Forest Management Plan that addresses vegetation and habitat improvements in the wooded areas, as well as providing access to those areas for implementation;
- A Recreational Use Plan that provides guidelines on recreational access that is compatible with the protection of conservation values.

IV. Property Overview:

The property is located westerly of Seven Mile Road, which runs south off of Scituate Avenue (RI Rt. 12) in the southeastern portion of the town of Scituate. This roughly 55 acre property is mostly open fields, except for approximately 20 acres of forested wetlands along Cranberry Brook, and a small stand of upland hardwoods in the southwest corner. The property is bisected by Cranberry Brook, which runs south through the property to the North Branch Pawtuxet River. The Lawton Farm has historically been utilized for agricultural purposes, and that use is continued through the current management of the hayfields.

The forest cover is predominately hardwoods, with red maple in the wetland and riparian zone, and a mix of upland oaks in the small area of upland soils and in the matured hedgerow between two fields. These woodlands were at one time cleared for pasture, as is evident by the presence of stone walls and barbed wire fencing along some of the boundaries. Those less productive, abandoned fields and wetland areas have reverted to woodlands.

The soils on the property are primarily upland Paxton very stony fine sandy loams, and Woodbridge very stony fine sandy loams underlying the open fields, and Lippitt gravelly sandy loam, very rocky, and Ridgebury extremely stony, fine sandy loams in the wooded portions of the property. Soil moisture and site quality varies somewhat between the drier sites on the eastern ridge and hillsides adjacent to the stream valley, and the poorly drained areas along the stream.

V. Stewardship Issues:

a. Wildlife habitat:

Management recommendations in the LFMP for grassland habitat for Eastern meadowlark and the Bobolink identifies the following features:

- Provision of uninterrupted grasslands, which requires removal of hedgerows that could harbor predators (such as the cowbirds that lay eggs in other bird's nests);
- Warm-season grasses that are mowed or burned on a regular basis to control woody plant intrusions;
- Elimination of disturbances during nesting season (April 1 through August 31), such as the presence of dogs.

One of the old-field, brushy sites lies in between the open hayfield and the mature woodlands of the stream valley. This positioning of early-successional habitat in a transitional zone provides a feathered edge effect, which increases the value of this zone for habitat. The forested wetlands provide an additional source of

habitat, with nesting and feeding sites for Woodcock and a variety of other birds and mammals. Native woodland vegetation within this wetland area is competing with invasive plants such as the multiflora rose, Japanese barberry and buckthorn.

b. Water Resources/Water Quality

This property is in the watershed of the North Branch Pawtuxet River, which helps feed a groundwater recharge area that provides an important source of groundwater in Kent County. Activities on this property could have some affect on the quality of the water that flows off the property towards the North Branch Pawtuxet River. The wooded riparian zone along the stream provides a good buffer to activities on the adjacent uplands, including the management of the hayfields. Handling and application of pesticides used to control invasive plants will be carried out with caution to prevent polluting the surface water which eventually will enter the stream . In addition, maintaining adequate native vegetation in and around the wetlands will provide natural filtering of pollutants and prevent sediment erosion.

c. Invasive Plants:

Invasive plants have a negative impact on native plant communities, and interfere with any attempts at establishing regeneration of tree species. Disturbed sites and exposed areas, such as the open fields and adjacent residential sites, and the disturbances created by timber harvesting, can often lead to problems with the spread of invasive plants. There are significant amounts of invasive plants in the wooded areas of the property, as well as in the field edges and the hedgerow within the hayfields. A detailed review of those plants, their locations, and control methods is provided in the Forest Management component of the LFLMP (page 14). See also the Invasive Plant Fact Sheets in Appendix VI of the LFLMP.

d. Rare and Endangered Species and Habitats:

Presently, there are no known federal or state endangered plants or animal species within the 55 acres. Grassland bird species are species of concern due to declining habitats, and were a prime motivation in the purchase of this land. In order to provide and protect the grassland habitat for the referenced species, the hayfields are managed according to the Grassland Habitat Management Plan detailed in the LFLMP, with no hay cutting during the grassland nesting bird nesting season between April 1 and August 1st and no dogs allowed on the property during that time; at other times dogs must be on a leash not to exceed eight (8) feet in length.

e. Bird Survey Info

The SSC has had numerous bird surveys conducted of the property in 2005, 2010, 2011 and 2012, by bird survey professionals. Results of these surveys can be obtained upon request. Generally, the survey's have indicated a population of over 30 bird species, which included Bobolink, Eastern meadowlark, Indigo bunting, scarlet tanager and cedar waxwings. Since 2011 , however, no Eastern meadowlark were cited, possibly due to heavy dog use in recent years.

VI. INVASIVE PLANT MONITORING AND MANAGEMENT PLAN:

1. Conditions Identified in the LFLMP:

The property is divided into grassland and forest management areas (see Map 1 and 2). Below are brief descriptions of each area identified in the LFLMP as needing invasive plant management and the recommendation identified at the time the plan was written in 2010. Further details of each area can be found in the LFLMP.

a. GRASSLAND HABITAT MANAGEMENT PLAN – Fields 1-4

This plan component applies to approximately 35 acres of open grassland fields. There are four (4) field zones on the property, coinciding with the Field determinations of the USDA-NRCS's Conservation Plan Map 1.

The SCC seeks to manage the grassland fields at the Lawton Farm for multiple purposes, with the provision of grassland habitat for Eastern meadowlark and Bobolink being the primary purposes. Supporting local agriculture and providing a scenic, passive recreational resource are secondary purposes of the management of these grasslands. These purposes are mutually attainable provided that the SCC is able to implement a harvesting and recreational use plan that accommodates the primary purpose of the grassland habitat values. Management of the grasslands for provision of bird-nesting habitat requires disturbance minimization practices: mowing for hay is conducted after August 1 each year; hedgerows that cut into the middle of fields are eliminated; trail use through the middle of fields is restricted during nesting season; and all dogs, restrained or not, are restricted during nesting season. Under that mowing schedule, the quality of the hay is going to be below that necessary for forage. Management practices to improve the quality of the hay may not be feasible. Application of lime and fertilizer may increase the volume of hay, and may be feasible for that purpose. Treatment of the grasses to remove weeds is not a feasible activity, and will reduce the wildlife food quality of the grassland.

Recommendations:

- Remove the hedgerow between Fields 1 and 2 to minimize predation of nests by the brown cowbird;
- Eliminate the mowed trails that cut through the middle of the fields during nesting season to minimize disturbance of the nests;
- Avoid any application of weed-control, since the weeds provide food;
- Conduct brush removal and re-treatments of invasive plants along field edges (see treatment recommendations on page 11 of the LFLMF);
- Continue to allow mowing on an annual basis after August 1;
- Field 4 should be mowed every 3 years to provide old-field habitat conditions;
- Implement lime and fertilizer applications in Field 1 to improve hay production;
- Eliminate the presence of dogs in the fields between April 1 and August 31 to prevent disturbance of the nests.

2. Grassland Field 5 (includes Forest Stands 1 and 2)

a. Stand 1:

STAND: 1 ; ACRES: 15; COVER TYPE: Mixed Hardwoods
MANAGEMENT OBJECTIVE(S): Provide Wetland Wildlife Habitat through the

enhancement of native tree and shrub species, while protecting the quality of the water that flows through the stand's riparian zone.
SITE QUALITY: Fair. Soils are Ridgebury extremely stony fine sandy loam, with a site index of 55 for Red maple and a site index of 63 for White pine. Where soil conditions are not completely saturated, White pine and Northern red oak can become established and become productive for timber purposes.
FOREST RESOURCE DATA:
STAND DENSITY: 103 SQ. FT. OF BASAL AREA/ACRE
TREES/ACRE: 288 AVG. DIAMETER (DBH): 8.1"
STOCKING LEVEL: Fully-stocked at 95% on UCH chart
STAND DESCRIPTION:
This stand occupies the riparian zone along Cranberry Brook through the central portion of the property .The northern portion of the stand is a narrow band of relatively young woodlands, having sprouted up since the 1970's from previously open fields. The mix of species within this northern strip of the stand includes Red maple, American elm, and White ash, with Speckled Alder and Spicebush shrubs along the edges. Invasive shrubs within the field edges of this portion of the stand include Multi-flora rose and Autumn-olive [Asian bittersweet, buckthorn].

The southern portion of the stand is stocked with an older stand of Red maple and White pine in a wider patch of wetlands, with the stream flowing through the eastern portion of the stand. The White pines and a few Red oaks are found in the western portion of the stand, within the transition zone to the better-drained site of Stand 2. The eastern portion of the stand is dominated by the Red maple, which represents about 75% of the stocking. Understory species in this portion of the stand include hickory and white pine saplings in the western portion, Green briers, Sweet Pepperbush and, in the eastern portions of the stand, invasive Japanese barberry and Multiflora rose [Asian bittersweet, buckthorn]. The eastern edges of the stand along the field include alder clumps, as well as invasive plants.

MANAGEMENT RECOMMENDATIONS:

Control Invasive Plants : Heavy stands of well established Multi-flora rose, bittersweet vines, and Autumn-olive shrubs requires an initial mechanical brush removal, followed up by herbicidal treatment of cut stumps, and spot treatment with herbicides on re-sprouting stumps for several years. The initial removal effort will require cutting with brush cutters within the wooded areas that are not accessible by heavy mowing equipment. Due to the dominance of the multiflora rose in the wetland, shrub removal should be done in stages to avoid creating a potential erosion problem and violation of RI DEM Wetland Regulations. One-third of the shrubs could be cut in each of a 3-year period, within the time frame of the NRCS contract. Manual cutting is a more favorable approach to provide a more selective cutting process, allowing some of the native vegetation that may be found there to remain. Stump treatment with herbicide to minimize sprouting involves the use of Triclopyr or 2,4-D concentrate painted on the freshly-cut stumps. Addition of a dye to the herbicide will facilitate tracking the application to improve control. For several years following the initial treatments, spot treat the sprouting and newly-established invasive plants with a diluted spray mixture of the chosen herbicide, according to the approved label directions. Concentrated Round-Up or Rodeo (in wetland areas) would be absorbed into the plant within 24 hours, and would have the least impact on wildlife of the commercially available products. Any application of this chemical should be carried out by a licensed applicator.

b. S**tand 2**

STAND: 2; ACRES: 5; COVER TYPE: Oak/Hardwoods
MANAGEMENT OBJECTIVE(S): Improve forest health and upland wildlife habitat conditions.
SITE QUALITY: Poor. Lippitt gravelly sandy loam soil is a somewhat excessively drained soil that has low productivity for both Red oak and White pine. Site index for Red oak equals 47 while that of White pine equals 55.
FOREST RESOURCE DATA:
STAND DENSITY: 80 SQ. FT. OF BASAL AREA/ACRE
TREES/ACRE: 310 AVG. DIAMETER (DBH): 6.8"
STOCKING LEVEL: fully-stocked at 79%
STAND VOLUME ESTIMATE: 3,000 BF/ACRE 7 CORDS/ACRE

STAND DESCRIPTION:
This small stand is located in the southwest corner of the property, and also includes a strip of trees between the two fields in the western portion of the property. The overstory is predominately mixed Red and White oaks, with Black and Northern red oaks the most prevalent species. The mixed upland red oaks represent about 50% of the total stocking. Other species in the stand include Pignut and Mockernut hickory, Red maple, small diameter Black cherry, and Pitch pine. There are a few large diameter White pines in the southern portion of the stand, in the transition zone to the wetter sites of Stand 1. The sawtimber-sized trees in the stand, which represent about half of the total stocking, include White oak, hickory, Black oak and the pines in all sawtimber size classes, with some White and Black oaks in the 20 to 24 inch diameter size classes along the western boundary. The smaller diameter trees in the stand, which are typically subject to Timber Stand Improvement (TSI) activities, include all oaks in the 4 to 10 inch dbh size classes, some hickory, and the black cherry. The understory includes White oak and American beech saplings, small diameter Eastern redcedar, some highbush blueberry, and a ground-level presence of lowbush blueberry and greenbriers.

2. INVASIVE PLANT WORK COMPLETED TO DATE:

In all areas, re-vegetation will occur through natural re-vegetation. No planting will be conducted.

a. Spring 2009 removed hedgerow between Fields 1 and 2

Contractor - Dave Pancarowicz

Funding - Town of Scituate Conservation Commission

Follow-up plan - yearly mowing

In 2009 the SCC hired David Pancarowizc to remove the hedgerow located between Fields 1 and 2 . This was completed by cutting, removing and mowing the majority of plants growing in the hedgerow. A few of the larger saplings were left in place. This hedgerow was greater than 50 feet away from wetland edge and 100 feet away from stream and therefore did not require prior approval from RIDEM to conduct the removal.

b. Fall 2010 and Follow-up in Spring 2011 Removed invasives in Forest Stand 2 (~3 acres)

Contractor – Dave Renzi, Out in Front Horticulture

Funding - Rhode Island Natural History Survey

Follow-up plan – Lawton Farm yearly budget

In 2010 the SCC received grant services through the Community Invasive Plant Control , RI Forest Health Works Project of the RIDEM and RI Natural History Survey through the U.S. Forest Service and an American Recovery and Reinvestment Act grant. Under this program the RI Natural History Survey contracted with Dave Renzi and Out in Front Horticulture to remove invasive plants from the are within the existing paths in Stand 2. The RI History Survey applied for approval through the RIDEM Water Quality and Wetland Restoration Team (RIDEM Wetland Restoration Team) and received approval. The work included initial removal by hand and/or machinery and sump treatment in Fall/Winter 2010, followed by foliar spraying in Spring 2011.

c. Spring 2011 and Follow-up Fall 2011 and Fall 2012: Invasives removal Field edges 3 and 4 (see pics) and Area/Field 5.

Contractor – Dave Renzi

Method - Mechanical and hand removal, herbicide treatment-stump

Funding – Spring: NRCS grant ($6,452)

- Fall: NRCS grant ($1313)

Follow-up plan – Lawton Farm yearly budget/NRCS grant

In spring 2011in conjunction with the work being conducted by the RI Natural History Survey, the SCC initiated invasive plant removal work of Fields 3, 4 and 5 utilizing funding received from the Natural Resource Conservation Service (NRCS). Prior to conducting the work the SCC applied to and received approval from the RIDEM Wetlands Restoration team to conduct the work. The work included initial removal by hand and/or machinery and sump treatment in Winter/Spring, followed by foliar spraying in Fall 2011 and is scheduled again in 2012.

d. Winter 2011 Invasives removal field edge along stone wall on northern side of Field 1

Contractor- Dave Pancarowicz

Method - Hand and mechanical removal

Funding – Contractor‘s grant with NRCS

Follow-up - Lawton farm yearly budget –mowing

In Winter 2011 the SCC initiated invasive plant removal from the area of the stone wall in the northern side of Field 1 utilizing funding received from NRCS. The work was conducted via hand and mechanical removal. This area is located outside of the wetland area and therefore no approval was sought from the RIDEM Wetlands Restoration Team.

e. Spring and Fall 2012 Invasives removal

Contractor: Dave Renzi

Method – Mechanical, hand removal and herbicide stump treatment

Funding – Spring NRCS Grant: $1,040

Fall NRCS Grant: $920

Followup: Annual followup of invasives removal in areas previously treated utilizing Conservation Commission budget of $2,000 annually, with an additional $1,500 annually treat new areas.

Removal of invasives along the eastern side of the stream in field 2 (see map) in spring -specifically Buckthorn and Bittersweet. The method of removal was hand cutting (due to the proximity to the wetland) and stump treating with an approved aquatic herbicide treatment. Follow-up to the invasives removal that took place in 2011 in field edges 3 and 4 in late fall, minor brush cutting and hand cutting with herbicide stump removal.

Summer 2023 Invasives removal along riparian edge and along edge of Field 3

Organization – Youth Conservation League (YCL)

Method – Hand removal

Funding - YCL Grant and Land Trust/Conservation Commission Annual Budget

Follow-up - plan to apply for YCL grant annually

In 2023 the SCC and Scituate Land Trust applied for and received a YCL grant through the RI Audubon. In August 2023 a crew of 6 YCL staff, assisted by Cindy Gianfrancesco and Rob Bower, removed bittersweet, multiflora rose and other invasives from the area around the footbridge which crosses Cranberry Brook, the area between the eastern edge of Field 3 and the stone wall and the area around the upper culvert. Plants were cut by YCL staff and stump treated with herbicide (Rodeo) by Cindy and Rob. All cut vegetation remained onsite.

4. Annual Inspections, Monitoring Status Report and Follow-up

In addition, a Lawton Farm yearly budget for invasive plant control will be established through the SCC and Scituate Land Trust annual budgets and/or grant funded. The budget will allow for follow-up invasives treatment to Fields 1, 2, 3 4 and 5. All funding from the Lawton Farm budget is subject to yearly approval.
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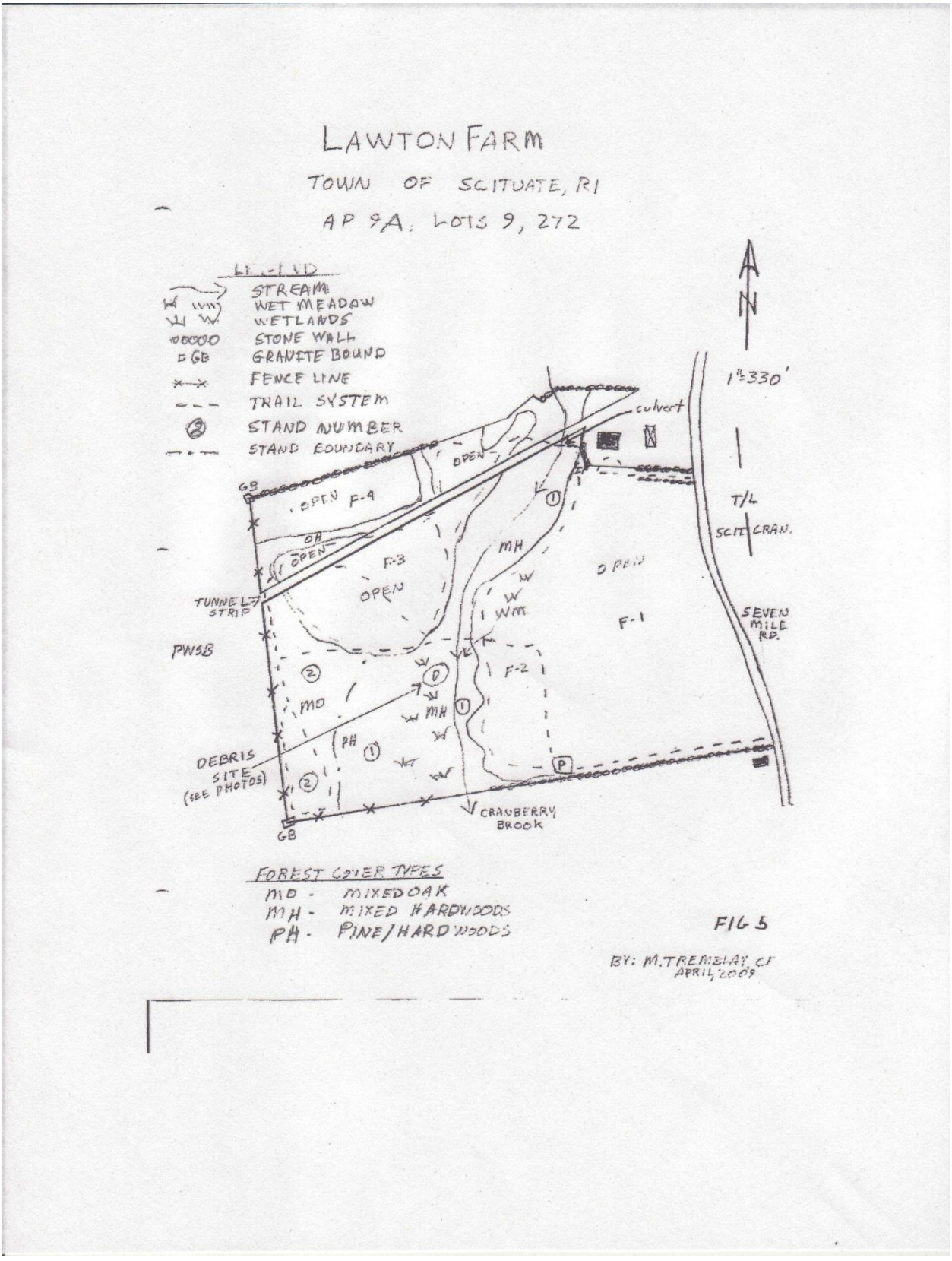
Town of Scituate
Lawton Farm
Approximate Acres: 54
Field 4
Grassland
Field 3
Grassland
Field 1
Grassland
(mowed every yr.)
Field 2
Grassland
Field 5
Forest & Stream Buffer
Legend
stream
wetland
Image: prov03utm.sid
180 0 180 360 540 720
Feet
N

Map 1


LAWTON FARM
TOWN OF SCITUATE, RI
AP 9A, LOTS 9, 272
LEGEND
STREAM
WET MEADOW
WETLANDS
STONE WALL
GRANITE BOUND
FENCE LINE
TRAIL SYSTEM
STAND NUMBER
STAND BOUNDARY
N
1"=330'
culvert
OPEN
GB
OPEN F-4
OH
OPEN
F-3
OPEN
MH
OPEN
F-1
T/L
SCIT CRAN.
SEVEN MILE RD.
TUNNEL STRIP
PWSB
F-2
MD
MH
PH
DEBRIS SITE (SEE PHOTOS)
CRANBERRY BROOK
GB
FOREST COVER TYPES
MD - MIXED OAK
MH - MIXED HARDWOODS
PH - PINE/HARDWOODS
FIG 5
BY: M. TREMBLAY CF
APRIL, 2009

Map 2

Appendix A

Sample Annual Status/Monitoring Report

Annual Status/Montoring Report:

Inspection Conducted By: Date:

Field 1:

Conditions:

Follow-up treatment conducted;

Follow-up treatment needed:

Photos

Field 2:

Conditions

Follow-up treatment conducted;

Follow-up treatment needed:

Photos:

Field 3:

Conditions

Follow-up treatment conducted;

Follow-up treatment needed:

Photos:

Field 4:

Conditions

Follow-up treatment conducted;

Follow-up treatment needed:

Photos:

Field 5:

Stand 1:

Conditions

Follow-up treatment conducted;

Follow-up treatment needed:

Photos:

Stand 2:

Conditions

Follow-up treatment conducted:

Follow-up treatment needed:

Photos:

Appendix B:

Completed Annual Status/Monitoring Reports

Annual Status/Montoring Report:

Inspection Conducted By: Gianfrancesco/Capirchio Date: 9-30-12

Field 1: Currently managed as a hay field

Conditions: Limited invasive plant removal has taken place in Field 1

Upland Areas

1. Hedgerow between Fields 1 and 2 which was removed several years ago is becoming overgrown with bittersweek and weeds.
2. Stone Wall around north and east side of field had initial invasive removal conducted early this year. Limited invasive plants were observed.

Wetland Areas

3. Eastern edge of field, along margin with Field 5/the stream corridor, is thick with invasive plants such as buckthorn, multiflora rose and bittersweet. This area has never had any invasive plant removal conducted and required DEM approval to initiate invasive removal.

NOTE: Town needs to stop mowing path along either side of hedgerow

Follow-up treatment conducted;

No follow-up has been conducted in any areas of Field 1

Follow-up treatment needed:

Upland Areas

1. Hedgerow needs brush hogging and then mowing on a regular basis
2. Stone walls around north and east side of field needs follow up invasive plant removal

Wetland Areas

3. Awaiting DEM approval to initiate invasive plant removal along eastern edge of field along stream corridor

Photos:

View of Hedgerow facing south

View of wet meadow facing west

View of edge of field looking west

View looking south down stream from upper crossing

Field 2: Currently managed as a hay field.

Conditions: No invasive plant removal has taken place in Field 2

Upland Areas:

1. See #1 above in Field 1.
2. Stone wall along southern edge of field has some invasive plants.

Wetland Areas

3. Lower southwest edge of Field 2, adjacent to wetlands, is thick with invasive plants including buckthorn, multiflora rose and bittersweet. This area has never had any invasive plant removal conducted and required DEM approval to initiate invasive removal.

4. There is a wet meadow along the northwestern edge of this field. Question: is it appropriate to mow and/or use foliar spray (Rodeo)in this area during dry conditions since it has always been managed as a field and invasive plant encroachment is beginning to occur?

Follow-up treatment conducted;

No initial invasive plant removal or follow-up has been conducted in Field 2

Follow up treatment needed:

Upland

1. See #1 in Field 1 above
2. Invasive removal from stone wall along southern edge of Field 2 is needed.

Wetland

3. Awaiting DEM approval to initiate invasive plant removal along eastern edge of field along stream corridor.

Photos:

Lower southwest edge of Field 2

Field 3: Currently managed as a hay field

Conditions:

Upland Area:

1. Buckthorn Stand: Field 3 has a stand of buckthorn growing within the field which was cut in 2011 and again in Fall 2012. The former stand of buckthorn still remains, albeit only 3 inches tall, but will most likely grow back in the spring.
2. Stone Wall: Stone walls surrounding the field are all in need of invasive plant removal.
3. Stone Island: There is an island of stone in the field that is thick with invasive plants which needs to be treated.
4. Western Edge of Field – between field and woodland – in need of invasive plant removal.

Wetland Area:

5. Eastern & Southern Field Edge: Invasive plant removal was undertaken in Spring 2011 along the eastern and southern edge of Field 3, from the edge of the field to approx. 20 feet into the wooded area. This work was conducted under approval from the RIDEM Wetlands Restoration Team. Currently there is evidence of invasive re-growth in the areas where invasive plant removal and treatment has occurred.

6. 20 feet from eastern edge of field to stream channel and southern wetland: No invasive work has been conducted in this area. Buckthorn, multiflora rose and bittersweet are prevalent. There is a stone wall which parallels the stream in this area. Inspection beyond the stone wall was not conducted due to the thickness of the vegetation and difficult terraine. Approval is being sought from DEM to conduct invasive plant removal in this area.

Follow-up treatment conducted:

Upland Area:

1. Buckthorn Stand: The stand of buckthorn in the field was mowed in Fall 2012.
2. Stone Walls: no invasive plant removal or follow-up treatment has been conducted.
3. Stone Island: no invasive plant removal or follow-up treatment has been conducted.
4. Western edge of Field: no invasive plant removal or follow-up has been conducted.

Wetland Area:

5. Eastern & Southern Field Edge 3: Follow-up treatment with foliar spray in the area along the eastern edge of the field with foliar spray was conducted in Fall 2011.

6. 20 feet from eastern edge of field to stream channel & southern wetland: no invasive removal work or follow-up has been conducted in this are to date.

Follow-up treatment needed:

Upland Area:

1. Buckthorn Stand: The stand of buckthorn will need continued mowing and foliar spraying annually.
2. Stone Walls: All stone walls in upland area are in need of invasive plant removal. Recommend foliar spraying.
3. Stone Island: Recommend foliar spraying.
4. Western Edge of Field – recommend removal and follow-up with foliar spraying.

Wetland Area:

5. Eastern Field Edge 3: Additional foliar treatment in Fall 2012 was included in the original approval from DEM for the area along the eastern edge of Field 3 and is scheduled to take place soon. Foliar spraying and hand removal in this area should be conducted annually.

6. 20 feet from eastern edge of field to stream channel: An application was submitted to DEM in Spring 2012 to conduct invasive removal in this area and approval is pending. It is recommended that invasive plant removal in this area be conducted by hand over a period of 3 years by removing one third of the invasive plants each year to reduce the potential for erosion, and that annual foliar spraying be conducted as follow-up.

Photos:

View of former buckthorn stand showing regrowth

View facing south along east edge of Field showing growth

View of stream channel facing north from lower crossing

View of south edge of field – note yellow bittersweet in trees

View from field facing south to southern wetland

View of western edge of Field 3 facing downhill from edge of Field 4.

Field 4: Currently managed as habitat field

Conditions:

Upland Area: This upland field is not managed as a hay field, and is only mowed every 2-3 years to allow for a diversity of plants. Invasive plant removal along the western and northern stone walls was conducted in Spring 2011. There is currently minimal invasive plant encroachment along the western and northern stone walls, and extensive invasive plant encroachment along stone walls to the east and south.

Wetland: No wetlands exist within or adjacent to this field.

Follow-up treatment conducted:

Upland: Follow-up treatment was conducted in Fall 2011 along the western and northern stone walls.

Followup treatment needed:

Upland: Follow-up treatment is scheduled for Fall 2012 along the western and northern stone walls.

Photos: none

Field/Area 5: 2 forest stands are located in this area. No fields exist in this area.

Stand 1: Stand 1 runs along the southern and eastern edge of Field 3.

Conditions:

Upland:

1. Buckthorn stand along southwestern edge of field: This stand was cut in Spring 2011 and underwent follow-up in Fall 2011. Buckthorn is resprouting thickly in this area and requires intensive management.

Wetland:

2. Area between path to Stand 2 and Field 3: From Stand 2 along the southern edge of Field 3 to the stream, invasive plant removal was conducted in Spring 2011 under DEM approval from the edge of the path to approx. 20 feet into the woodland. Invasive regrowth is extensive at this time.

Follow-up treatment conducted:

Upland:

1. Follow-up was conducted in Fall 2011 via foliar spraying

Wetland

2. Follow-up was conducted in Fall 2011 via foliar spraying

Follow-up treatment needed:

Upland:

1. Extensive follow-up treatment is needed in this area. Follow-up treatment is currently scheduled for Fall 2012. Recommend mowing in fall of each year and spraying re-growth in spring of each year.

Wetland:

2. Extensive follow-up treatment is needed throughout this area. Follow-up treatment is currently scheduled for Fall 2012.

Photos:

View of buckthorn stand facing west

View of buckthorn stand facing east

Regrowth of area at edge of stand 3 facing south

Stand 2:

Conditions

Stand 2 is a wooded area in the southwest corner of the property. Initial invasive plant removal work was conducted under the RI Forest Health Work Program. This area is mostly upland and is surrounded by a trail. RIDEM approved the initial work which took place in Fall 2010 and follow-up treatment in Spring 2011. The area to the east of Stand 2, between this stand and the stream has not been included in any of the invasive plant removal activities conducted to date; however, the area closest to the trail has moderate invasive plant growth and should be included in future removal activities.

Follow-up treatment conducted: Follow-up treatment via Foliar spraying was conducted in Spring 2011.

Follow-up treatment needed: Minimal follow-up work in needed in this area, but there is some limited re-growth taking place. It is recommended that foliar spraying take place starting Spring 2013. Also, it is recommended that the area to the east of the stand be included in future invasive plant removal activities.

Photos:

Photo of Stand 2