

# Wetland Replication and Mitigation Plan

for  
1 Paddock Lane  
Franklin, MA

**DATE:**

July 2, 2025

**PURPOSE:**

CONSTRUCTION DOCUMENT

**PREPARED FOR:**

Nabih Younis  
1 Paddock Lane  
Franklin, MA 02038

**PREPARED BY:**

Goddard Consulting LLC  
291 Main Street, Suite 8  
Northborough, MA 01532

Attachments:

Planting Plan, prepared by Goddard Consulting LLC, dated 7/2/2025

WetMix Seed Label, New England Wetland Plants

Conservation/Wildlife Seed Label, New England Wetland Plants

**A. Location:**

The proposed wetland replication area is located on the northeastern side of the site to the north of the proposed single-family home. The Wetland Replication Areas total 4,543 s.f.

**B. General Installation Procedures:**

**Supervision:** All work within the replication area shall be supervised by a qualified wetland scientist. The supervising wetland scientist (“the supervisor”) shall submit qualification for approval by the Conservation Commission prior to the commencement of work that requires supervision. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

**Timing:** Work shall take place ideally when the work areas are completely dry. The construction and installation of the replication area should be accomplished during the spring or fall growing seasons (between April 16 and May 31 or between September 16 and October 30). Planting during these periods is highly recommended. The replication area grading is advised not commence unless the contractor can guarantee completion of the planting and seeding of the replication area within the same season.

**Step 1: Stake Limits of Work, confirm wetland flags in place & install ECB**

Stake out limits of work for replication areas and confirm wetland flags are in place on site. Erosion control barriers shall then be installed in the form of straw wattles (or similar 100% biodegradable invasive-free barrier), placed at the limit of work for the replication area. These will remain in place and be maintained until the areas are completely stabilized and then may be removed after approval from the Conservation Commission. The supervisor shall have authority to require additional erosion control measures if deemed necessary.

**Step 2: Remove trees and vegetation**

Save woody debris specimens and stockpile for reuse. Clear and remove all remaining vegetation within the replication areas and the BVW alteration areas in preparation for excavation and grading. Retain native vegetation anywhere possible. Access to the replication area will be laid out to avoid the destruction of vegetation to the greatest extent possible.

**Step 3: Excavation of BVW Alteration Areas**

Pull all invasive plants and shrubs prior to transporting soils. Excavate BVW alteration area and transport organic-rich topsoils to the wetland replication area for reuse.

**Step 4: Excavation of new BVW Replication Area**

An excavator or backhoe shall remove existing soils up to the edge of the staked BVW replication area boundary. Excavation will continue until redoximorphic features are reached in the soil profile. Once

redoximorphic features are reached, excavation will cease. Subsoil of the C-horizon shall be loosened prior to Step 5 to ensure soils aren't compacted prior to topsoil placement. Care will be taken to remove any invasive roots and plants within the area to ensure soils used in the replication area are uncontaminated.

**Step 5: Final Grading of Replication Area**

Upon removal of existing soils down to the proper depth (as determined by the supervisor based on the presence of redoximorphic features in the soil profile), 6-12" of organic rich topsoil will be spread throughout the replication area. Soil excavated from the BVW impact area may be reused for this purpose. If necessary, supplemental material to be added to the replication area shall consist of a 50:50 mix of loam and organic material with an organic content between 12 and 20%. This material shall be placed within the replication area to a total depth 6-12" and even with the surrounding proposed elevation on design plan, to be determined by the supervising wetland scientist.

Final grade shall be confirmed to be proper by the wetland scientist prior to plantings. Placement of soil shall be such that no equipment drives over, or compacts placed soils. Final grading will result in microtopographic relief of pits and mounds. Topography will create areas that pool and flood during heavy rain events and see water near the surface during the wet seasons. Slopes around the replication area shall be graded to less than 2H:1V where practical and shall have erosion control mats installed as necessary. The wetland scientist onsite has authority to adjust grade based on field observations during construction.

**Step 6: Place woody debris and boulders**

Woody debris and boulders if available shall be randomly placed throughout the replication area to mimic a natural wetland and provide cover for wildlife.

**Step 7: Planting**

Precise siting of plants may be determined by the wetland scientist in the field prior to installation. All plantings shall be distributed throughout the area according to the planting plan; trees spaced at 10-15' on center; shrubs spaced at 6-10' on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have its roots loosened prior to planting to encourage root growth away from the planting bulb. Leaf litter shall be spread throughout area if available. Wetland seed mix shall be scattered evenly by hand throughout the replication area. The erosion control barrier shall remain in place until the disturbed soils have been stabilized.

**Step 8: Erosion Controls Removal**

Once the replication area is stable, a request shall be submitted to the Conservation Commission's Agent to remove the erosion controls around wetland replication area. Upon approval of stabilization, erosion controls shall be removed promptly and any significant disturbance seeded with a wetland seed mix as specified above.

**Step 9: Replication Monitoring**

a. **Seasonal monitoring reports** shall be prepared for the replication area by a qualified wetland scientist for a period of 2 years after installation. This monitoring program will consist of late spring/early summer and fall inspections and will include photographs and details about the vitality of the replication area. Monitoring reports shall be submitted to the Commission by November 15th of each year.

Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, soil characteristics & hydrology, survival of vegetation and plant mortality, areal extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present, monitored and removed.

b. **At least 75% of the surface area** of the replication area shall be re-established with indigenous plant species within three growing seasons. If the replication area does not meet the 75% revegetation requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, replication goals. This plan must include an analysis of why the areas have not successfully revegetated and how the Applicant intends to resolve the problem.

### C. Planting List:

#### **Proposed Plantings for Replication Area 1 (986 s.f.)**

Common Name	Scientific Name	Number	Min. Size
<b>Trees (n= 6)*</b>			
Red Maple (FAC)	<i>Acer rubrum</i>	6	2-3'
<b>Shrubs (n=13)*</b>			
Black Elderberry (FACW)	<i>Sambucus nigra</i>	7	1-2 gal. pot
Highbush Blueberry (FACW)	<i>Vaccinium corymbosum</i>	6	1-2 gal. pot
<b>Seed Mix- New England Wetland Plants WetMix</b>			0.5 lbs.

\*Planting species and seed mixes may be substituted with similar native species with the same wetland indicator status if certain species are unavailable.

#### **Proposed Plantings for Replication Area 2 (1,705 s.f.)**

Common Name	Scientific Name	Number	Min. Size
<b>Trees (n= 10)*</b>			
Red Maple (FAC)	<i>Acer rubrum</i>	5	2-3'
Swamp White Oak (FACW)	<i>Quercus bicolor</i>	5	2-3'
<b>Shrubs (n=22)*</b>			
Black Elderberry (FACW)	<i>Sambucus nigra</i>	5	#1
Winterberry (FACW)	<i>Ilex verticillata</i>	5	#1
Highbush Blueberry (FACW)	<i>Vaccinium corymbosum</i>	12	#1
<b>Seed Mix- New England Wetland Plants WetMix</b>			0.75 lbs.

\*Planting species and seed mixes may be substituted with similar native species with the same wetland indicator status if certain species are unavailable.

**Proposed Plantings for Replication Area 3 (1,852 s.f.)**

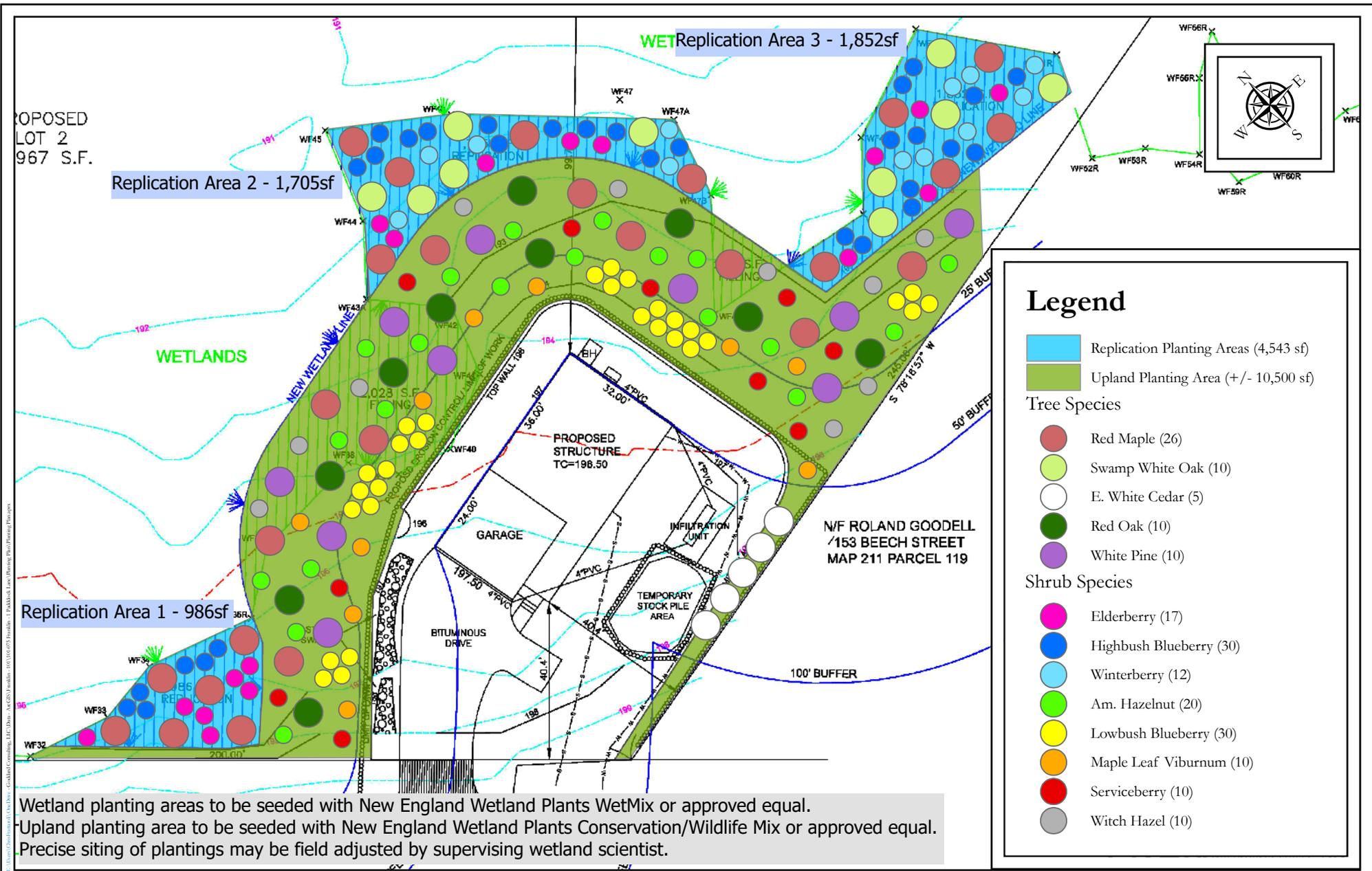
Common Name	Scientific Name	Number	Min. Size
<b>Trees (n= 10)*</b>			
Red Maple (FAC)	<i>Acer rubrum</i>	5	2-3'
Swamp White Oak (FACW)	<i>Quercus bicolor</i>	5	2-3'
<b>Shrubs (n=24)*</b>			
Black Elderberry (FACW)	<i>Sambucus nigra</i>	5	#1
Winterberry (FACW)	<i>Ilex verticillata</i>	7	#1
Highbush Blueberry (FACW)	<i>Vaccinium corymbosum</i>	12	#1
<b>Seed Mix- New England Wetland Plants WetMix</b>			0.75 lbs.

\*Planting species and seed mixes may be substituted with similar native species with the same wetland indicator status if certain species are unavailable.

**Proposed Plantings for Buffer Zone (+/- 10,500 s.f.)**

Common Name	Scientific Name	Number	Min. Size
<b>Trees (n=35)*</b>			
E. White Cedar (Arbor Vitae)	<i>Thuja occidentalis</i>	5	2-3'
Red Oak (FACU)	<i>Quercus rubra</i>	10	2-3'
Red Maple (FAC)	<i>Acer rubrum</i>	10	2-3'
White Pine (FACU)	<i>Pinus strobus</i>	10	2-3'
<b>Shrubs (n=80)*</b>			
American Hazelnut (FACU)	<i>Corylus americana</i>	20	#1
Lowbush Blueberry (FACU)	<i>Vaccinium angustifolium</i>	30	#1
Maple Leaf Viburnum (FACU)	<i>Viburnum acerifolium</i>	10	#1
Serviceberry (FAC)	<i>Amelanchier canadensis</i>	10	#1
Witch Hazel (FACU)	<i>Hamamelis virginiana</i>	10	#1
<b>Seed Mix- New England Wetland Plants Conservation/Wildlife Mix</b>			6 lbs.

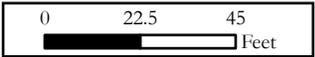
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# Planting Plan

1 Paddock Lane  
Franklin, MA

Date: 07/02/2025



1" = 45'

71.4404897°W, 42.1278121°N

Parcel ID: 211-118

## **NEW ENGLAND WETLAND PLANTS, INC**

14 Pearl Lane South Hadley, MA 01075

PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

### **New England Wetmix (Wetland Seed Mix)**

<b>Botanical Name</b>	<b>Common Name</b>	<b>Indicator</b>
<i>Carex vulpinoidea</i>	Fox Sedge	OBL
<i>Carex scoparia</i>	Blunt Broom Sedge	FACW
<i>Carex lurida</i>	Lurid Sedge	OBL
<i>Carex lupulina</i>	Hop Sedge	OBL
<i>Poa palustris</i>	Fowl Bluegrass	FACW
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Scirpus atrovirens</i>	Green Bulrush	OBL
<i>Asclepias incarnata</i>	Swamp Milkweed	OBL
<i>Carex crinita</i>	Fringed Sedge	OBL
<i>Vernonia noveboracensis</i>	New York Ironweed	FACW+
<i>Juncus effusus</i>	Soft Rush	FACW+
<i>Aster lateriflorus (Symphyotrichum lateriflorum)</i>	Starved/Calico Aster	FACW
<i>Iris versicolor</i>	Blue Flag	OBL
<i>Glyceria grandis</i>	American Mannagrass	OBL
<i>Mimulus ringens</i>	Square Stemmed Monkey Flower	OBL
<i>Eupatorium maculatum (Eutrochium maculatum)</i>	Spotted Joe Pye Weed	OBL

APPLY: 18 LBS/ACRE :2500 sq ft/lb

The New England Wetmix (Wetland Seed Mix) contains a wide variety of native seeds that are suitable for most wetland restoration sites that are not permanently flooded. All species are best suited to moist ground as found in most wet meadows, scrub shrub, or forested wetland restoration areas. The mix is well suited for detention basin borders and the bottom of detention basins not generally under standing water. The seeds will not germinate under inundated conditions. If planted during the fall months the seed mix will germinate the following spring. During the first season of growth several species will produce seeds while other species will produce seeds after the second growing season. Not all species will grow in all wetland situations. This mix is comprised of the wetland species most likely to grow in created/restored wetlands and should produce more than 75% ground cover in two full growing seasons.

The wetland seeds in this mix can be sown by hand, with a hand-held spreader, or hydro-seeded on large or hard to reach sites. Lightly rake to insure good seed-to-soil contact. Seeding can take place on frozen soil, as the freezing and thawing weather of late fall and late winter will work the seed into the soil. If spring conditions are drier than usual watering may be required. If sowing during the summer months supplemental watering will likely be required until germination. A light mulch of clean, weed free straw is recommended.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

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14 Pearl Lane South Hadley, MA 01075

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### **New England Conservation/Wildlife Mix**

<b>Botanical Name</b>	<b>Common Name</b>	<b>Indicator</b>
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium purpureum (Eutrochium maculatum)</i>	Purple Joe Pye Weed	FAC
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster pilosus (Symphyotrichum pilosum)</i>	Heath (or Hairy) Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	

APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

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