

# FOXBOROUGH CONSERVATION COMMISSION

40 South Street, Foxborough, Massachusetts 02035  
www.foxboroughma.gov/conservation  
508-543-1251



## Buffer Zone Restoration Guidelines

*“Wetlands are the kidneys of nature.”*

Maintaining or restoring a small living filter of native vegetation along wetlands will intercept pollutants, slow down runoff from adjacent land, provide some wildlife habitat, and reduce the need for watering, pesticides and herbicides.



*Cinnamon Fern*

### What is a Native Plant?

Native plants (also called indigenous plants) are plants that have evolved over thousands of years to adapt to the geography, hydrology, and climate of a specific region. As a result, native plants form communities with other plants that provide habitat for a variety of wildlife such as songbirds and butterflies.

### Why Use Native Plants?

Because native plants are adapted to local conditions, they provide a beautiful, hardy, drought resistant, and low maintenance landscape, while benefiting the environment. Once established, they save time and money by eliminating the need for lawn chemicals, water and maintenance equipment.

#### NATIVE PLANTS:

*(When compared to our non-native lawns)*

- Do not require fertilizers or other chemicals
- Require little or no watering
- Help to reduce water pollution
- Provide shelter and food for native wildlife

### What is a Buffer Zone and why is “Restoring” it so Important?

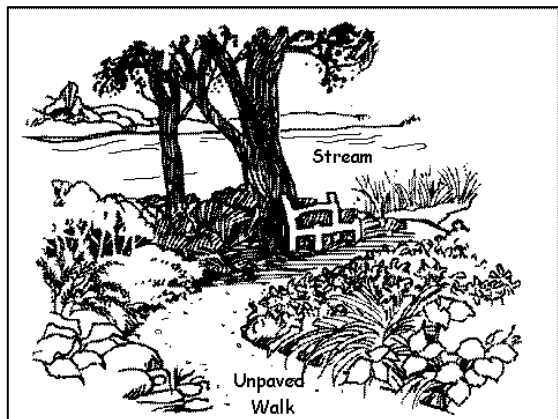
Wetlands, rivers, streams and ponds don’t thrive in isolation, but depend on the land surrounding them to keep them healthy. Buffer Zones were set up by the State and Town to help keep wetlands healthy and do what they do best. Adding native plants back to a Buffer Zone will help to maintain the water quality of ponds, streams and wetlands by filtering out stormwater runoff pollutants, providing wildlife food and habitat, and preventing erosion.

#### RESOURCES IN THIS GUIDE:

- Appendix 1** - Internet Resources;  
**Appendix 2** - Easy Native Plant lists for dry, moist, and wet site conditions; and  
**Appendix 3** – Local Nurseries that sell native plants.

## PUTTING A RESTORATION PLAN TOGETHER

### 1 - DETERMINE SIZE AND LOCATION OF RESTORATION



*Your buffer zone does not need to look weedy or messy. Our native plants are beautiful, so your buffer can be a relaxing and enjoyable space, as shown above.*

If you've been issued an Order of Conditions that requires a buffer zone restoration, please discuss your Order's special requirements with the Conservation Agent. In general, the Conservation Commission (*Commission*) requires that proposed alterations in a buffer zone (*BZ*) area should be restored at a ratio of >1:1 (*s.f. alteration to s.f. restoration*).

Example, if a homeowner proposes to install a 10' x 10' (i.e. 100 s.f.) shed on an existing lawn, what would be only 10' from a wetland edge, then the Commission may allow the shed if the homeowner agrees to remove >100 s.f. of lawn (next to wetland) and restore the area with native plants.

#### Preferred Areas to Restore

- Existing lawns within the Bylaw's 25-Foot No Activity Zone
- Altered areas that are next to existing native vegetation

### 2 - HOW MANY/WHAT KIND OF PLANTS WILL YOU NEED?

#### Categories of Native Plants Used in a Restoration Area

**Trees** create an upper canopy layer that provides shade for wetlands and wildlife habitat. Common native trees include maples, oaks and cherries.

**Shrubs** make up the mid-story layer, which helps to prevent erosion and provide food for wildlife. Common shrubs include azaleas, blueberries, viburnums and dogwoods.

**Herbaceous Plants** live in the lower story/forest floor and often become dormant (disappear) during winter. They help to cleanse stormwater runoff and prevent erosion. Common natives include ferns, wildflowers and ground-covers, including moss.

The number of plants needed from each category (trees, shrubs and herbaceous) depends upon the size (i.e. total square feet [*s.f.*]) of the area that will be restored. The Commission generally recommends using a balance of plants from each category, based upon total size, as follows:

- ❑ One (1) tree sapling, 6'-8' tall, for every 150 s.f.;
- ❑ One (1) shrub, at least 24" tall, for every 80 s.f.; and
- ❑ Three (3) herbaceous or groundcover plant for every 25 s.f. (*planted in clusters*), or a native seed mix applied at the recommended coverage rate.

#### In Other Words:

If, for example, the proposed restoration area is 300 s.f. in size, then the homeowner might be asked to plant a combination of native plants, such as the following:

- ❑ 2 trees;
- ❑ 4 shrubs; and
- ❑ 36 ferns, wildflowers and/or groundcovers.

## **PUTTING A RESTORATION PLAN TOGETHER** *(continued)*

### **3 - SELECTING SPECIES OF NATIVE PLANTS TO USE**



*Jack in the Pulpit*

When you're selecting your plants, keep in mind the amount of sunlight and water your restoration area receives, as well as soil type. A sunny, dry location with sandy soil will support different plants than a shady, wet area with acidic soil. Try to use plants that will provide food for wildlife and pollinators, such as plants that produce nectar, fruits, seeds, or nuts.

If you live in an area with a high deer population, you might want to plant deer-resistant plants (*i.e. that they don't like to eat*), such as Jack in the Pulpit, Bayberry, Red Osier Dogwood, Witch Hazel, and Sweet Fern.

The way that plants reproduce and spread is another thing to consider. Annual plants live for only one season and spread seeds at the end of the season. Biennial plants grow foliage during the first year, then flower and seed during the second year. Perennials might spread by seed dispersal, but some multiply by sending out underground runners. Although plants that spread by runners can quickly overtake an area, this can be advantageous.

For example, hay scented fern quickly creates a beautiful and lush green carpet, so is an excellent choice if you need to cover/stabilize a steep hillside area.

### **4 - SUBMIT A PLAN**

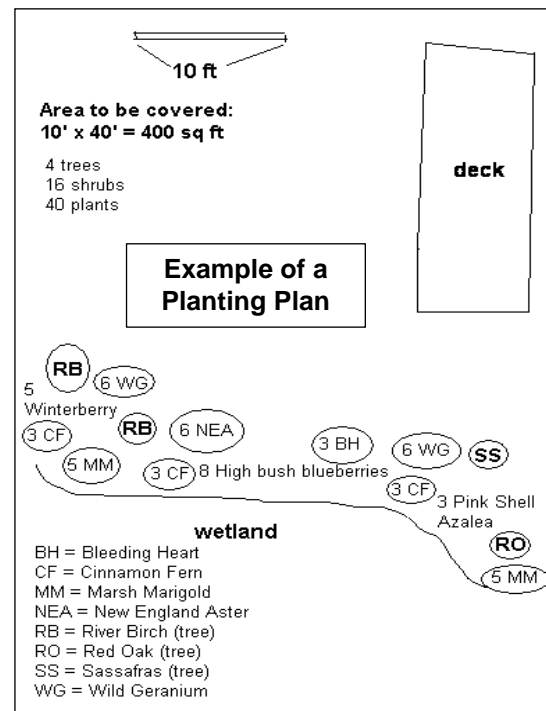
After selecting the native plants that you would like to use in your restoration area, you need to draw an informal plan, at a scale of about 1"=10', with the approximate locations of where your new plants should go.

Clumps of the same plant species look best and mimic nature, rather than spacing individual plants equidistant from each other.

Remember that some plant species need more room to grow than others, so you should plan accordingly.

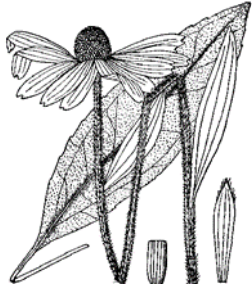


*Witch Hazel - flowers in late fall and early winter*



## **DOING THE WORK** *(after the Commission approves your proposed plan)*

### **1 - WHEN TO PLANT YOUR RESTORATION AREA**



*Cone Flower*

Planting should be done in early spring or late fall; i.e. at the beginning or the end of the growing season.

Foxborough's growing season runs from around April 16 through October 18. Planting during hot, dry summer conditions will likely delay plant growth, or germination (if planting seeds), and will likely require extensive watering for at least the first year for your plants to survive.

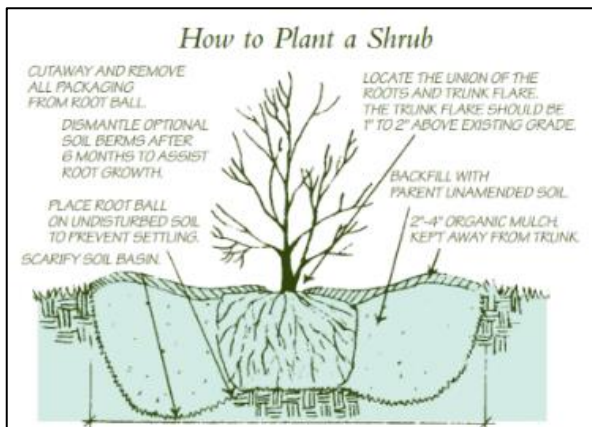
As with any other kinds of plantings, regular watering is required for the first year or two, while the plants are becoming established, and more often during a drought or heat wave. Watering newly seeded areas might not necessary, since native species will usually germinate when conditions are most appropriate. If you add a layer of mulch, compost or shredded leaves, this will help retain moisture in the soil for tender young plants.

Fall plantings should occur before the first frost, which is usually around October 18. Some shrubs and trees may be planted up to November 15<sup>th</sup>, weather permitting, but some plant species are ill-suited for fall planting.

### **2 - REPLACING YOUR LAWN; A GOOD CHOICE**

Proper soil preparation is the most important factor to a successful native planting project. Use a sod cutter (which can be rented), to remove portions of your existing lawn. Do not turn over the exposed soil, since disturbing the soil will likely expose weed seeds and encourage them to grow. Weeds, especially non-natives, will often out-compete your newly planted native seedlings by taking up nutrients, water, and sunlight.

### **3 - PLANTING TREES AND SHRUBS**



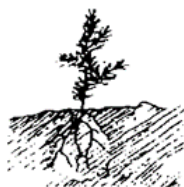
Native plants are installed the same way as any other potted or bare root plant, by digging a hole large enough to allow your new plant's roots to grow. If you are planting seeds, mulching is often necessary to improve soil and moisture conditions and will help ensure successful germination and early growth. You will want to use proper tree/ shrub planting procedures to ensure that your new plant gets a good start and the best chance for a long life.

**Dig the hole** as deep as the root ball and twice as wide.

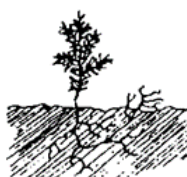
**Check the soil** around the hole; if it is hard-packed, loosen it up a bit with the shovel or a pitch fork.

## DOING THE WORK

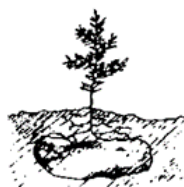
### 3 - PLANTING TREES AND SHRUBS (continued)



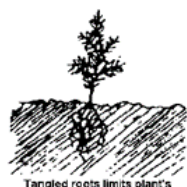
Air pockets leaves roots without soil



Upturned roots leaves plant without water and soil



Rock blocks plant's growth



Tangled roots limits plant's reach for water



Too shallow planting leaves roots exposed



Too deep planting strangles the plant

**Remove the root ball from the container.** Roots are like a plant's blood vessels and work best if they are not twisted or knotted up. You might need to loosen or slice any roots that are on the bottom of the container. It may sound dramatic, but if the roots are very dense, you might need to loosen them by slicing them with a knife or shovel.

**Place the plant in the hole,** making sure that the soil is at the same depth as the container to ensure it is planted at the same level it grew in the nursery. If your plant is balled and burlapped, just place the wrapped plant in the hole, carefully untie the burlap and then tuck any excess in the hole or cut it off at ground level. When buried, burlap will turn into organic matter, but if left above-ground, it could wick moisture away from your plant.

**Fill the hole with water,** let it drain down a bit, and then replace the soil evenly around the root ball, then hand pack the soil (or press it down with your foot) to remove any air pockets.

**Make a small dam** around the plant's base (as wide as the hole) with any leftover soil, to create a depression that will retain water.

**Water thoroughly** and remember to water your new plant at least two to three times a week, especially during hot or dry weather.

**Mulch** with 1-2 inches of organic material (but don't pack mulch too tightly, or pile it up against the plant's stem or trunk).

**Scatter logs, branches, natural (rounded) rocks, or leaf litter** around your new plantings to help naturalize the area.

### 4 - MONITORING YOUR NEWLY RESTORED AREA



To ensure the success of your new project, you will need to monitor it regularly, remove invasive plants (weeds), and replace any plants that don't survive. After plants become established, they will need only minimal maintenance. Fertilizers and chemicals should be avoided. One of the nicest things about gardening with native plants is the fact that since they were "made" to grow here, they only need your help in the beginning!

**Summary:** *Native plants require only minimal maintenance and watering, after they're established. By choosing to restore your property's buffer zone with native plants, you will save money, have more time to enjoy your new "garden" (which won't need much upkeep), and will enjoy watching the wildlife your native plants are sure to attract. You will also have peace of mind, knowing that your native garden will help to create a healthier environment for your family, your neighbors, and your wild visitors. **Thank you!***



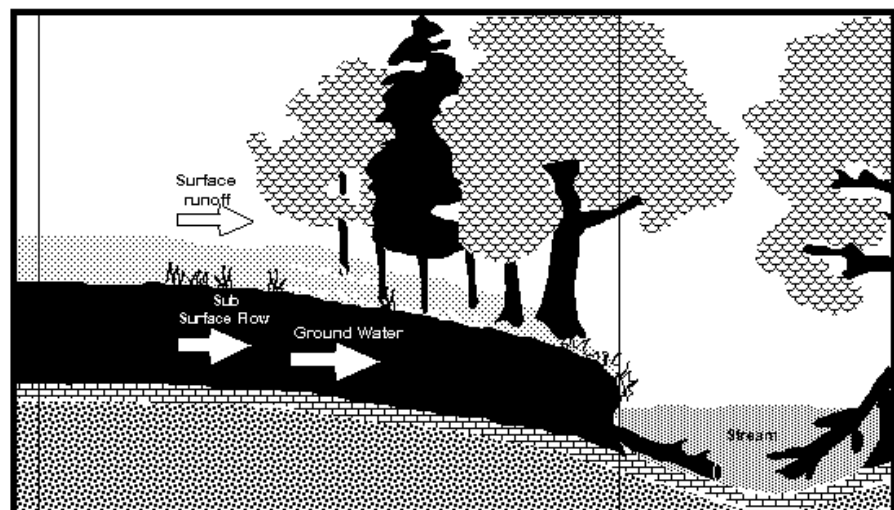
## INTERNET RESOURCES

- ❑ **Lane Learning Center, Foxborough** – A great place to visit to get inspiration about how you can use beautiful native plants in your own yard.  
<https://www.foxboroughma.gov/departments/conservation> (*Conservation Land Info link*)
- ❑ **Native Plant Trust** (*formerly NEWFS*) – Conserving and promoting New England’s native plants.  
<http://www.nativeplanttrust.org/>
- ❑ **Greenscapes Massachusetts** – Landscaping practices with less impact on the environment.  
<http://greenscapes.org/your-yard/>
- ❑ **Wild Ones** – Encourages the preservation and restoration of native communities.  
<https://wildones.org/>
- ❑ **Eco Landscape Alliance (ELA)** - The ELA advocates for ecological landscape practices through education, collaboration, and outreach.  
<https://www.ecolandscaping.org/>
- ❑ **Association to Preserve Cape Cod (APCC)** – Their mission is to preserve, protect and enhance the natural resources of Cape Cod, but this website’s information applies to Foxborough, too.  
<https://apcc.org/>
- ❑ **MCA Native Pollinator Task Force** – *MCA’s mission is to conserve native pollination systems.*  
<https://www.svtweb.org/mca-native-pollinator-task-force>
- ❑ **MA Natural Heritage & Endangered Species Program** – Native shrubs to plant for wildlife.  
<https://www.mass.gov/guides/native-shrubs-for-plantings-as-wildlife-food>
- ❑ **Invasive Plant Atlas of New England** – Database of invasive and potentially invasive plants.  
<http://www.eddmaps.org/ipane/>

### **Vegetated Buffer Strips**

help keep our ground and surface waters clean by:

- **Slowing down** stormwater runoff;
- **Promoting** groundwater recharge;
- **Preventing** erosion;
- **Allowing** plants to absorb nutrients (*fertilizers, etc.*) and pollutants; and
- **Filtering** stormwater before it can empty into a pond, stream or wetland.



←----- **Vegetated Buffer Strip** -----→

## SUGGESTED NATIVE PLANTS

### Easy Plants for Dry Soils

#### Trees

*Acer saccharum* – Sugar Maple  
*Betula lenta* – Black Birch  
*Pinus strobus* – Eastern White Pine  
*Quercus rubra* – Northern Red Oak  
*Sorbus americana* - American Mountain-Ash

#### Shrubs

*Amelanchier arborea* – Tall Shadbush  
*Comptonia peregrina* – Sweet Fern  
*Cornus racemosa* - Gray Dogwood  
*Gaylussacia baccata* - Black Huckleberry  
*Ilex glabra* - Inkberry Holly  
*Kalmia angustifolia* - Sheep Laurel  
*Kalmia latifolia* - Mountain Laurel  
*Moelia pensylvanica* - Bayberry  
*Prunus maritima* - Beach Plum  
*Rhododendron vaseyi* - Pink-shell Azalea  
*Rosa virginiana* - Virginia Rose  
*Spiraea alba var latifolia* – Meadowsweet  
*Vaccinium angustifolium* - Lowbush Blueberry  
*Vaccinium vacillans* - Woodland Blueberry

#### Herbaceous Plants / Groundcovers\*

*Antennaria species* - Pussy-Toes\*  
*Aquilegia species* - Columbine  
*Arctostaphylos uva-ursi* – Bearberry\*  
*Asclepias syriaca* – Common Milkweed  
*Asclepias tuberosa* - Butterfly Weed  
*Baptisia australis* – Wild Blue False Indigo  
*Carex pensylvanica* - Pennsylvania Sedge\*  
*Echinacea purpurea* – Purple Coneflower  
*Epigaea repens* – Trailing Arbutus, Mayflower\*  
*Gaultheria procumbens* – Wintergreen, Teaberry\*  
*Iris verna v. smalliana* - Clumping Dwarf Iris  
*Lupinus perennis* – Wild Blue Lupine  
*Maianthemum canadense* - Canada Mayflower\*  
*Monarda fistulosa* – Bee Balm  
*Rudbeckia hirta* – Black-Eyed Susan  
*Schizachyrium scoparium* - Little Bluestem Grass\*

#### Ferns

*Onoclea sensibilis* – Sensitive Fern  
*Thelypteris noveboracensis* – New York Fern  
*Dennstaedtia punctilobula* – Hay-Scented Fern

### Easy Plants for Moist Soils

#### Trees

*Acer rubrum* - Red Maple  
*Betula nigra* - River Birch  
*Cercis canadensis* - Eastern Redbud  
*Nyssa sylvatica* – Black Gum/Tupelo  
*Sorbus americana* – American Mountain Ash

#### Shrubs

*Amelanchier canadensis* – Thicket Shadbush  
*Clethra alnifolia* - Sweet Pepperbush  
*Cornus amomum* - Silky Dogwood  
*Cornus sericea* – Red-Osier Dogwood  
*Hamamelis virginiana* – Common Witch Hazel  
*Ilex verticillata* – Winterberry  
*Lindera benzoin* - Spicebush  
*Myrica gale* - Sweet Gale  
*Rosa palustris* - Swamp Rose  
*Sambucus canadensis* - Elderberry  
*Vaccinium corymbosum* - Highbush Blueberry  
*Viburnum cassinoides* – Wild Raisin  
*Viburnum recognitum* - Arrowwood  
*Viburnum lantanoides* - Hobblebush

#### Herbaceous Plants / Groundcovers\*

*Actaea pachypoda* – White Baneberry, Doll's-Eyes  
*Arisaema triphyllum* - Jack-in-the-Pulpit  
*Cornus canadensis* – Bunchberry\*  
*Eutrochium maculatum* – Joe Pye Weed  
*Lobelia cardinalis* - Cardinal Flower  
*Mertensia virginica* – Eastern Bluebells  
*Maianthemum* - *Smilacina stellatum* - Star Flower\*  
*Penstemon digitalis* – Foxglove Beardtongue  
*Podophyllum peltatum* - Mayapple  
*Symphyotrichum novae-angliae* – New England Aster  
*Trillium erectum* - Red Trillium  
*Trillium grandiflorum* - Showy Trillium  
*Uvularia sessilifolia* – Sessile-Leaved Bellwort  
*Vaccinium macrocarpon* – Large Cranberry\*

#### Ferns

*Adiantum pedatum* - Maidenhair Fern  
*Athyrium filix-femina* - Lady Fern  
*Matteuccia struthiopteris* - Ostrich Fern  
*Osmunda cinnamomea* - Cinnamon Fern  
*Polystichum acrostichoides* – Christmas Fern

## SUGGESTED NATIVE PLANTS

### Easy Plants for Wet Soils

#### Trees

*Platanus occidentalis* - American Sycamore  
*Acer Rubrum* - Red Maple  
*Fraxinus Pennsylvania* - Green Ash  
*Nyssa sylvatica* – Black Gum/Tupelo

#### Shrubs

*Aronia arbutifolia* - Red Chokeberry  
*Ilex glabra* - Inkberry Holly  
*Ilex verticillata* – Winterberry Holly  
*Lindera benzoin* – Common Spicebush  
*Myrica gale* - Sweet Gale  
*Rhododendron viscosum* - Swamp Azalea  
*Rosa palustris* – Swamp Rose  
*Salix discolor* – Pussy Willow  
*Sambucus canadensis* – Common Elderberry  
*Vaccinium corymbosum* - Highbush Blueberry  
*Viburnum cassinoides* – Wild Raisin

#### Herbaceous Plants / Groundcovers\*

*Anemone Canadensis* – Canada Anemone\*  
*Asclepias incarnata* - Swamp Milkweed  
*Caltha palustris* - Marsh Marigold  
*Camassia species* - Camas Lily  
*Carex vulpinoidea* – Fox Sedge  
*Chelone glabra* – White Turtlehead  
*Eupatorium perfoliatum* – Boneset  
*Iris versicolor* - Blue Flag Iris  
*Liatris spicata* - Marsh Blazing Star  
*Lilium canadense* – Canada Lilly  
*Lobelia cardinalis* - Cardinal Flower  
*Rubus hispidus* – Dewberry\*  
*Symphytotricheum puniceum* – Swamp Aster  
*Symplocarpus foetidus* - Skunk Cabbage\*  
*Vaccinium macrocarpon* – Cranberry\*  
*Verbena hasata* – Blue Vervain

#### Ferns

*Osmunda cinnamomea* - Cinnamon Fern  
*Osmunda claytoniana* - Interrupted Fern  
*Osmunda regalis* - Royal Fern

#### ***Simple things you can do in your own backyard to promote a healthier environment***

- Shred leaves in the fall to use as mulch for your beds and borders
- Use an electric, or a mulching, lawnmower
- Leave mulched grass clippings on the lawn to add organic matter and nutrients to the soil
- Mow lawns at 3" to 3.5"
- Irrigate only when necessary
- Build a compost pile
- Choose a natural pest control instead of toxic chemicals
- Let part of your property overgrow naturally to provide habitat for beneficial insects and birds
- Plant native trees or shrubs that produce berries for birds



Green Ash



## LOCAL NURSERIES THAT SELL NATIVE PLANTS & SEEDS

|  |  |
|--|--|
| <b><u>Bigelow Nurseries</u></b><br><a href="https://bigelownurseries.com/">https://bigelownurseries.com/</a><br>455 Main Street, Northborough, MA 01532  | Ph: 508-845-2143<br>Large nursery. Good selection of native trees, shrubs and herbaceous plants. <i>Sizes: containers to B&amp;B trees.</i>  |
| <b><u>Blue Stem Natives</u></b><br><a href="https://www.bluestemnatives.com/">https://www.bluestemnatives.com/</a><br>376 Washington Street, Norwell, MA 02061   | Ph: 774-260-5512<br>A women-owned native plant nursery, focused on increasing knowledge of New England's native plants.  |
| <b><u>Blue Moon Farm Perennials</u></b><br><a href="https://bluemoonfarmperennials.com/">https://bluemoonfarmperennials.com/</a><br>173 Saugatucket Road, Wakefield, RI 02879  | Ph: 401-284-1783<br>Large nursery. Mostly perennials with good selection of natives; <i>whole plants rather than seeds or plugs.</i>   |
| <b><u>Native Plant Trust</u></b> (formerly NE Wildflower Society)<br><a href="https://www.nativeplanttrust.org/">https://www.nativeplanttrust.org/</a><br><b>Garden in the Woods</b> , 180 Hemenway Road<br>Framingham, MA 01701 Ph: 508-877-7630<br><b>Nasami Farm</b> , Whately, MA Ph: 413-397-9922 | Two large nurseries that sell only native herbaceous and small woody plants. Excellent selection of NE wildflowers and hard to find species (i.e. Lady's slippers, trilliums). <i>Sizes: seedlings to 10 gal.</i> Visit <i>Garden in the Woods</i> ; it's an excellent garden idea center. |
| <b><u>Russell's Garden Center</u></b><br><a href="https://www.russellsgardencenter.com/">https://www.russellsgardencenter.com/</a><br>379 Boston Post Road, Wayland, MA 01778  | Ph: 508-358-2283<br>Large garden center; sells many native perennials, ferns and grasses, and some native trees and shrubs.  |
| <b><u>Sylvan Nursery</u></b><br><a href="https://sylvannurseries.com/">https://sylvannurseries.com/</a><br>1028 Horseneck Road, Westport, MA 02790   | Ph: 508-636-4573<br>Large nursery. Primarily wholesale, but open to retail 3 days/week. <i>Offers plants in all sizes.</i>   |
| <b><u>Weston Nurseries</u></b><br><a href="https://www.westonnurseries.com/">https://www.westonnurseries.com/</a><br>93 E. Main Street, Hopkinton, MA  | Ph: 508-435-3414 (Hopkinton)<br>Retail garden center and also a wholesale nursery. Large selection of plants, some of which are native.  |
| <b><u>A Wing and a Prayer Nursery</u></b><br><a href="https://aliceskitchenathoneyhill.com/amys-nursery/">https://aliceskitchenathoneyhill.com/amys-nursery/</a><br>48 Trouble Street, Cummington, MA<br><i>Open May- Oct, limited hours, several days/week.</i>                                       | Ph: 413-634-5659<br>Small retail nursery growing well over 100 species. Most are native wildflowers or grasses grown from seed; also sell some woody plants grown locally.   |
| <b><u>Earth Tones Native Plants</u></b><br><a href="https://www.earthtonesnatives.com/">https://www.earthtonesnatives.com/</a><br>212 Grassy Hill Road, Woodbury, CT 06798   | Ph: 203-263-6626 <i>Sizes: 1 quart to 5 gal.</i><br>Small nursery; worth the trek from MA. Grows/sells hundreds of native species from wild-collected seeds.   |
| <b><u>Colonial Seed</u></b><br><a href="https://www.colonialseed.com/seed-products.html">https://www.colonialseed.com/seed-products.html</a><br>Windsor, CT – <i>Agways may sell some seed mixes.</i>  | Ph: 413-355-0200<br>A seed mix company that also sells plugs of many native NE grasses, sedges, rushes, and some forbs.  |
| <b><u>Earnst Seeds</u></b><br><a href="https://www.ernstseed.com/">https://www.ernstseed.com/</a><br>8884 Mercer Pike, Meadville, PA 16335   | Ph: 800-873-3321<br>Largest native seed producer and supplier in eastern US. Sells seeds, seed mixes, for eco restoration, etc.  |

(The above-listed resources are suggestions, only, and not recommendations.)