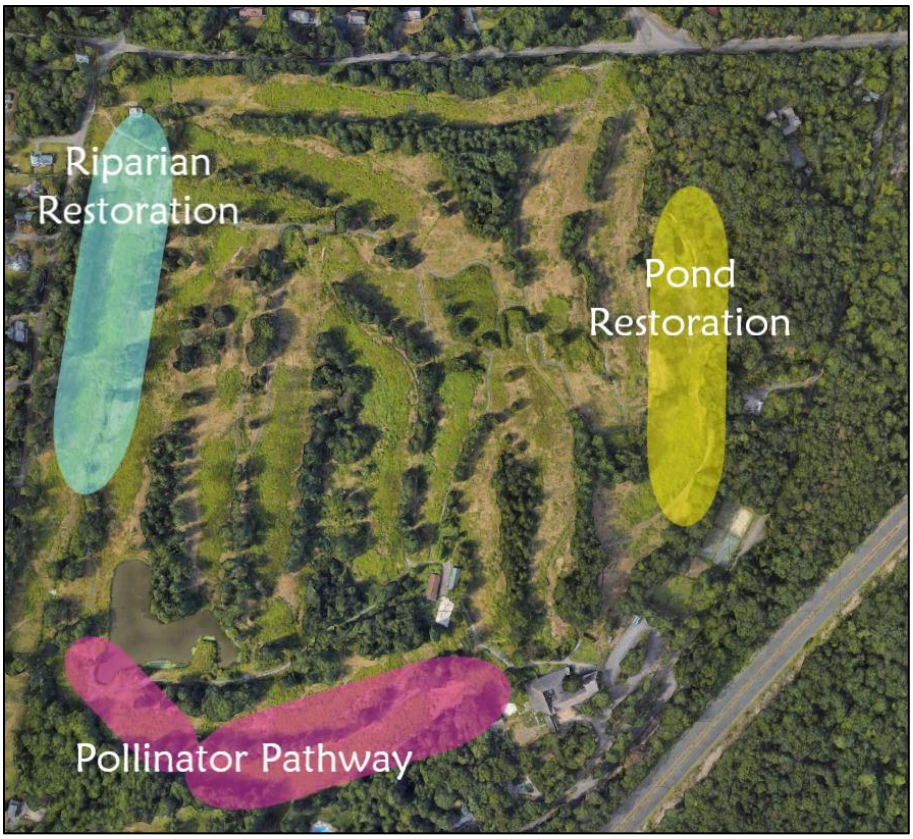
SOUTHWEST CONSERVATION DISTRICT

Potential Ecological Restoration Projects for the old Woodbridge Country Club Site:
50 Woodfield Road
Woodbridge, CT

The Southwest Conservation District (SWCD) is pleased to provide technical assistance, and potential projects report for the municipal property at 50 Woodfield Road in Woodbridge, CT. As you are aware, the SWCD provides support for 43 municipalities in our service area on a range of conservation matters.

Our team met with several members of the Woodbridge Conservation Commission and the Woodbridge Land Trust to walk the site on April 24th, 2024. Discussion centered around potential conservation and habitat restoration projects around the edges of the property. Three natural resource areas were identified and are described in this document.



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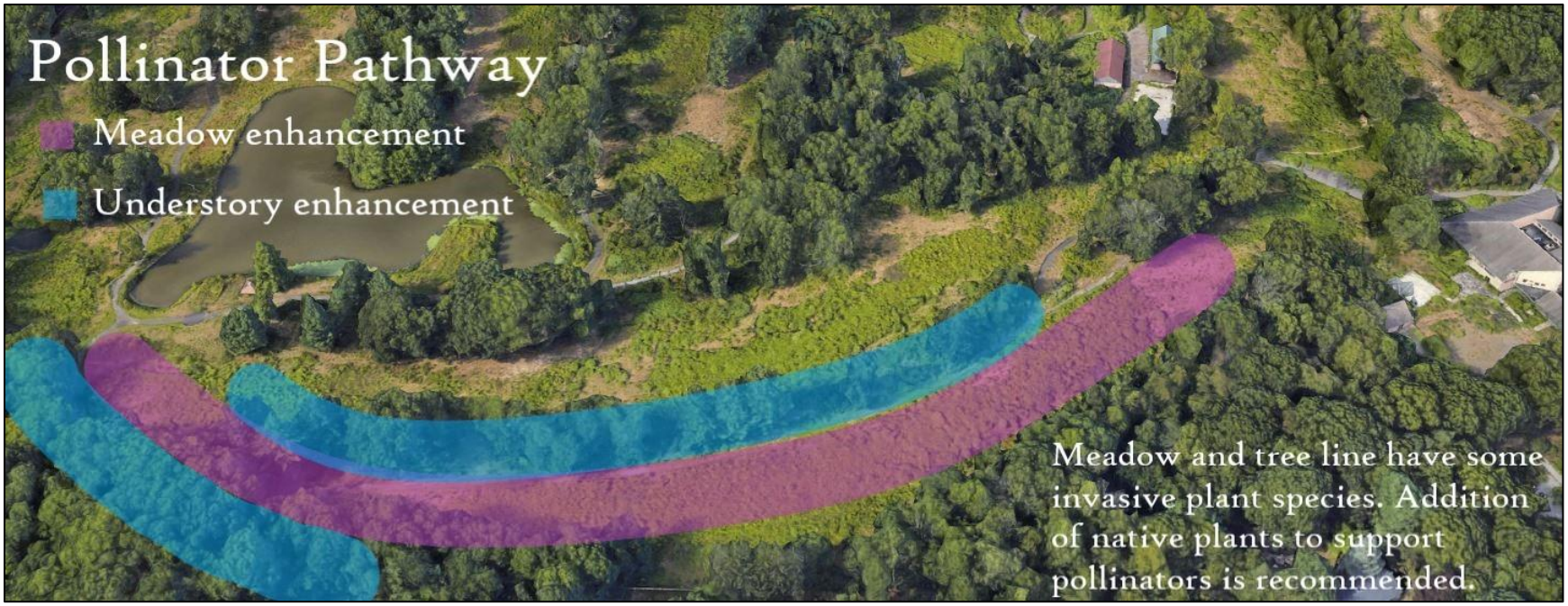


Pollinator Pathway

The trail segment on the southern edge of the property starts near the former clubhouse and goes westerly towards a pond. On the southern side of this trail is a former golf fairway that is beginning to become shrubby. The northern side of the trail is a windbreak consisting of a mix of deciduous and evergreen trees. There are several wet spots within the windbreak and wetland soils are adjacent to this area. It is an ideal trail segment to manage for pollinator and wildlife habitat to enhance passive recreation.

The approximate area for the meadow enhancement is 2.5 acres. The approximate area for the understory enhancement is 1.25 acres and the forested wetland takes up approximately 1 acre.

Existing conditions

The southern trail segment is bordered by an open meadow on the south (**Photo 3**) and a forested wetland in the property's southwest corner (**Photo 9**). To the north of the trail is a strip of deciduous & evergreen trees (**Photo 1**). This area is a mixture of Well Drained Dense Till Uplands, Moist Dense Till Uplands, and Wet Till Depressions (***Attachment D***). The depth of the water table is estimated between 8-61 cm or 3-24 inches (***Attachment C***). This section lies within the Indian River and Wepawaug River watersheds (***Attachment F***).

Understory Enhancement - There are several low/wet spots just north of the trail within the strip of trees, which includes red maples (*Acer rubrum*), white pine (*Pinus strobus*), and hickory (*Carya sp.*)(**Photo 2**). The understory of the trees is primarily grass, including native little bluestem (*Schizachyrium scoparium*) (**Photo 7 & 8**). There is no shrub understory except for invasive multiflora rose (*Rosa multiflora*).

The forested wetland had a more diverse understory including skunk cabbage (*Symplocarpus foetidus*) and tussock sedge (*Carex stricta*). Native wood anemone (*Anemone quinquefolia*) and invasive multiflora rose (*Rosa multiflora*) were also found on the wetland edge next to the trail. This area as well as some of the area northwest of it are classified as Connecticut Wetlands (***Attachment B & E***).

Meadow Enhancement - The open meadow is primarily grass and herbaceous forbs with evidence of invasives multiflora rose (*Rosa multiflora*) and mugwort (*Artemisia vulgaris*). Also, it was noted during the site visit that swamp milkweed (*Asclepias incarnata*) has been found in this open meadow during the summer.

Steps for Habitat Restoration

We recommend first managing the invasive plant species, creating space for native plants to regenerate and adding additional native plant species. The primary invasive species and possible methods of removal for this area are:

- Brush hog the **multiflora rose (*Rosa multiflora*)**. To control this invasive, cut monthly during the growing season for 2-4 years. You could also remove individual plants with a weed wrench or mattock. Make sure the plant's root crown is removed to prevent regrowth. Alternatively, and if desired, cut and apply a systemic herbicide, like triclopyr, to the fresh stumps. Consulting with or hiring a licensed pesticide applicator is recommended. Extra caution and possible permitting would be required for any herbicide application in wetland areas. Refer to https://ipm.cahnr.uconn.edu/invasive_plants_multiflora_rose/ for more information.

- Repeatedly mow the **mugwort (*Artemisia vulgaris*)** in this area. It is essential to mow before/during flowering, which occurs from August to October to prevent seed formation and further spread. Repeated mowing is often not enough to control this invasive. You may also want to try smothering sections of it with layers of cardboard and mulch or heavy landscape fabric. Or, if desired, use a foliar spray of glyphosate (August-October) or glyphosate/triclopyr (earlier in the growing season). Consulting with or hiring a licensed pesticide applicator is recommended. See (https://cipwg.uconn.edu/wp-content/uploads/sites/244/2022/04/UConn-Extension-Artemisia-vulgaris-Mugwort.pdf) for more information.

Understory Enhancement - For the strip of trees north of the trail segment, we recommend brush hogging stands of multiflora rose monthly from April to October and/or removing individual plants with a weed wrench or mattock. Mow and/or selectively smother areas of mugwort. Avoid all of these methods in the low/wet spots (potentially wetland soil/vernal pools). If any invasive species are present in these areas, use hand loppers to cut to just above ground level monthly. The continuous cutting will deplete the plant's resources over time.

Expect that invasive control will likely take 2-4 years. Once invasive plant species have been removed, we recommend enhancing the understory of the trees with a variety of native understory trees, shrubs and herbaceous forbs. Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate. New native plantings can occur prior to complete invasive removal, because the new plants can help in decreasing invasive seed germination. However, diligent monitoring is necessary to ensure the invasives in the area remain under control.

In areas of soil with higher moisture, appropriate understory tree and shrub species include highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), Canada serviceberry (*Amelanchier canadensis*), and American witch hazel (*Hamamelis virginiana*). Appropriate herbaceous species include white wood aster (*Eurybia divaricata*), cinnamon fern (*Osmundastrum cinnamomeum*), New York fern (*Thelypteris noveboracensis*), columbine (*Aquilegia canadensis*), American spikenard (*Aralia racemosa*), and sessile bellwort (*Uvularia sessilifolia*).

In areas with well-drained soil, appropriate understory tree and shrub species include lowbush blueberry (*Vaccinium angustifolium*), mountain laurel (*Kalmia latifolia*), running serviceberry (*Amelanchier spicata* or *stolonifera*), sweet fern (*Comptonia peregrina*), and huckleberry (*Gaylussacia baccata*). Appropriate herbaceous species

include little bluestem (*Schizachyrium scoparium*), Pennsylvania sedge (*Carex pensylvanica*), wintergreen (*Gaultheria procumbens*), bracken fern (*Pteridium aquilinum*).

For the edge of the forested wetland, we recommend using hand loppers to cut multiflora rose to just above ground level, to avoid disturbing wetland soils. Any work in this area will require a plan to be reviewed by Woodbridge's IWWC prior to any invasive species removal. Invasive removal will help restore and enhance the habitat adjacent to the wetland on site and prevent the spread of the invasives into the wetland.

Once the invasive species are under control, some native shrubs may be added to increase the buffer between the trail and the wetland. Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate. Appropriate shrub species include spicebush (*Lindera benzoin*), highbush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), sweet pepperbush (*Clethra alnifolia*), possum haw (*Viburnum nudum*), and winterberry (*Ilex verticillata*).

Meadow Enhancement - For the open meadow, we recommend brush hogging stands of multiflora rose monthly from April to October and/or removing individual plants with a weed wrench or mattock. Mow and/or selectively smother areas of mugwort.

There are several options for enhancing the diversity of the meadow. You can pick one or a combination of management techniques to suite your overall goals and restraints.

First, simply manage as a meadow. Rotationally mow the meadow at a height of 6-8 inches. Rotational mowing is the practice of mowing different sections of the meadow at different times a year rather than one complete annual cut. For example, cut ¼ of the meadow in March, ¼ in late June, and ¼ in October, and the remaining ¼ uncut for the year. The following year, repeat but in a different pattern. See an example 4-year rotation management plan in **Figure 1**.

Using rotational mowing allows for managing invasives and woody species while leaving sections of habitat for a variety of pollinators and wildlife. The variation of mowing will allow light to access the soil at different times of the year in different areas for seed germination. It appears that the property is regenerating on its own. Native seed banks can last a long time, and more natives may appear over time under the new management regime.

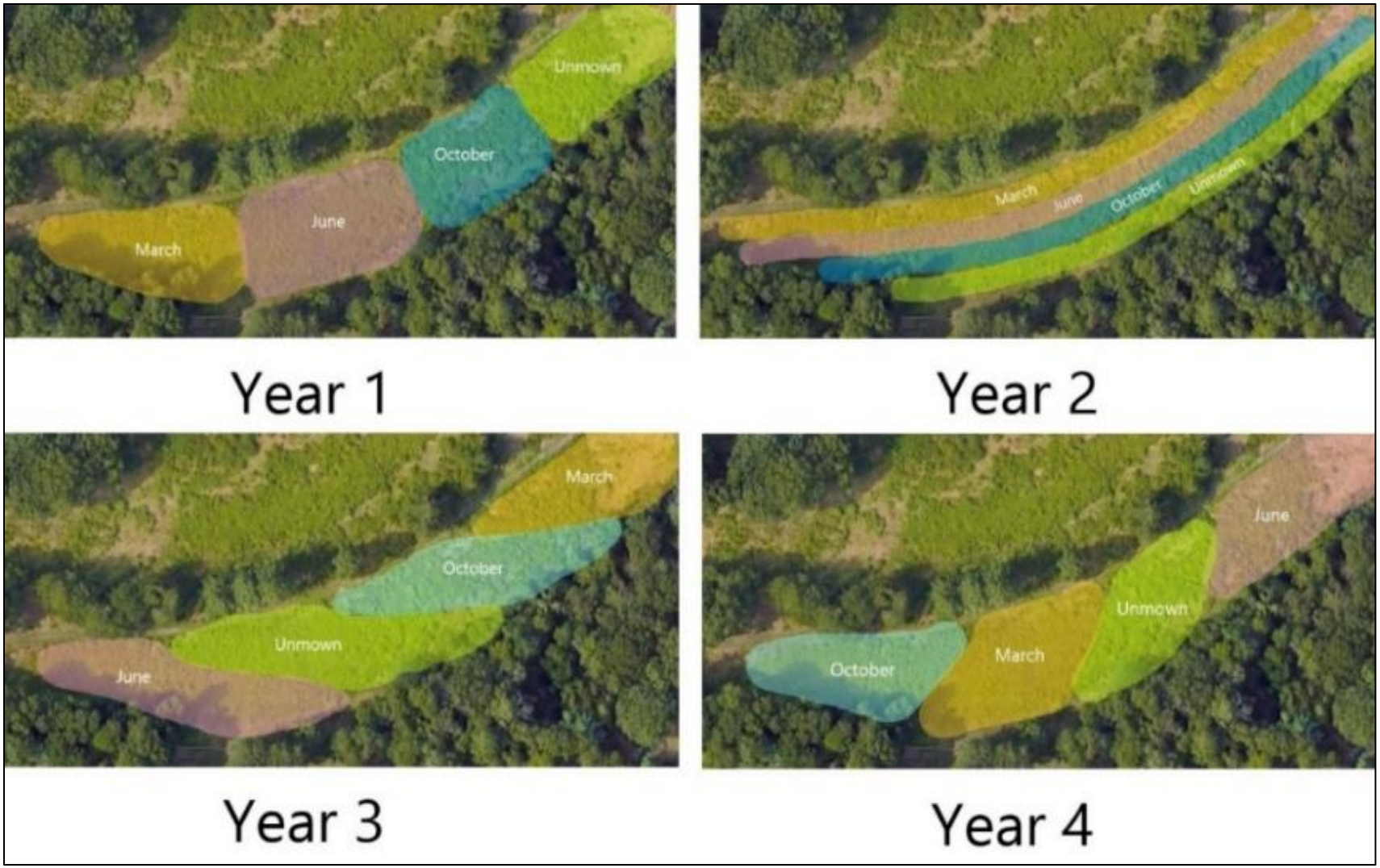


Figure 1. Example four-year rotational mowing plan.

Another approach is to revitalize soil biology. Being a former golf course, it's likely that the former greens were heavily managed with herbicides, pesticides, and fertilizers. That management style greatly alters the soil microbiome by decreasing microbe diversity and soil health. This in turn affects the plant species that can thrive in the soil (invasive plants tend to do better in highly disturbed soils with less microbial diversity).

The soil microbiome improves with plant, invertebrate and wildlife diversity. A great way to jump start the soil microbiome is to add compost. Many prairie and meadow restorations in the Great Plains utilize drill-seeders to add compost. Because this area was highly managed in the past, it's likely that the majority of its New England rocks were removed, making this method an option for the property. The best way to accomplish this would be to coordinate with a local farmer that has a drill-seeder that has the capacity for larger seed size to be able to accommodate compost. SWCD could assist with making connections if this is the selected option for the property.

We also recommend finding a local farmer who makes a finished compost balanced in terms of its carbon to nitrogen ratio (C:N = >15:1) and microbial composition (fungi: bacteria = ≥1:1). Fungal dominated compost best supports shrubs and trees, while bacterial dominated composts generally support annual and weed plant species. A balanced or slightly fungal dominated compost will help enhance the soil for perennial meadow species. (To learn more about this, we suggest this YouTube video by Nicole Masters.) The compost should include some type of manure (livestock and/or worm castings) and woody materials for optimum microbe diversity. The compost must also be mature and dry to ensure it doesn't damage the drill seeder. We recommend a rate of 1-2 tons (about 2-4 cubic yards)/acre. Most native meadow plants prefer low fertility, so the aim of adding compost is to add more diverse microbes and some organic matter.

Alternatively, you can manage the meadow to promote certain species. This method entails flagging out desirable species on site and then using a brush hog or flail mower (to ensure height of 6-8 inches) to mow down undesirable and other areas of the meadow. This method allows desirable species to have a competitive edge over other species and the chance to reseed and spread. Avoid mowing desirable species during the growing season – mow once a year in either November or early spring (if mowing in November, leave some sections unmown to leave overwintering habit for pollinators).

This is a more adaptative method, as you will need to adjust to the species present on site to promote or deter them. You may also want to plan different mowing times to accommodate for varying pollinator and wildlife species.

For example, it's best to mow plants that you want to deter right before/as they begin to flower to prevent seed and hit them at a time where they've directed all their energy into flower formation. Since there is mugwort and multiflora rose present in the meadow, mowing down mugwort patches in late July and multiflora patches in late May is critical. Native species should be flagged out as you see them (for example an easy time to identify little bluestem is over winter) so you make sure that you mow around them. Allow desirable species to go to seed. As you become familiar with the species present, you can add or subtract mowing times and areas.

Another approach is to seed the meadow with native plant species. There are a couple of ways to go about this. Using a drill seeder to intersperse a native meadow mix into the existing meadow is one option. Again, the best way to accomplish this is to coordinate with a local farmer with a drill seeder that has the capacity for larger seed size to be able to accommodate a mixture of seed sizes. You could also broadcast seed by push spreaders or by hand. October to February is the best time to broadcast native plant seed. Most native plant species require being outside overwinter to germinate. Be aware that some native plant species often take several years to germinate, so you may not see these plants established for a number of years.

Alternatively, you could plant seed just in areas where invasive species have been removed. You can either seed with a mix or seed different areas with one or two native plant species to promote clusters of species. Sow the seed by hand or with a broadcast spreader, rake in and tamp down with your feet to get good seed to soil contact.

Another seeding method is planting seed of a single species in separate patches (CT DEEP's biologist who does a lot of the state's meadow restorations recently started utilizing the fantastic idea). For example, broadcast a bunch of joe-pye seed in a 10' circular area then a patch of little bluestem in a different 10' circular area. This mimics the natural way plant populations present in a meadow more than a bunch of species dispersed separately over a meadow. It may also help the seedlings in the long run if they have some of the same species nearby, especially if they are a less competitive plant species. This method is also kind of like an in-between of seeding and transplanting – a little more work than broadcasting a mix, but more control over species and less cost than transplants.

Buying plugs or larger transplants is also an option but will be much more costly and labor intensive to install and maintain (for example, will need to water transplants until they establish).

Appropriate herbaceous species that can enhance the diversity of the meadow include anise hyssop (*Agastache foeniculum*), big bluestem (*Andropogon gerardii*),

northern sea oats (*Chasmanthium latifolium*), turtlehead (*Chelone glabra* or *lyonii*), tall white aster (*Doellingeria umbellata*), coneflower (*Echinacea purpurea*),boneset (*Eupatorium perfoliatum*), joe pye (*Eutrochium purpureum*), hollow joe pye (*Eutrochium fistulosum*), swamp mallow (*Hibiscus moscheutos*), jewelweed (*Impatiens capensis*), blazing star (*Liatris spicata*), button blazing star (*Liatris squarrosa*), wood lily (*Lilium philadelphicum*), great blue lobelia (*Lobelia siphilitica*), wild lupine (*Lupinus perennis*), bee balm (*Monarda didyma*), wild bergamot (*Monarda fistulosa*), golden groundsel (*Packera aurea*), Whorled mountain mint (*Pycnanthemum verticillatum*), black eyed Susan (*Rudbeckia fulgida*), brown eyed Susan (*Rudbeckia triloba*), little bluestem (*Schizachyrium scoparium*), sweet goldenrod (*Solidago odora*), New England aster (*Symphyotrichum novae-angliae*), blue vervain (*Verbena hastata*), culver's root (*Veronicastrum virginicum*), and golden Alexanders (*Zizia aptera*). Appropriate vine species include virgin's-bower clematis (*Clematis virginiana*) and wild cucumber (*Echinocystis lobata*).

Audubon's Forest Bird Habitat Assessment for the property was also shared with us. To manage this area while enhancing bird and wildlife habitat, we have several recommendations. First, avoid the use of herbicides. While the recommended herbicides have few direct negative impacts, studies show that exposure can negatively affect the microbiomes of many organisms, causing varied indirect side effects. These include negative effects on gut microbiomes that lead to chronic disease and endocrine system dysfunction. Second, coordinate with a wildlife biologist to determine appropriate times of the growing season to mow while protecting ground-nesting birds or other practices for specific species found on the property.

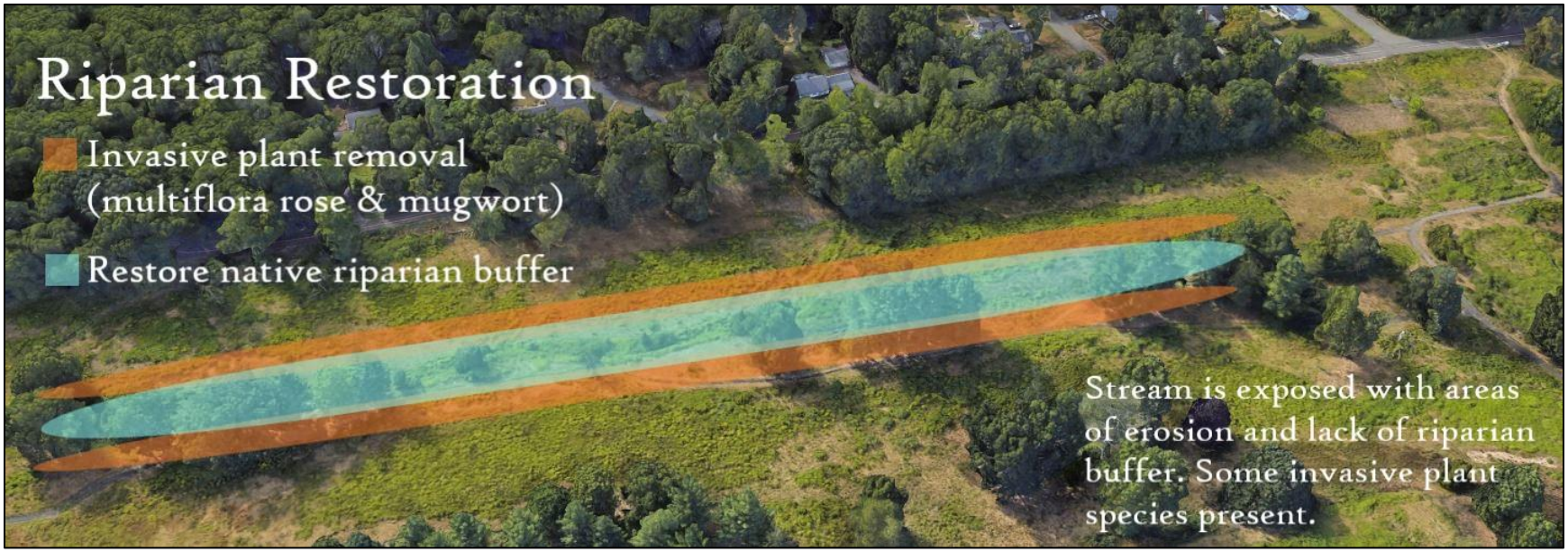
Potential Partners

- NRCS
- SWCD
- Audubon Connecticut
- Local farms
- Connecticut Invasive Plant Working Group
- Connecticut Land Conservation Council (CLCC)
- USFWS Partners for Fish & Wildlife Program
- Yale University

Potential Funding Sources

- NRCS – EQIP or CSP or HFRP
- Sustainable CT Community Match Fund
- CLCC's Climate Smart Land Stewardship Grant Program

- Land Trust Alliance's list of Federal Funding Opportunities (updated regularly/ only shows current open opportunities)
- USFS's Landscape Scale Restoration (LSR) Grant
- Neotropical Migratory Bird Conservation Act (NMBCA) Grant Program
- North American Wetlands Conservation Act (NAWCA) Grant
- Connecticut Association of Wetland Scientists' Les Mehrhoff Grant



Riparian Restoration

The trail segment on the western edge of the property continues from the pond in the southwest corner of the property and goes northerly towards an old snack bar building in the northwest corner of the property. On both sides of the trail is a mix of meadow and small stands of mixed deciduous and evergreen trees. On the western side of this trail is a small stream. While a few areas of the stream are protected by riparian vegetation, much of the stream is exposed. Several areas of erosion were noted during our site visit. It is an ideal trail segment to manage for riparian restoration and pollinator and wildlife habitat to enhance passive recreation.

The approximate area for the riparian buffer restoration and enhancement is 2.25 acres. Adjacent meadows and stands of trees were not estimated.

Existing conditions

The western trail segment starts next to a large pond in the southwest corner of the property (**Photo 10 & 11**). Heading northerly, a small stream runs southward on the western side of the trail. It is largely lacking riparian buffer and shows sign of erosion (**Photo 12 & 13**). The existing buffer includes invasive species multiflora rose (*Rosa multiflora*) and mugwort (*Artemisia vulgaris*). Some reaches of the stream do have some riparian buffer (**Photo 14**), which could be further enhanced. More northerly, the small stream is within a wooded area (**Photo 15**). On both sides of the trail and the stream are patches of meadow and mixed stands of trees. This area is a mixture of Moist Dense Till Uplands and Well Drained Till Uplands (***Attachment D***). The depth of the water table is estimated between 46->200 cm or 18-> 78 inches (***Attachment C***). This section lies within the Wepawaug River watershed (***Attachment F***).

Steps for Habitat Restoration

We recommend managing the invasive plant species, creating space for native plants to regenerate and adding additional native plant species for diversity and erosion control. The primary invasive species and possible methods of removal for this area are:

- Brush hog the **multiflora rose (*Rosa multiflora*)**. To control this invasive, cut monthly during the growing season for 2-4 years. You could also remove individual plants with a weed wrench or mattock. Make sure the plant's root crown is removed to prevent regrowth. Alternatively, and if desired, cut and apply a systemic herbicide, like triclopyr, to the fresh stumps. Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. Refer to https://ipm.cahnr.uconn.edu/invasive_plants_multiflora_rose/ for more information.
- Repeatedly mow the **mugwort (*Artemisia vulgaris*)** in this area. It is essential to mow before/during flowering, which occurs from August to October to prevent seed formation and further spread. Repeated mowing is often not enough to control this invasive. You may also want to try smothering sections of it with layers of cardboard and mulch or heavy landscape fabric. Or, if desired, use a foliar spray of glyphosate (August-October) or glyphosate/triclopyr (earlier in the growing season). Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. See (https://cipwg.uconn.edu/wp-content/uploads/sites/244/2022/04/UConn-Extension-Artemisia-vulgaris-Mugwort.pdf) for more information.

Invasive Removal in Surrounding Area- For meadow areas along the trail, we recommend brush hogging stands of multiflora rose monthly from April to October and/or removing individual plants with a weed wrench or mattock. Mow and/or selectively smother areas of mugwort. The continuous cutting will deplete the plant's resources over time.

Expect that invasive control will likely take 2-4 years. Once invasive plant species have been removed or to aid in their removal, we recommend utilizing some of the meadow management techniques discussed in the Pollinator Pathway section. Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate. New native plantings can occur prior to complete invasive removal, because the new plants can help in decreasing invasive seed germination. However diligent monitoring is necessary to ensure the invasives in the area remain under control.

In areas of soil with higher moisture, likely closer to the stream or low-lying areas, appropriate meadow shrub species include highbush blueberry (*Vaccinium corymbosum*), American elderberry (*Sambucus nigra ssp. canadensis*), Canada serviceberry (*Amelanchier canadensis*), American cranberry bush (*Viburnum opulus var. americanum*).

Appropriate herbaceous species include heart leaf golden alexanders (*Zizia aptera*), anise hyssop (*Agastache foeniculum*), wild bergamot (*Monarda fistulosa*), whorled mountain mint (*Pycnanthemum verticillatum*), turtleheads (*Chelone glabra* or *lyonii*), sweet goldenrod (*Solidago odora*), swamp mallow (*Hibiscus moscheutos*), great blue lobelia (*Lobelia siphilitica*), New England aster (*Symphyotrichum novae-angliae*), culver's root (*Veronicastrum virginicum*), button blazing star (*Liatris squarrosa*), black eyed Susan (*Rudbeckia fulgida*), bee balm (*Monarda didyma*), lady fern (*Athyrium filix-femina*), northern sea oats (*Chasmanthium latifolium*), bristle-leaf sedge (*Carex eburnea*), and sensitive fern (*Onoclea sensibilis*).

In areas with well-drained soil, appropriate meadow shrub species include lowbush blueberry (*Vaccinium angustifolium*), Virginia rose (Rosa virginiana), running serviceberry (*Amelanchier spicata* or *stolonifera*), sweet fern (*Comptonia peregrina*), huckleberry (*Gaylussacia baccata*), American hazelnut (*Corylus americana*), and shrubby St. John's wort (*Hypericum prolificum*).

Appropriate herbaceous species include wavy hair grass (*Deschampsia flexuosa*), prairie dropseed (*Sporobolus heterolepis*), rattlesnake master (*Eryngium yuccifolium*), anise hyssop (*Agastache foeniculum*), butterfly milkweed (*Asclepias tuberosa*), common milkweed (*Asclepias syriaca*), wild lupine (*Lupinus perennis*), whorled mountain mint (*Pycnanthemum verticillatum*), showy goldenrod (*Solidago speciosa*), downy goldenrod

(*Solidago puberula*), great blue lobelia (*Lobelia siphilitica*), smooth aster (*Symphyotrichum laeve*), late purple aster (*Symphyotrichum patens*), blue star (*Amsonia hubrichtii*), coneflower (*Echinacea purpurea*), Appalachian blazing star (*Liatris squarrulosa*), wild senna (*Senna hebecarpa*), black eyed Susan (*Rudbeckia fulgida*), and spotted bee balm (*Monarda punctata*).

Appropriate understory trees to enhance stands of trees include sassafras (*Sassafras albidum*), downy shadbush (*Amelanchier arborea*), flowering dogwood (*Cornus florida*).

Restore Riparian Buffer – From the edge of the streambanks to 50 feet out, we recommend using hand loppers to cut multiflora rose to just above ground level, to avoid disturbing wetland and watercourse soils. Any work in this area will require a plan to be reviewed by Woodbridge's IWWC prior to any invasive species removal. Invasive removal will help restore and enhance the habitat adjacent to the small stream on site and prevent the spread of the invasives along the watercourse.

Once the invasive species are under control, native shrubs and/or forbs should be added to increase the riparian buffer and prevent further erosion around the stream. Selecting a mixture of native plant species with varying mature heights can ensure some views of the stream from the trail while maintaining a robust riparian buffer for stream health (**Figure 2**). Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate.

Figure 2. Conceptual example of using plant species with varying mature heights to protect the stream and build habitat while still allowing views to stream and beyond.

Suitable shrubs and small trees include withe rod (*Viburnum nudum var. cassinoides*), black chokeberry (*Aronia melanocarpa*), winterberry (*Ilex verticillata*), silky dogwood (*Swida amomum*), speckled alder (*Alnus incana*), highbush blueberry (*Vaccinium corymbosum*), black elderberry (*Sambucus nigra ssp. canadensis*), American witch-hazel (*Hamamelis virginiana*), ninebark (*Physocarpus opulifolius*), fragrant sumac (*Rhus aromatica*), white meadowsweet (*Spiraea latifolia*), arrowwood (*Viburnum dentatum*), creeping juniper (*Juniperus horizontalis*), mountain witch- alder (*Fothergilla major*), summersweet (*Clethra alnifolia*), and sweet fern (*Comptonia peregrina*).

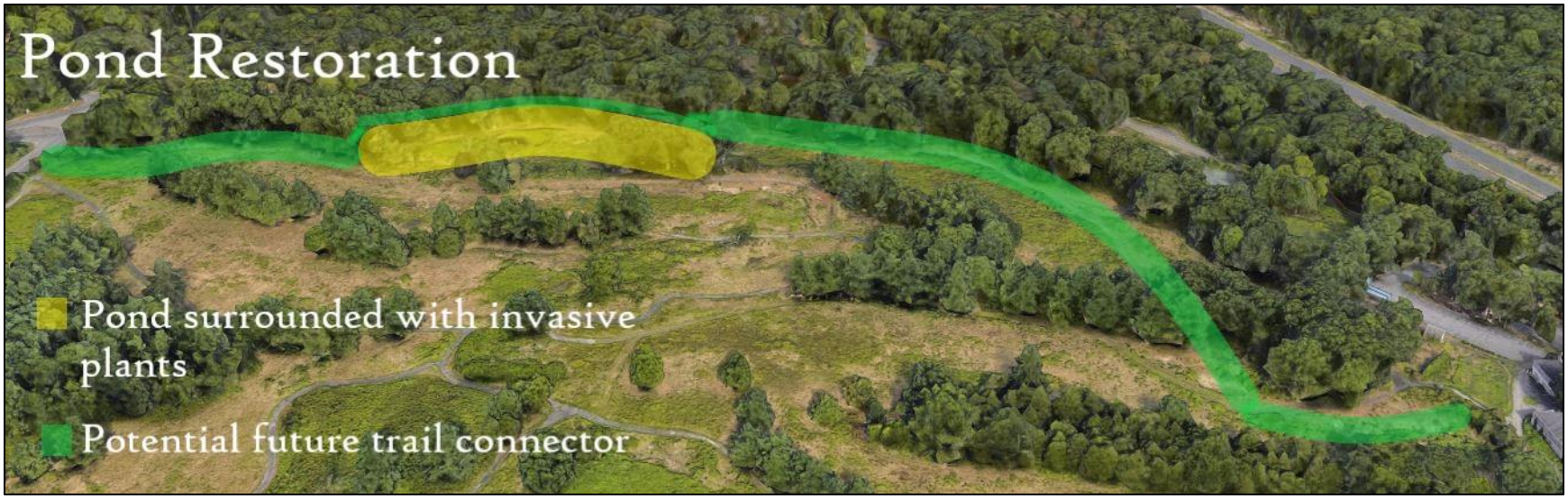
Suitable herbaceous species include marsh marigold (*Caltha palustris*), downy skullcap (Scutellaria incana), cardinal flower (Lobelia cardinalis), turtlehead (Chelone glabra), cinnamon fern (*Osmunda cinnamomea*), fringed sedge (*Carex crinita*), and tussock sedge (*Carex stricta*).

Potential Partners

- NRCS
- SWCD
- Audubon Connecticut
- Connecticut Invasive Plant Working Group
- Connecticut Land Conservation Council (CLCC)
- USFWS Partners for Fish & Wildlife Program
- Yale University
- Wepawaug River Watershed Alliance

Potential Funding Sources

- NRCS – EQIP or CSP or HFRP
- Sustainable CT Community Match Fund
- CLCC's Climate Smart Land Stewardship Grant Program
- Land Trust Alliance's list of Federal Funding Opportunities (updated regularly/ only shows current open opportunities)
- USFS's Landscape Scale Restoration (LSR) Grant
- Neotropical Migratory Bird Conservation Act (NMBCA) Grant Program
- North American Wetlands Conservation Act (NAWCA) Grant



Pond Restoration

The trail segment on the eastern edge of the property starts near Ansonia Road and goes southerly towards the former clubhouse in the southeast corner of the property. On the western side of the trail is a mix of meadow and small stands of mixed deciduous and evergreen trees. On the eastern side of this trail is a deciduous forest with a stream running through it. On the northerly section of this trail is a manmade pond. It is an ideal trail segment to manage for pond edge restoration and pollinator and wildlife habitat to enhance passive recreation. Also, due to its route connecting Ansonia Road to the parking lot at the former clubhouse, it's an ideal path to use as a greenway connector.

The approximate area for the pond edge restoration is 0.25 acres. The approximate length of the potential greenway extension is almost ½ mile.

Existing conditions

The eastern trail segment is bordered by deciduous forest on the east (**Photo 4 & 6**) which contains a small stream (**Photo 5**). There is invasive plant pressure in the understory of the deciduous forest, along the stream, and around the small manmade pond (**Photo 17 & 18**). The northern part of this trail is close to Ansonia Road (**Photo 16**). This area is a mixture of Well Drained Dense Till Uplands, Well Drained Till Uplands, and Shallow Dry Till Uplands (***Attachment D***). The depth of the water table is estimated between 46->200 cm or 18-> 78 inches (***Attachment C***). This section lies within the West River, Indian River and Wepawaug River watersheds (***Attachment F***).

Invasive species found include garlic mustard (*Alliaria petiolata*), mugwort (*Artemisia vulgaris*), burning bush (*Euonymus alatus*), multiflora rose (*Rose multiflora*), and Japanese knotweed (*Fallopia japonica*).

Steps for Habitat Restoration

We recommend managing the invasive plant species, creating space for native plants to regenerate and adding additional native plant species. The primary invasive species and possible methods of removal for this area are:

- Brush hog the **multiflora rose (*Rosa multiflora*)**. To control this invasive, cut monthly during the growing season for 2-4 years. You could also remove individual plants with a weed wrench or mattock. Make sure the plant's root crown is removed to prevent regrowth. Alternatively, and if desired, cut and apply a systemic herbicide, like triclopyr, to the fresh stumps. Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. Refer to https://ipm.cahnr.uconn.edu/invasive_plants_multiflora_rose/ for more information.
- Repeatedly mow the **mugwort (*Artemisia vulgaris*)** in this area. It is essential to mow before/during flowering, which occurs from August to October to prevent seed formation and further spread. Repeated mowing is often not enough to control this invasive. You may also want to try smothering sections of it with layers of cardboard and mulch or heavy landscape fabric. Or, if desired, use a foliar spray of glyphosate (August-October) or glyphosate/triclopyr (earlier in the growing season). Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. See (https://cipwg.uconn.edu/wp-content/uploads/sites/244/2022/04/UConn-Extension-Artemisia-vulgaris-Mugwort.pdf) for more information.

- To remove **Japanese knotweed (*Fallopia japonica*)** you can either try to dig up, *carefully removing all* pieces of roots, or cut down to the ground 6 times a year to deplete its resources. Another option would be to cut to the ground and smother the heavy with heavy plastic or other material for several years. You could also cut and apply a systemic herbicide, like triclopyr or glyphosate, to the fresh stumps. Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. Refer to www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd529922.pdf for more information. Burn or bag & remove from the site any knotweed debris, because pieces will re-root.

- To remove **garlic mustard (*Alliaria petiolata*)**, hand pulling is the most effective method. You can pull first- or second-year plants year-round but prioritize those in flower or with seed capsules. If the removed plant is in flower or has seed capsules it should be bagged and thrown in the garbage to prevent the spread of seed. Also, garlic mustard is edible so can be eaten! Seeds remain viable for five years, so monitor removal areas for new plants. See https://cipwg.uconn.edu/garlic-mustard-2/ for more information.

- There are multiple ways to remove **burning bush (*Euonymus alatus*)** and luckily is not as aggressive as some other invasive shrubs. For young plants, we recommend hand pulling. Larger plants will not recover if you remove most of their root system with a root-wrenching tool or hoe. You can also cut the shrubs down to 1-2' above the soil and repeatedly cut resprouts until the plant's energy reserves are depleted. Alternatively, you can use the cut stump herbicide approach year-round. Cut and apply a systemic herbicide, like triclopyr to the fresh stumps. Consulting with or hiring a licensed pesticide applicator is recommended for all chemical use on publicly owned property. See https://extension.psu.edu/burning-bush and https://www.treesatlanta.org/how-to-remove-winged-burning-bush/ for more information.

Understory Enhancement - For the forest east of the trail segment, we recommend removing invasives burning bush and multiflora rose with a weed wrench or mattock. Brush hog stands of multiflora rose monthly from April to October. Hand pull garlic mustard. Mow and/or selectively smother areas of mugwort. Cut Japanese knotweed to the ground and

smother with thick tarps. Avoid any of these methods along the stream banks (and 50 feet out). If any invasive species are present in this area, use hand loppers to cut to just above ground level monthly. The continuous cutting will deplete the plant's resources over time.

Expect that invasive control will likely take 2-4 years. Once invasive plant species have been removed, we recommend enhancing the understory of the trees with a variety of native understory trees, shrubs and herbaceous forbs. Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate. New native plantings can occur prior to complete invasive removal, because the new plants can help in decreasing invasive seed germination. However diligent monitoring is necessary to ensure the invasives in the area remain under control.

In areas with well-drained soil, appropriate understory tree and shrub species include lowbush blueberry (*Vaccinium angustifolium*), mountain laurel (*Kalmia latifolia*), running serviceberry (*Amelanchier spicata* or *stolonifera*), eastern redbud (*Cercis canadensis*), dwarf chestnut oak (*Quercus prinoides*), striped maple (Acer pensylvanicum), hobblebush (Viburnum lantanoides), rosebay (Rhododendron maximum), chokecherry (*Prunus virginiana*), sweet fern (*Comptonia peregrina*), American holly (*Ilex opaca*), and huckleberry (*Gaylussacia baccata*).

Appropriate herbaceous species include white goldenrod (*Solidago bicolor*), white wood aster (*Eurybia divaricata*), marginal fern (*Dryopteris marginalis*), wild sarsaparilla (*Aralia nudicaulis*), Pennsylvania sedge (*Carex pensylvanica*), wintergreen (*Gaultheria procumbens*), bracken fern (*Pteridium aquilinum*).

In areas adjacent to the stream, any work may require a plan to be reviewed by Woodbridge's IWWC prior to any invasive species removal. Invasive removal will help restore and enhance the habitat adjacent to the wetland on site and prevent the spread of the invasives into the wetland.

Appropriate replacement understory tree and shrub species include American hornbeam (*Carpinus caroliniana*), highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), Carolina allspice (*Calycanthus floridus*), Canada serviceberry (*Amelanchier canadensis*), American witch hazel (*Hamamelis virginiana*), sweet pepperbush (*Clethra alnifolia*), possum haw (*Viburnum nudum*), and winterberry (*Ilex verticillata*).

Appropriate herbaceous species include white wood aster (*Eurybia divaricata*), cinnamon fern (*Osmundastrum cinnamomeum*), New York fern (*Thelypteris noveboracensis*), Goldie's fern (*Dryopteris goldiana*), hop sedge (*Carex lupulina*), columbine (*Aquilegia canadensis*), marsh marigold (*Caltha palustris*), American spikenard

(*Aralia racemosa*), false hellebore (*Veratrum viride*), false Solomon's seal (*Maianthemum racemosum)*, and sessile bellwort (*Uvularia sessilifolia*).

Pond Edge Restoration - From the edge of the pond to 50 feet out, we recommend using hand loppers to cut invasive species to just above ground level, to avoid disturbing wetland and watercourse soils. Any work in this area will require a plan to be reviewed by Woodbridge's IWWC prior to any invasive species removal. Invasive removal will help restore and enhance the habitat adjacent to the small stream on site and prevent the spread of the invasives along the watercourse.

Once the invasive species are under control, native shrubs and/or forbs should be added to increase the riparian buffer around the pond. Selecting a mixture of native plant species with varying mature heights can ensure views of the pond from the trail while maintaining a robust riparian buffer for water health. Continued monitoring for invasives should continue to ensure they do not return or that invasives from the seed bank do not germinate. It is also possible to further enhance the pond with emergent plants that would be rooted in the pond substrate. This planting approach would likely need further permitting review as part of any project approvals.

Suitable shrubs and small trees include withe rod (*Viburnum nudum var. cassinoides*), running serviceberry (*Amelanchier spicata*), winterberry (*Ilex verticillata*), red twig dogwood (*Swida sericea*), buttonbush (*Cephalanthus occidentalis*), sweet gale (*Myrica gale*), bushy St. John's wort (*Hypericum densiflorum*), swamp rose (*Rosa palustris*), summersweet (*Clethra alnifolia*), smooth alder (*Alnus serrulata*), ninebark (*Physocarpus opulifolius*), American witch-hazel (*Hamamelis virginiana*), white meadowsweet (*Spiraea latifolia*), and arrowwood (*Viburnum dentatum*),

To enhance the space between the trail and the pond, we recommend native herbaceous plants such as swamp milkweed (*Asclepias incarnata*), joe-pye weed (*Eutrochium purpureum* – look for shorter cultivars 'baby joe' or 'little joe'), turtleheads (*Chelone glabra* or *lyonii*), fringed sedge (*Carex crinita*), cardinal flower (*Lobelia cardinalis*), northern sea oats (*Chasmanthium latifolium*), fox sedge (*Carex vulpinoidea*), royal fern (*Osmunda regalis*), American bur-reed (*Sparganium americanum*), spike rush (*Eleocharis palustris*), tussock sedge (*Carex stricta*) and cinnamon fern (*Osmunda cinnamomea*).

Greenway Trail Extension – There are several nearby trailheads to various greenways and open space trails (**Figure 3**). The entrance to the historic Indian Trails Park Lane area is located just east of where the eastern trail segment's northern edge is on Ansonia Road. The Yale Nature Preserve entrance is located almost across the street from that trailhead. To the south of the parcel, down Johnson Road is the trailhead to the

handicap accessible Racebrook Tract. These three nearby trailheads have little to no parking. The 50 Woodbridge Road parcel offers not only a potential connection between the three trailheads but also an area to park in the existing parking lot.

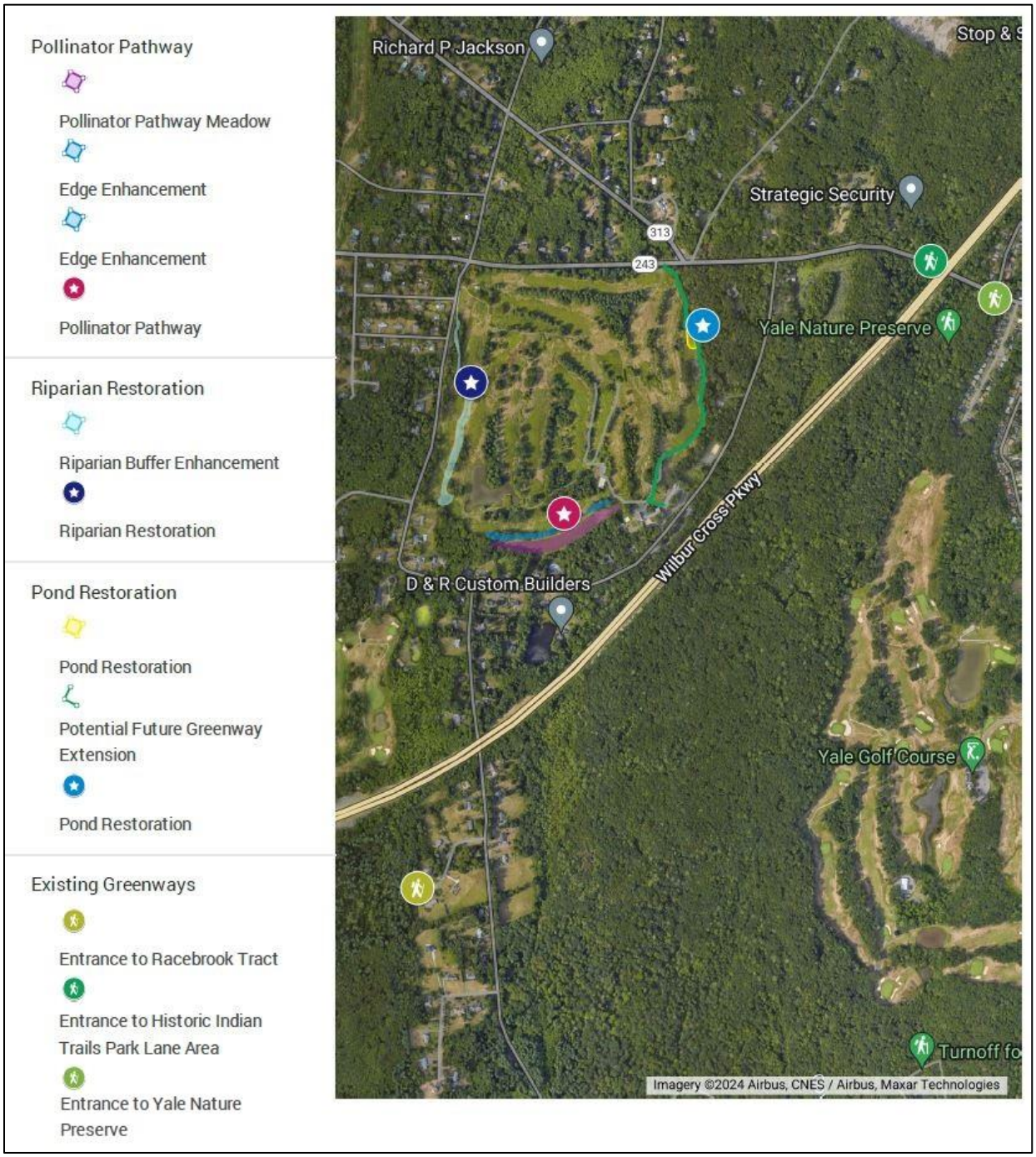


Figure 3. Map of potential parcel projects and nearby existing greenways.

Potential Partners

- NRCS
- SWCD
- Audubon Connecticut
- Connecticut Invasive Plant Working Group
- Connecticut Land Conservation Council (CLCC)
- USFWS Partners for Fish & Wildlife Program
- Yale University
- Wepawaug River Watershed Alliance
- West River Watershed Coalition

Potential Funding Sources

- NRCS – EQIP or CSP or HFRP
- Sustainable CT Community Match Fund
- CLCC's Climate Smart Land Stewardship Grant Program
- Land Trust Alliance's list of Federal Funding Opportunities (updated regularly/ only shows current open opportunities)
- USFS's Landscape Scale Restoration (LSR) Grant
- Neotropical Migratory Bird Conservation Act (NMBCA) Grant Program
- North American Wetlands Conservation Act (NAWCA) Grant
- CT DEEP Recreational Trails Grant

Conclusions

In each potential project section, we included a list of potential partners. Increasing partners builds community buy-in to ensure projects not only occur but are maintained and enjoyed in the long term. Partnerships can also increase access to funding and resources. While we were asked to elaborate on a short list of potential projects, it's important to consider each as part of a bigger picture. Review this my maps project to see all the potential projects on an interactive Google Map and explore other nearby open spaces and resource areas. **Figure 3** above offers a still shot of this map.

Another way to look at the property is to think about providing permanent open space and protection to the property. The following are funding opportunities to assist with that process:

- CLCC's Connecticut Conservation Partnership Program and Transaction Assistance Grant (TAG) Program
- CT DEEP's Open Space and Watershed Land Acquisition Grant Program

Thank you for connecting with the SWCD for assistance with this municipal property. Our team is glad to have provided these recommendations for the property and are available for continued conversations about the site. Please reach out to us with any questions or clarifications on the information in this document.

Sincerely,

Courtney Gilligan
Natural Resource Specialist

Attachment A

Site Photographs

Photo 1. *Pollinator Pathway – understory enhancement*. North side of southern trail segment. Mix of deciduous & evergreen trees.

Photo 2. *Pollinator Pathway – understory enhancement*. Low/wet spot on the north side of southern trail segment.

Photo 3. *Pollinator Pathway –meadow enhancement*. South side of southern trail segment. Open meadow with invasive shrub pressure.

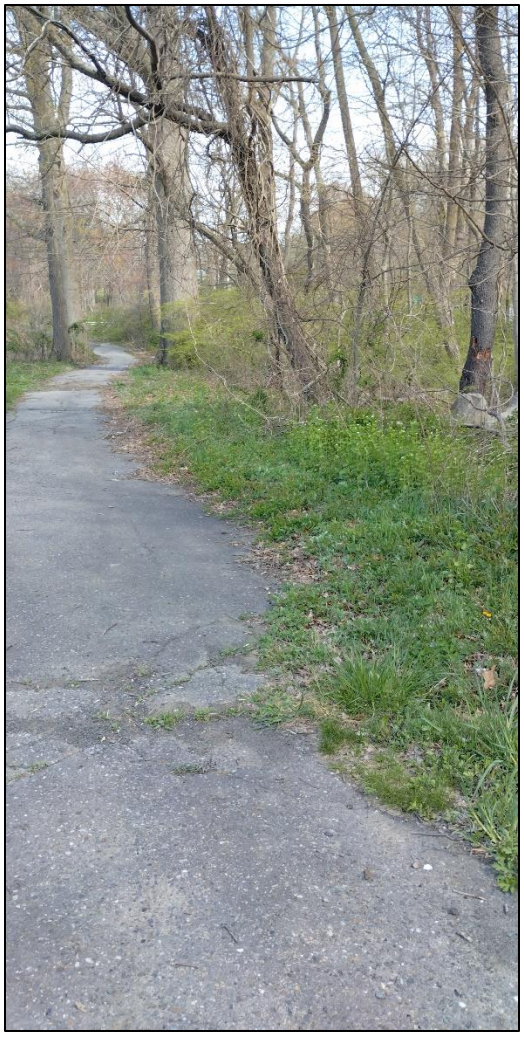


Photo 4. *Pond Restoration – understory enhancement*. Looking northward from the eastern trail segment. Deciduous woods with invasive plant pressure.

Photo 5. *Pond Restoration – understory enhancement*. Stream within wooded area east of the eastern trail segment. Note invasives in the background (circled in red).

Photo 6. *Pond Restoration – understory enhancement*. Looking northward from the eastern trail segment at pond's edge.

Photo 7. *Pollinator Pathway –understory enhancement*. North side of southern trail segment. Mix of deciduous & evergreen trees. Note evidence of existing little bluestem population (circled in red) and some invasive plant species.

Photo 8. *Pollinator Pathway –understory enhancement*. North side of southern trail segment, right before trail turns northwesterly. Mix of deciduous & evergreen trees. Note evidence of existing little bluestem population and some invasive plant species.

Photo 9. *Pollinator Pathway –forested wetland*. South view from southern trail segment, right after trail turns northwesterly. A small, forested wetland with diverse species is adjacent to the existing trail.

Photo 10. *Pond between Pollinator Pathway area and Riparian Restoration area*. Looking northeast after the western trail segment begins. Pond offers scenic view and additional habitat.

Photo 11. *Riparian Restoration –meadow enhancement*. Looking southward back at pond (Photo 10) from the western trail segment.

Photo 12. *Riparian Restoration*. Looking westward from the western trail segment (taken from same location as Photo 11). Note small stream lacking riparian buffer (circled in red) and invasive plant pressure.

Photo 13. *Riparian Restoration*. West side of the western trail segment. Small stream lacks riparian buffer (circled in red) and showed evidence of erosion.

Photo 14. *Riparian Restoration*. Looking southwesterly towards west side of the western trail segment. Small stream has more riparian buffer in this section and note evidence of little bluestem.

Photo 15. *Riparian Restoration – meadow enhancement*. Looking towards northwest corner of property from western trail segment. Existing gate to road in background (circled in blue). The small stream is within the wooded area in this section (circled in red).

Photo 16. *Pond Restoration*. Walking easterly on northern trail segment towards northeast corner of property. The existing trail comes close to the road.

Photo 17. *Pond Restoration*. Looking southerly on the eastern trail segment. Small manmade pond offers aesthetics & habitat. Some invasive plant pressure.

Photo 18. *Pond Restoration*. Looking northerly on the eastern trail segment. Small manmade pond offers aesthetics & habitat. Some invasive plant pressure.

Attachment B

CT Inland Wetlands Map

Custom Soil Resource Report
Map—Inland Wetlands (CT) (50 Woodfield Road, Woodbridge)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- CT nonwetland
- CT wetland
- Not rated or not available

Soil Rating Lines
- CT nonwetland
- CT wetland
- Not rated or not available

Soil Rating Points
- CT nonwetland
- CT wetland
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

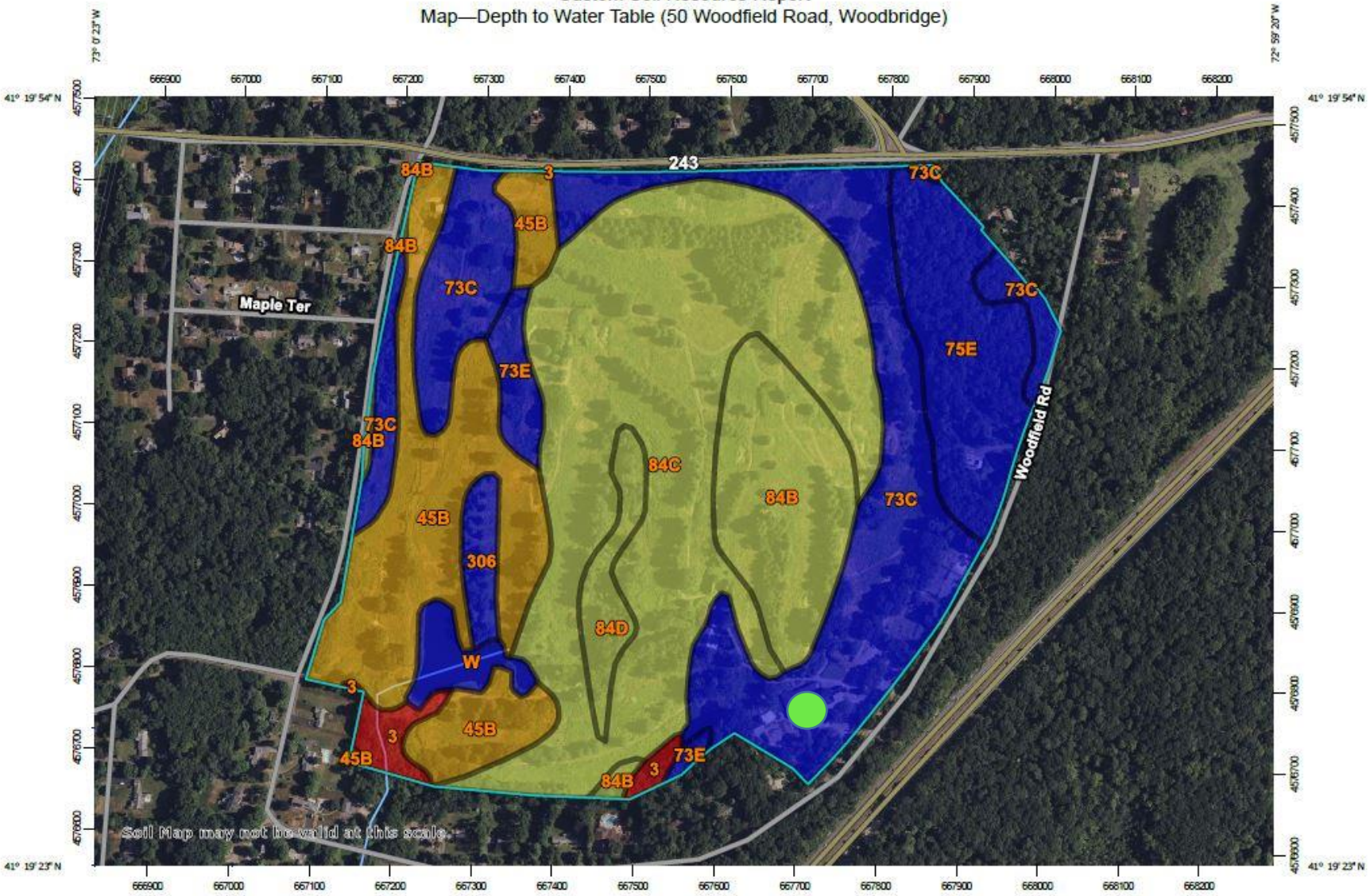
Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	CT wetland	Ridgebury, extremely stony (40%)	2.3	1.6%
			Leicester, extremely stony (35%)		
			Whitman, extremely stony (17%)		
			Swansea (2%)		
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	CT nonwetland	Woodbridge, fine sandy loam (82%)	23.1	16.5%
			Paxton (10%)		
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	CT nonwetland	Charlton, very stony (50%)	33.6	24.0%
			Chatfield, very stony (30%)		
			Sutton, very stony (5%)		
			Rock outcrop (5%)		
			Hollis, very stony (5%)		
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	CT nonwetland	Charlton (45%)	2.6	1.9%
			Chatfield (30%)		
			Rock outcrop (10%)		
			Sutton, very stony (5%)		
			Hollis (3%)		
			Unnamed, red parent material (1%)		
			Unnamed, sandy subsoil (1%)		
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	CT nonwetland	Hollis (35%)	11.9	8.5%
			Chatfield (30%)		
			Rock outcrop (15%)		
			Charlton (7%)		
			Sutton, very stony (5%)		
			Unnamed, red parent material (1%)		
			Unnamed, sandy subsoil (1%)		
			Brimfield (1%)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	CT nonwetland	Paxton (55%)	12.9	9.2%
			Montauk (30%)		
			Woodbridge (5%)		
			Charlton (5%)		
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	CT nonwetland	Paxton (55%)	45.8	32.7%
			Montauk (30%)		
			Woodbridge (6%)		
			Charlton (5%)		
			Stockbridge (1%)		
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	CT nonwetland	Paxton (55%)	3.5	2.5%
			Montauk (30%)		
			Charlton (6%)		
			Woodbridge (5%)		
			Stockbridge (1%)		
306	Udorthents-Urban land complex	CT nonwetland	Udorthents (50%)	2.1	1.5%
			Urban land (39%)		
			Rock outcrop (2%)		
W	Water	CT wetland	Water (100%)	2.4	1.7%
Totals for Area of Interest				**140.0**	**100.0%**

Attachment C

Depth to Water Table Map

Custom Soil Resource Report
Map—Depth to Water Table (50 Woodfield Road, Woodbridge)



Map Scale: 1:6,660 if printed on A landscape (11" x 8.5") sheet.
Meters: 0 50 100 200 300
Feet: 0 300 600 1200 1800
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	8	2.3	1.6%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	46	23.1	16.5%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	>200	33.6	24.0%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	>200	2.6	1.9%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	>200	11.9	8.5%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	61	12.9	9.2%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	61	45.8	32.7%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	61	3.5	2.5%
306	Udorthents-Urban land complex	>200	2.1	1.5%
W	Water	>200	2.4	1.7%
Totals for Area of Interest			**140.0**	**100.0%**

Attachment D

Ecological Classification Map

Custom Soil Resource Report

Map—Ecological Classification Name: NRCS Forestland Site (50 Woodfield Road, Woodbridge)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Moist Dense Till Uplands
- Shallow Dry Till Uplands
- Well Drained Dense Till Uplands
- Well Drained Till Uplands
- Wet Till Depressions
- Not rated or not available

Soil Rating Lines
- Moist Dense Till Uplands
- Shallow Dry Till Uplands
- Well Drained Dense Till Uplands
- Well Drained Till Uplands
- Wet Till Depressions
- Not rated or not available

Soil Rating Points
- Moist Dense Till Uplands
- Shallow Dry Till Uplands
- Well Drained Dense Till Uplands
- Well Drained Till Uplands
- Wet Till Depressions
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	Wet Till Depressions	2.3	1.6%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	Moist Dense Till Uplands	23.1	16.5%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Well Drained Till Uplands	33.6	24.0%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Well Drained Till Uplands	2.6	1.9%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	Shallow Dry Till Uplands	11.9	8.5%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	Well Drained Dense Till Uplands	12.9	9.2%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	Well Drained Dense Till Uplands	45.8	32.7%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	Well Drained Dense Till Uplands	3.5	2.5%
306	Udorthents-Urban land complex		2.1	1.5%
W	Water		2.4	1.7%
Totals for Area of Interest			**140.0**	**100.0%**

Attachment E

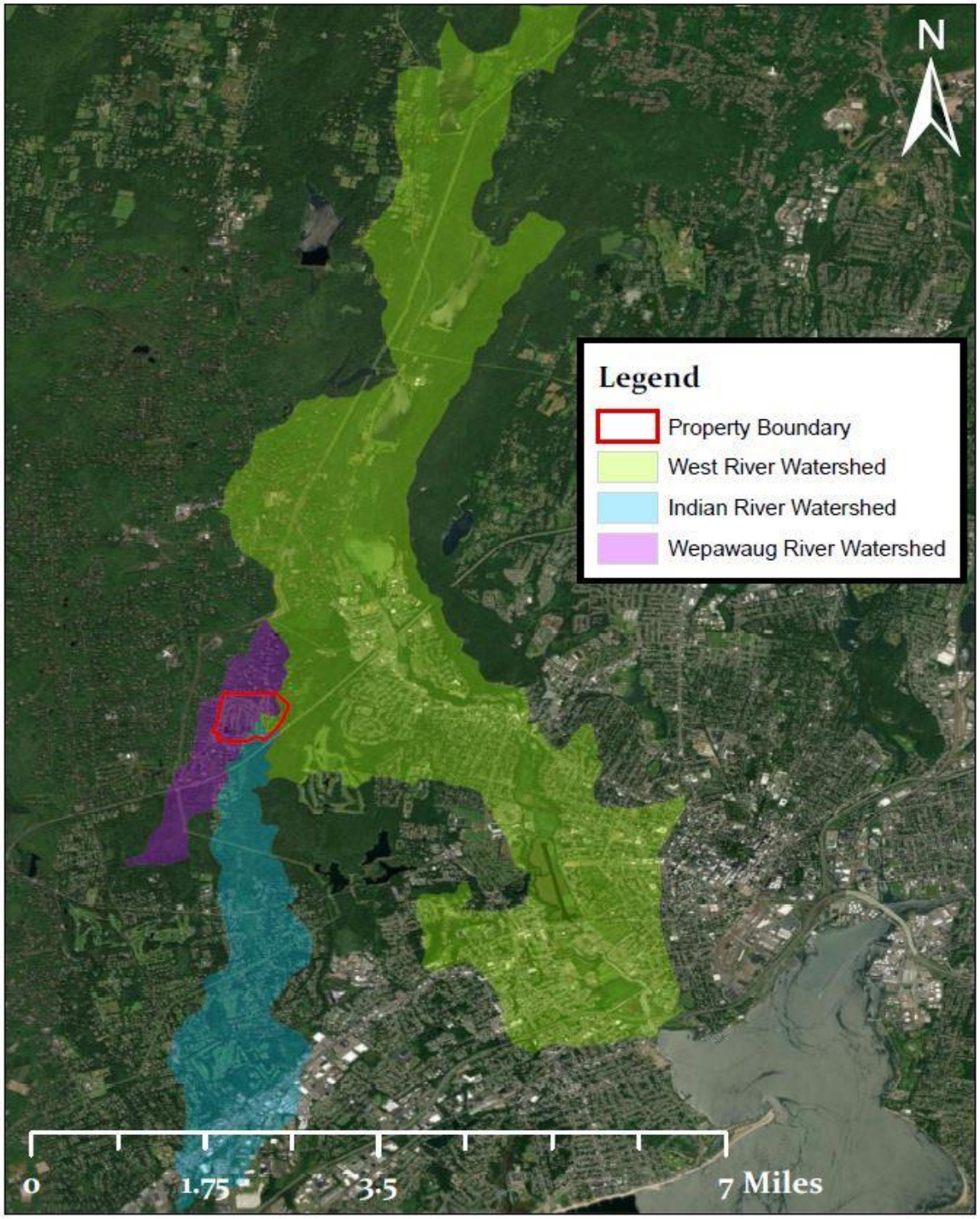
Resource Concern Map

50 Woodfield Road Resource Concern Map

Attachment F

Watershed Maps

50 Woodfield Rd Watersheds Map



50 Woodfield Rd Watersheds Closeup Map