
Appendix A
Wetland Delineation and Ecological Evaluation Report

WETLAND DELINEATION AND ECOLOGICAL EVALUATION REPORT

**UPPER COLLINSVILLE MILL POND MASTER PLAN
COLLINSVILLE, CONNECTICUT**

MMI# 1752-13-2

June 6, 2011



Prepared for:

Town of Canton
4 Market Street
Collinsville, Connecticut 06022



Funding provided by the Farmington River
Enhancement Grants, administered by the
Connecticut Department of Environmental
Protection.

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1.0 INTRODUCTION

On May 24, 2011 Matthew Sanford, a professional wetland scientist and certified soil scientist with Milone & MacBroom, Inc., completed a wetland delineation and ecological evaluation of the wetlands and uplands associated with the Upper Collinsville Mill Pond located in Collinsville, Connecticut. The evaluation was completed as part of the Upper Collinsville Mill Pond Master Plan study. Prior to conducting our field work, all pertinent maps, reports, and surveys were reviewed as an aid in our evaluation of the impoundment.

Inland wetlands and watercourses along the impoundment were delineated in accordance with the regulations of the Town of Canton, Connecticut and the State of Connecticut *Inland Wetlands and Watercourses Act*, CGS 22a-36 through 45 and the regulations of the U. S. Army Corps of Engineers (USACOE) "Wetlands Delineation Manual," dated 1987 and the "Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region" dated October 2009. State-regulated wetland areas consist of any of the soil types designated by the National Cooperative Soils Survey as poorly drained, very poorly drained, alluvial, or floodplain. Regulated watercourses consist of rivers; streams; brooks; waterways; lakes; ponds; marshes; swamps; bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, not regulated pursuant to sections 22a-28 to 22a-35, inclusive (tidal wetlands). Federal jurisdictional wetlands were delineated using the three parameter approach which consists of the presence of hydric soils, hydrology, and hydrophytic vegetation.

The ecological evaluation including walking the various wetland and upland habitats within and surrounding the impoundment. Vegetation surveys were completed by visual encounter method which includes the identification of plants by leaves, bark, twigs, fruit, and flowers. Wildlife data was collected by visual encounter and auditory survey methods which includes the identification of wildlife by tracks, feces, fur, pellets, rubbings, feathers, burrows, nests, and habitats. The following report summarizes our findings.

2.0 SOILS

Weather conditions were clear and dry. Site conditions were suitable for wetland delineation work. Soils were examined using a spade and Dutch auger. Geospatial data was accessed via the USDA-NRCS web soil survey mapping for the project site. The web soil survey mapping is appended. The following soil units are mapped within and/or along the impoundment:

- Hinckley
- Windsor
- Udorthents and/or Urban Land
- Suncook
- Fluvaquent
- Rippowam
- Water

2.1 Upland Soils

The upland soils are derived from glaciofluvial deposits. They consist of stratified sand and gravel. The parent material of these soils is acidic crystalline rock.

The *Hinckley* series consists of very deep, excessively drained soils formed in glaciofluvial materials. They are nearly level through very steep soils on terraces, outwash plains, deltas, kames, and eskers. Saturated hydraulic conductivity is high or very high. Slope ranges from 0 through 60 percent. Cleared areas are used for hay, pasture, and silage corn. Most areas are forested, brush land or used as urban land. Northern red, black, white, scarlet and scrub oak, eastern white and pitch pine, eastern hemlock, and gray birch are the common trees. Unimproved pasture and idle land support hardhack, little bluestem, bracken fern, sweet fern, and low bush blueberry.

The *Windsor* series consists of very deep, excessively drained soils formed in sandy outwash or eolian deposits. They are nearly level through very steep soils on

glaciofluvial landforms. Slope ranges from 0 through 60 percent. Saturated hydraulic conductivity is high or very high. Most areas are forested or in low growing brushy vegetation. Some areas are used for silage corn, hay, and pasture. Small areas, mostly irrigated, are used for shade tobacco, vegetables and nursery stock. Some areas are in community development. Common trees are white, black, and northern red oak, eastern white pine, pitch pine, gray birch, poplar, red maple, and sugar maple.

The soil mapping unit *Udorthents and/or Urban Land* is used to describe soils that have been substantially disturbed including areas that have been excavated or filled by at least two feet.

2.2 Wetland Soils and Ordinary High Watermark

The resource mapping does indicate several areas of alluvial floodplain soils. Most of these soil types are nonhydric soils and are considered excessively drained. In addition to the resource mapping, MMI found several pockets of hydric floodplain soils that are considered poorly and very poorly drained soils. Portions of the impoundment were delineated based upon ordinary high water mark because no wetland and/or alluvial floodplain soils were present.

The alluvial floodplain and wetland soils are derived from glaciofluvial deposits. They consist of stratified sand and gravel. The parent material of these soils is acidic crystalline rock.

The *Suncook* series consists of very deep, excessively drained sandy soils formed in alluvial sediments. They are nearly level soils on flood plains, subject to common flooding. Slope ranges from 0 to 3 percent. Saturated hydraulic conductivity is high or very high in the surface layer and underlying strata. Most areas are wooded or in brushy unimproved pasture. Cleared areas are in hay or pasture, but a few scattered areas are in

cultivated crops. Common trees are sycamore, aspen, white and black oak, red maple, white pine, and ironwood. Understory plants include bayberry, ground cedar, lowbush blueberry, pipsissewa, and hairy moss.

The soil mapping unit *Fluvaquent* is used to describe those soils that have been deposited by the river in more recent times and cannot be classified into a taxonomic series. The drainage class for these soils can range from poorly drained to excessively drained.

The *Rippowam* series consists of very deep, poorly drained loamy soils formed in alluvial sediments. They are nearly level soils on flood plains subject to frequent flooding. Slope ranges from 0 to 3 percent. Saturated hydraulic conductivity ranges from moderately high or high in the loamy upper part and high or very high in the underlying sandy materials. Most areas are in brushy woodland. Common trees are red maple, willow, and alder. A few areas are cleared and used for pasture or hay.

The series *Water* is used to describe rivers, reservoirs, ponds, lakes and other large open bodies of water.

The wetland limits are represented on the project plans by wetland flag sequence W-1 through W-138.

3.0 VEGETATION COVER TYPES

The wetland and watercourse resources present within and along the impoundment are described herein using the U. S. Fish and Wildlife Service's wetland classification system described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et al., 1979). Upper Collinsville Mill Pond impoundment and its associated wetlands within the project limits belong to the palustrine ecological unit. The following wetland vegetative cover types are present within the project site:

- ❑ Palustrine Open Water (POW)
- ❑ Palustrine Emergent Marsh (PEM)
- ❑ Palustrine Scrub Shrub (PSS)
- ❑ Palustrine Forested (PFO)

The vegetation cover types are represented on Figure 1.

Palustrine Open Water (POW)

The POW cover type includes those areas that have open water present and can support submerged and/or floating aquatic vegetation. The open waters areas within this impoundment support small populations of submerged and/or floating aquatic vegetation. A few strands of watershield and white water lily were found within the low flow areas along Collins Road. The existing current of the river prevents substantial populations of floating aquatic vegetation from forming. Table 3-1 provides a list of plant species observed within the POW.



Upper Collinsville Mill Pond



**Small Pond located southeast of
Town Bridge Road**

Table 3-1
Upper Collinsville Mill Pond
Palustrine Open Water

Scientific Name	Common Name
<i>Herbaceous</i>	
<i>Nymphaea alba</i>	White water lily
<i>Brasenia schreberi</i>	Watershield

Note: * = Nonnative Invasive Plant Species

Palustrine Emergent Marsh (PEM)

The PEM includes those areas that support emergent and wet meadow plant species. Some shrubs may be intermixed amongst this vegetation type. Typically this cover type is found at water depths ranging from one inch to two feet. The upper mill pond has several large patches of PEM. Table 3-2 provides a list of plant species observed within the PEM.



Palustrine Emergent Marsh



Palustrine Emergent Marsh (Cattails)

Table 3-2
Upper Collinsville Mill Pond
Palustrine Emergent Marsh

Scientific Name	Common Name
<i>Shrubs</i>	
<i>Cornus amomum</i>	Silky dogwood
<i>Cephalanthus occidentalis</i>	Buttonbush
<i>Alnus rugosa</i>	Speckled alder
<i>Herbaceous</i>	
<i>Typha latifolia</i>	Broad leaved cattail
<i>Iris pseudacorus</i>	Yellow flag iris*
<i>Scirpus pungens</i>	Woolgrass
<i>Scirpus validus</i>	Soft stem bulrush
<i>Carex stricta</i>	Tussock sedge
<i>Lythrum salicaria</i>	Purple loosestrife*
<i>Sagittaria latifolia</i>	Duck potato
<i>Sparganium americanum</i>	American burreed
<i>Phragmites australis</i>	Common reed*
<i>Thelypteris palustris</i>	Marsh fern
<i>Impatiens capensis</i>	Jewelweed
<i>Juncus effusus</i>	Soft rush
<i>Carex stricta</i>	Tussock sedge
<i>Phalaris arundinacea</i>	Reed canary grass*
<i>Carex lurida</i>	Lurid sedge
<i>Heracleum maximum</i>	Cow parsnip
<i>Scirpus atrovirens</i>	Green bulrush
<i>Hesperis matronalis</i>	Dames rocket*
<i>Tracaulon sagittatum</i>	Arrow-leaved tearthumb

Note: * = Nonnative Invasive Plant Species

Palustrine Scrub Shrub (PSS)

The PSS includes those areas that support a predominately thick shrubby stratum and trees that are under 20 feet in height. Most of these cover types have hummocky topography with the high hummocks being vegetated with shrubs and herbaceous material and the pits a combination muck and/or standing water. There are several large

swaths of PSS that border the PEM's within the impoundment. Table 3-3 provides a list of plant species observed within the PSS.



Palustrine Scrub Shrub Wetland

**Table 3-3
Upper Collinsville Mill Pond
Palustrine Scrub Shrub Wetland**

Scientific Name	Common Name
<i>Trees</i>	
<i>Acer rubrum</i>	Red Maple
<i>Quercus palustris</i>	Pin Oak
<i>Ulmus americana</i>	American elm
<i>Shrubs</i>	
<i>Salix discolor</i>	Pussy willow
<i>Cornus amomum</i>	Silky dogwood
<i>Cephalanthus occidentalis</i>	Buttonbush
<i>Vaccinium corymbosum</i>	Highbush blueberry
<i>Salix sericea</i>	Silky willow
<i>Ilex verticillata</i>	Winterberry
<i>Alnus rugosa</i>	Speckled alder
<i>Sambucus canadensis</i>	American elderberry
<i>Herbaceous</i>	
<i>Symplocarpus foetidus</i>	Skunk cabbage
<i>Thelypteris palustris</i>	Marsh fern
<i>Impatiens capensis</i>	Jewelweed
<i>Juncus effusus</i>	Soft rush
<i>Carex stricta</i>	Tussock sedge
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Toxicodendron radicans</i>	Poison ivy
<i>Fallopia japonica</i>	Japanese knotweed*

Note: * = Nonnative Invasive Plant Species

Palustrine Forested (PFO)

The PFO includes those areas that support woody vegetation that is greater than 20 feet in height and the overstory canopy must have at least 30 percent coverage. PFO are the most common wetland cover type found within Connecticut. Table 3-4 provides a list of plant species observed within the PFO along the impoundment.



Palustrine Forested Wetlands Left Bank
(facing downstream)



Palustrine Forested Wetland Right Bank
(facing downstream)

Table 3-4
Upper Collinsville Mill Pond
Palustrine Forested Wetlands

Scientific Name	Common Name
<i>Trees</i>	
<i>Robinia pseudoacacia</i>	Black locust*
<i>Platanus occidentalis</i>	Sycamore
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Quercus palustris</i>	Pin Oak
<i>Ulmus americana</i>	American elm
<i>Carya ovata</i>	Shagbark hickory
<i>Populus deltoides</i>	Cottonwood

Table 3-4 (Continued)
Upper Collinsville Mill Pond
Palustrine Forested Wetlands

Scientific Name	Common Name
<i>Shrubs</i>	
<i>Lonicera americana</i>	American honeysuckle
<i>Lonicera morrowii</i>	Morrow's honeysuckle*
<i>Viburnum dentatum</i>	Northern arrowwood
<i>Kalmia latifolia</i>	Mountain laurel
<i>Ilex verticillata</i>	Winterberry
<i>Alnus rugosa</i>	Speckled alder
<i>Cornus amomum</i>	Silky dogwood
<i>Rosa multiflora</i>	Multiflora rose*
<i>Berberis thunbergii</i>	Japanese barberry*
<i>Herbaceous</i>	
<i>Symplocarpus foetidus</i>	Skunk cabbage
<i>Impatiens capensis</i>	Jewelweed
<i>Juncus tenuis</i>	Path rush
<i>Viola</i> sp	Violets
<i>Carex stricta</i>	Tussock sedge
<i>Carex crinita</i>	Fringed sedge
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Matteuccia struthiopteris</i>	Ostrich fern
<i>Dennstaedtia punctilobula</i>	Hay scented fern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Maianthemum canadense</i>	Canada mayflower
<i>Maianthemum racemosum</i>	False solomon's seal
<i>Galium aparine</i>	Common bedstraw
<i>Heracleum maximum</i>	Cow parsnip
<i>Alliaria petiolata</i>	Garlic mustard*
<i>Hesperis matronalis</i>	Dames rocket*
<i>Arisaema triphyllum</i>	Jack in the pulpit
<i>Trillium erectum</i>	Trillium
<i>Toxicodendron radicans</i>	Poison ivy
<i>Parthenocissus quinquefolia</i>	Virginia creeper
	Grasses

Note: * = Nonnative Invasive Plant Species

Wetland limits that are represented by ordinary high water mark are bordered by uplands that consist upland mixed hardwood forest, meadow, lawn, nurseries, single family

residences, and commercial/retail buildings. The predominate cover type is upland forested and the vegetation found within this community is presented in Table 3-5

**Table 3-5
Upper Collinsville Mill Pond
Forested Riparian Zone**

Scientific Name	Common Name
<i>Trees</i>	
<i>Robinia pseudoacacia</i>	Black Locust*
<i>Platanus occidentalis</i>	Sycamore
<i>Acer rubrum</i>	Red Maple
<i>Acer saccharinum</i>	Silver Maple
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i>	Red oak
<i>Quercus veluntina</i>	Black oak
<i>Betula lenta</i>	Black birch
<i>Betula populifolia</i>	Grey birch
<i>Pinus strobus</i>	White pine
<i>Ulmus americana</i>	American elm
<i>Carya ovata</i>	Shagbark hickory
<i>Tsuga Canadensis</i>	Eastern hemlock
<i>Ailanthus altissima</i>	Tree of heaven*
<i>Acer saccharum</i>	Sugar maple
<i>Tilia americana</i>	American basswood
<i>Carpinus caroliniana</i>	American hornbeam
<i>Shrubs</i>	
<i>Lonicera morrowii</i>	Morrow's honeysuckle*
<i>Ilex verticillata</i>	Winterberry
<i>Vaccinium corymbosum</i>	Highbush blueberry
<i>Cornus amomum</i>	Silky dogwood
<i>Rosa multiflora</i>	Multiflora rose*
<i>Kalmia latifolia</i>	Mountain Laurel
<i>Vaccinium angustifolium</i>	Lowbush blueberry
<i>Berberis thunbergii</i>	Japanese barberry*
<i>Hamamelis virginiana</i>	Common witch hazel
<i>Acer pensylvanicum</i>	Striped maple
<i>Viburnum acerifolium</i>	Maple leaved viburnum

Table 3-5 (Continued)
Upper Collinsville Mill Pond
Forested Riparian Zone

Scientific Name	Common Name
<i>Herbaceous</i>	
<i>Thalictrum pubescens</i>	Tall meadow rue
<i>Impatiens capensis</i>	Jewelweed
<i>Juncus tenuis</i>	Path rush
<i>Matteuccia struthiopteris</i>	Ostrich fern
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda cinnamomea</i>	Cinnamon fern
<i>Dennstaedtia punctilobula</i>	Hay scented fern
<i>Pteridium aquilinum</i>	Bracken fern
<i>Polygonatum biflorum</i>	True Solomon seal
<i>Rubus allegheniensis</i>	Common blackberry
<i>Alliaria petiolata</i>	Garlic mustard
<i>Maianthemum canadense</i>	Canada mayflower
<i>Maianthemum racemosum</i>	False Solomon seal
<i>Toxicodendron radicans</i>	Poison ivy
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Aster divaricatus</i>	Common wood aster
<i>Goodyera pubescens</i>	Downy rattlesnake plantain
<i>Fallopia japonica</i>	Japanese knotweed*
<i>Vines</i>	
	Oriental Bittersweet
<i>Vipes</i> sp.	Grape

Note: * = Nonnative Invasive Plant Species

4.0 FUNCTIONS AND VALUES

Wetlands and watercourses possess the capacity to perform a variety of ecological and societal functions. These vary depending on the specific characteristics of the wetland and/or watercourse being evaluated. The wetlands and watercourses within the project limits were evaluated in order to identify the functions that they provide.

Table 4-1 provides a summary of the functions and values of the watercourses and wetlands in the study area.

**Table 4-1
Upper Collinsville Mill Pond and Associated Wetlands
Functions and Values Assessment**

	Functions and Values	Comments
	Groundwater Recharge / Discharge	Yes – ground water discharges (seeps) observed along impoundment.
	Floodflow Alteration (Storage & Desynchronization)	Yes – impoundment and associated wetlands located within FEMA-designated 100-year flood zone.
	Fish & Shellfish Habitat	Yes – river supports warmwater and coldwater fish species.
	Sediment / Toxicant Retention	Yes – sediment deposition (alluvial deposits) occurs behind dam. Sand bars present upstream of dam.
	Nutrient Removal / Retention / Transformation	Yes – nutrient removal capabilities are present within emergent and scrub shrub wetland areas - high stem density present.
	Production Export (Nutrient)	Yes – impoundment exports allochthonous materials to downstream habitats.
	Sediment / Shoreline Stabilization	Yes – Impoundment banks are stable.
	Wildlife Habitat	Yes – riparian zones vary along river but wildlife habitat is high quality.
	Recreation (Consumptive & Non-Consumptive)	Yes – impoundment is used for fishing, swimming, boating, canoeing etc. The Farmington greenway parallels the left bank (facing downstream) of the impoundment
	Educational Scientific Value	Yes – educational signage present along greenway that parallels the left bank (facing downstream) of the impoundment.
	Uniqueness / Heritage	Yes, impoundment served industrial process back in the 1800s.
	Visual Quality / Aesthetics	Yes, impoundment located in historic section of town. Sections upstream of this impoundment have been federally designated as Wild and Scenic.
ES	Endangered Species	Yes – Impoundment has the potential to provide Bald Eagle wintering grounds Wood Turtle and Eastern Box Turtle habitat is present along impoundment

The principal functions/values of this system within this watershed are floodflow alteration, shoreline stabilization, wildlife habitat, nutrient and toxicant removal, fishery habitat, production export, and visual/aesthetic quality.

5.0 NATURAL DIVERSITY DATABASE

According to the December 2010 Connecticut Department of Environmental Protection (DEP) Natural Diversity Database (NDDB) there are areas of concern within and along the impoundment. A NDDB project review request was forwarded to the DEP in March 2011. A DEP letter dated April 1, 2011 (appended) identifies the state threatened Bald Eagle (*Haliaeetus leucocephalus*) and two species of special concern the Wood turtle (*Glyptemys insculpta*) and Eastern box turtle (*Terrapene carolina*) as being within the vicinity of the Upper Collinsville Mill Pond (see attached correspondence).

Bald eagles winter along the Farmington River and regularly use large diameter shoreline trees for perching and feeding from December through March. There are several large diameter trees located along the shorelines of the impoundment.

The eastern box turtle requires old field and deciduous forest habitats, which can include logged woodlands. Their home range is typically small.

The wood turtle preferred summer habitat includes pastures, old fields, woodlands bordering or adjacent to rivers and streams. There are several meadows located along the left and right banks of the impoundment and large deciduous forested tracts as well. The habitats bordering the impoundment are capable of supporting both turtle species.

References

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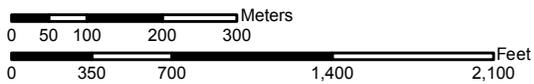
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USDA-NRCS Web Soil Survey Mapping

Soil Map—State of Connecticut



Map Scale: 1:9,930 if printed on A size (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other

Political Features

-  Cities

Water Features

-  Oceans
-  Streams and Canals

Transportation

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

MAP INFORMATION

Map Scale: 1:9,930 if printed on A size (8.5" × 11") sheet.

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 18N NAD83

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

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 10, Mar 31, 2011

Date(s) aerial images were photographed: 8/14/2006

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 Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, extremely stony	0.7	0.1%
4	Leicester fine sandy loam	3.3	0.7%
12	Raypol silt loam	3.3	0.7%
15	Scarboro muck	2.7	0.6%
23A	Sudbury sandy loam, 0 to 5 percent slopes	10.8	2.3%
29B	Agawam fine sandy loam, 3 to 8 percent slopes	5.9	1.3%
34C	Merrimac sandy loam, 8 to 15 percent slopes	3.2	0.7%
36A	Windsor loamy sand, 0 to 3 percent slopes	10.1	2.1%
38A	Hinckley gravelly sandy loam, 0 to 3 percent slopes	5.3	1.1%
38C	Hinckley gravelly sandy loam, 3 to 15 percent slopes	57.9	12.2%
38E	Hinckley gravelly sandy loam, 15 to 45 percent slopes	2.6	0.6%
50B	Sutton fine sandy loam, 3 to 8 percent slopes	3.3	0.7%
51B	Sutton fine sandy loam, 2 to 8 percent slopes, very stony	0.8	0.2%
57B	Gloucester gravelly sandy loam, 3 to 8 percent slopes	4.1	0.9%
60C	Canton and Charlton soils, 8 to 15 percent slopes	10.1	2.1%
60D	Canton and Charlton soils, 15 to 25 percent slopes	24.7	5.2%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	25.0	5.3%
61C	Canton and Charlton soils, 8 to 15 percent slopes, very stony	1.2	0.3%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	18.3	3.9%
62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	0.0	0.0%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	78.1	16.5%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	5.2	1.1%
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	30.7	6.5%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	20.2	4.3%
100	Suncook loamy fine sand	4.3	0.9%
103	Rippowam fine sandy loam	6.5	1.4%

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
109	Fluvaquents-Udifulvents complex, frequently flooded	4.6	1.0%
260C	Charlton-Urban land complex, 8 to 15 percent slopes	4.5	0.9%
306	Udorthents-Urban land complex	69.5	14.7%
308	Udorthents, smoothed	4.1	0.9%
W	Water	53.2	11.2%
Totals for Area of Interest		474.2	100.0%

CTDEP Natural Diversity Database Correspondence



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FRANKLIN WILDLIFE
391 ROUTE 32
N FRANKLIN CT 06254
860-642-7239



April 1, 2011

Ms Gwen Williamson
Milone and MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410

re: Master Plan & sediment removal Farmington River, Town Bridge to Bridge Street, Collinsville

Dear Ms. Williamson:

Your request was forwarded to me on 3/28/11 from the Department of Environmental Protection's (DEP) Natural Diversity Database. They have records of a state threatened species, the bald eagle (*Haliaeetus leucocephalus*) and two species of special concern, Wood turtle (*Glyptemys insculpta*) and Eastern Box turtle (*Terrapene carolina*) in the vicinity of this project. Bald eagles winter along the Farmington River. Bald eagles regularly use the shoreline trees for perching and feeding from December – March when there is open water during the winter months. If possible all old growth trees at or exceeding 12" dbh should be left standing near the waterside. To avoid affecting wintering eagles the Wildlife Division recommends that you **not** do work along the water from December 31 to March 1.

Eastern Box Turtles require old field and deciduous forest habitats, which can include power lines and logged woodlands. They are often found near small streams and ponds, the adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Wood turtles require riparian habitats bordered by floodplain, woodland or meadows. They hibernate in the banks of the river in submerged tree roots. Their summer habitat includes pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. Both of these species are dormant from November 1 to April 1 and have been negatively impacted by the loss of suitable habitat.

If Wood or Eastern Box turtle habitat exists on the proposed site and will be impacted by your project, the Wildlife Division recommends that a herpetologist familiar with the habitat requirements of this species conduct surveys between April and September to see if they are present. A report summarizing the results of such surveys should include habitat descriptions, reptile species list and a statement/resume giving the herpetologist' qualifications. The DEP doesn't maintain a list of qualified herpetologists. A DEP Wildlife Division permit may be required by the herpetologist to conduct survey work, you should ask if your herpetologist has one. The results of this investigation can be forwarded to the Wildlife Division and, after evaluation, recommendations for additional surveys, if any, will be made.

Standard protocols for protection of wetlands should be followed and maintained during the course of the project. Additionally, all silt fencing should be removed after soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted. Please be advised that the Wildlife Division has not made a field inspection of the project nor have we seen detailed timetables for work to be done. Consultation with the Wildlife Division should not be substituted for site-specific surveys that may be required for environmental assessments. The time of year when this work will take place will affect this species if they are present on the site when the work is scheduled. Please be advised that should state permits be required or should state involvement occur in some other fashion, specific restrictions or conditions relating to the species discussed above may apply. In this situation, additional evaluation of the proposal by the DEP Wildlife Division should be requested. If the proposed project has not been initiated within 12 months of this review, contact the NDDDB for an updated review. If you have any additional questions, please feel free to contact me at Julie.Victoria@ct.gov, please reference the NDDDB # at the bottom of this letter when you e-mail. Thank you for the opportunity to comment.

Sincerely,

Julie Victoria, Wildlife Biologist

cc: NDDDB – 201101629 (18013)