Wetland Description Report
Simsbury Meadows
Iron Horse Boulevard
Simsbury, CT

May 21, 2015

Prepared For:
Town of Simsbury
933 Hopmeadow Street
Simsbury, CT 06070

Prepared By:
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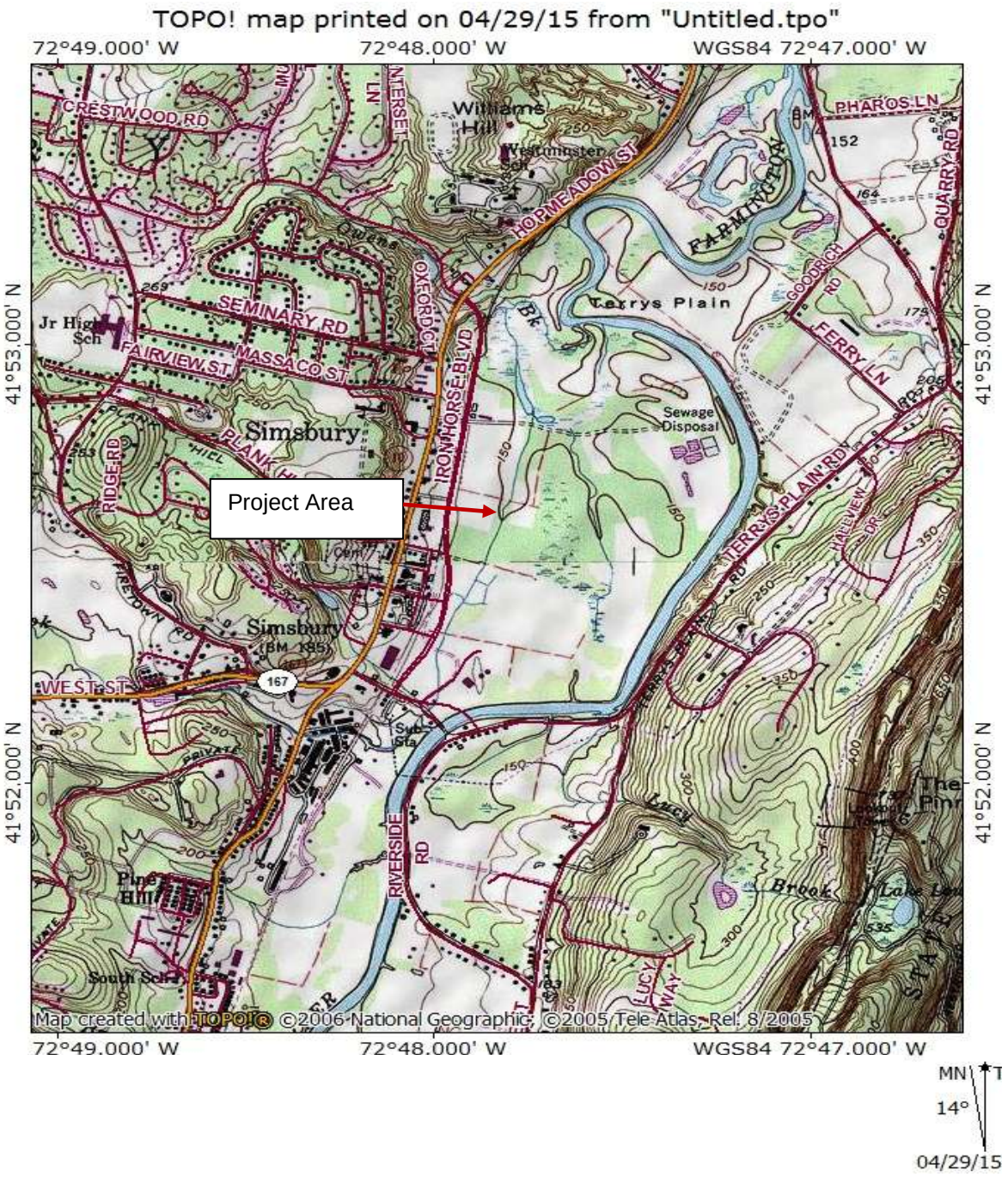
Introduction

In accordance with your request, Soil Science and Environmental Services, Inc, (SSES) has prepared a wetland assessment report for the Simsbury Meadows study area off of Iron Horse Boulevard in Simsbury. On April 23, 27, 28 and May 15, 2015, Jennifer Beno, Biologist/Wetland Scientist, inspected the existing conditions of the wetland areas within the study area specified by the Town. The inspections were conducted in order to identify the dominant vegetation within the wetlands and to assess the functional values of the wetlands.

The project area is located in the east central portion of the Town of Simsbury within a commercially developed area west of the Farmington River (Figure 1). The project area (Figure 2) as indicated by the Town of Simsbury consists of a gravel access road, gravel parking area, dog park, fields, narrow wooded upland, garage/shed, amphitheater and arts building, playground, and floodplain wetlands.

General Site Description

The Simsbury Meadows study area is located within a dominantly commercial area off of Iron Horse Boulevard. The study area is located east of Iron Horse Boulevard and west of the Farmington River and is accessible from Iron Horse Boulevard. Currently, the property consists of a gravel access road, gravel parking area, dog park, fields, narrow wooded upland, garage/shed, amphitheater and arts building, playground, and floodplain wetlands. The wetland areas are dominated by shallow marsh, shrub swamp, and wooded swamp communities.



SOIL SCIENCE and ENVIRONMENTAL SERVICES, INC.	U.S.G.S. Topography Map Simsbury Meadows Iron Horse Boulevard, Simsbury, CT	Date 4/29/15 Figure No. 1

Print Map

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Town of Simsbury
Geographic Information System (GIS)

Date Printed: 4/1/2015

MAP DISCLAIMER - NOTICE OF LIABILITY
This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Simsbury and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 400 feet

0 400 Feet

N W E S

http://simsbury.mapxpress.net/ags_map/printmap.asp?extentYmin... 4/1/2015

Figure 2 – Study Area Specified by Town of Simsbury

Topography and Drainage Basins

The study area is located in the Farmington River Regional Basin. This drainage basin is located within the Connecticut Major Basin. The study area is located between approximately 150 and 180 feet above sea level.

Geology

The dominant bedrock underlying the study area is New Haven Arkose. According to the Bedrock Geological Map of Connecticut (Connecticut Geological and Natural History Survey, 1985), New Haven Arkose is a reddish, poorly sorted arkose. Arkose is described as red to brown, medium- to coarse-grained, sandstone-like, sedimentary rock containing quartz, feldspar and rock fragments. It is the most common sedimentary rock of the Central Lowlands portion of Connecticut and is locally known as brownstone. Brownstone was quarried for use as building stone.

A review of the map showing the study area and immediate vicinity available at Connecticut Environmental Conditions Online (CT ECO) indicates that the study area is underlain by alluvium overlying fines.

Soils Description

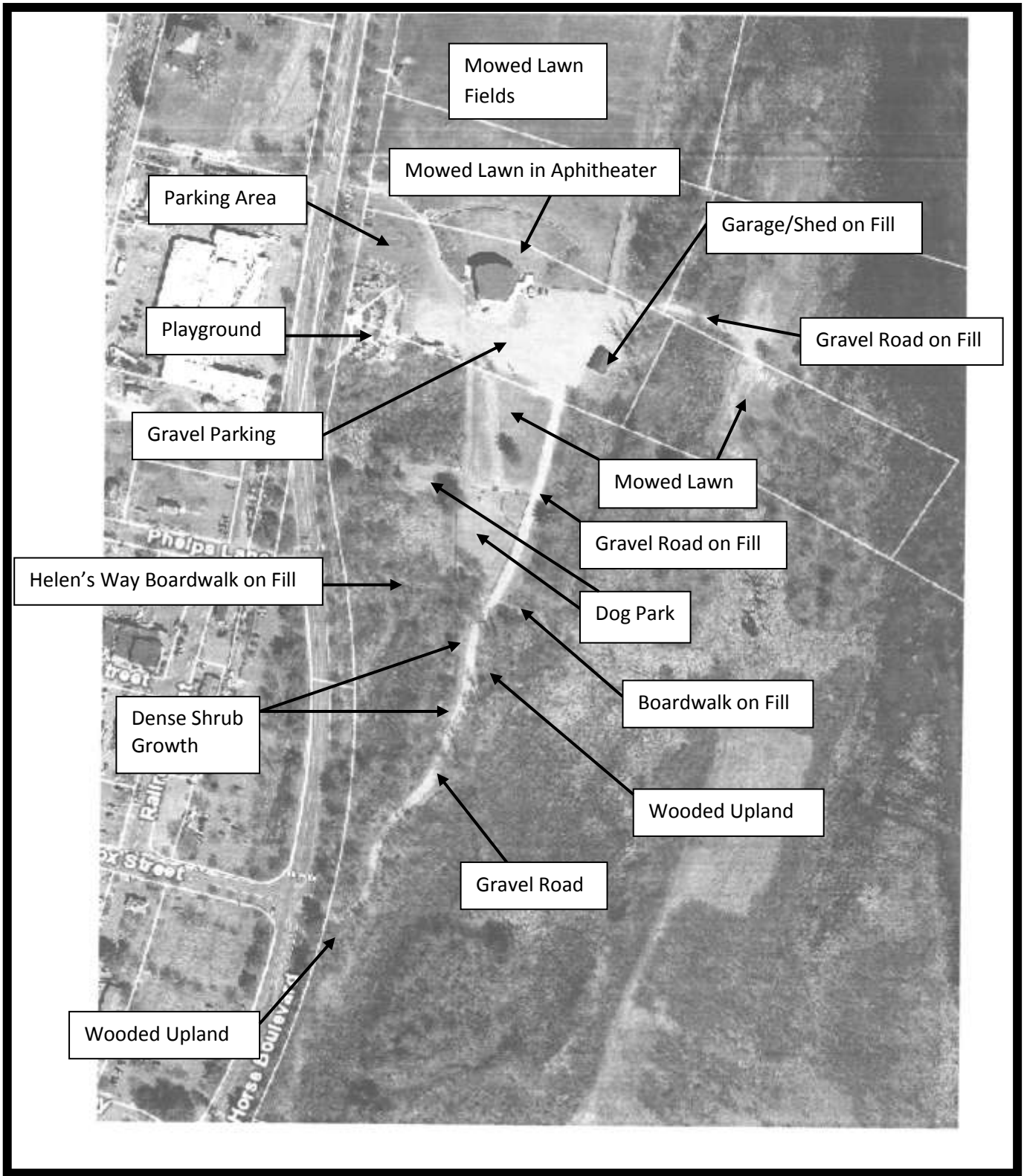
Wetlands within the study area were delineated by SSES in April 2015. The wetland soils within the study area include the poorly to very poorly drained Aquents (Aq), the poorly drained Walpole sandy loam (13), the moderately well-drained Pootatuck fine sandy loam (102), the poorly drained Limerick and Lim soils (107), and the very poorly drained Saco silt loam (108).

The non-wetland soils observed within the study area include the moderately well drained Ninigret and Tisbury soils (21), the well drained Agawam fine sandy loam (29), the Udorthens-Urban land complex (306), Urban land (307), and the well to moderately well drained Udorthents, smoothed (308) which is a disturbed soil. For additional information see Appendix I.

Description of Uplands

The uplands within the study area include a gravel access road, a gravel parking area, a fenced dog park, a red garage/shed building, an amphitheater and arts building, a playground, field areas, and narrow wooded upland areas. A mowed field area is present north of the dog park and is utilized for parking. Another mowed field is present in the northeastern portion of the project area and is also utilized for parking during different events held on the property. A gravel driveway passes through the project area between Wetlands 1 and 2 and Wetland 3. The upland area adjacent to the driveway is maintained as mowed lawn. Bordering some of these lawn areas are narrow wooded upland areas and dense shrub growth. The dominant vegetation observed in the upland areas within the study area includes red maple, sugar maple, white pine, black cherry, oaks, tree-of-heaven, apple, tulip, locust, cottonwood, red cedar, northern arrowwood, sumac, dogwood, tatarian honeysuckle, multiflora rose, burning bush, raspberry, bittersweet, grape, poison ivy, mugwort, Japanese knotweed, dandelion, garlic mustard, English plantain, Queen Ann's lace, curly dock, and grasses.

Upland grassed field/parking east of Wetland 1 and north of the dog park (5/15/15).



SOIL SCIENCE and ENVIRONMENTAL SERVICES, INC.	Existing Conditions Map - Uplands Simsbury Meadows Study Area, Iron Horse Boulevard, Simsbury, CT	Date 5/15/15 Figure No. 2

Gravel road, fill with mowed lawn grasses and wooded upland (5/15/15).

Parking area at north end of study area. Note amphitheater to the left and garage/shed building in the right-central portion of the picture (5/15/15).

Sidewalk on fill along western edge of Wetlands 1 and 2 (5/15/15).

Garage/shed located on fill adjacent to Wetland 3 (5/15/15).

Description of Wetlands Within the Designated Study Area

The wetlands within the study area are all located within the Farmington River watershed. A buried moderately well drained floodplain wetland was located within the amphitheater mowed lawn area. The wetland is outside of the study/project area and was not delineated, but was sketched onto a map. The fill over floodplain wetland currently supports mowed lawn grasses.

Wetland 1 – Northwest Portion of Study Area Along Iron Horse Boulevard

Wetland 1 is located within the northwestern portion of the study area and is dominated by shallow marsh, shrub swamp and deciduous forested swamp communities. The wetland was delineated by CT flags #52-115. A portion of this wetland was delineated as a Federal wetland (Federal flags #553-617). The wetland is surrounded by fill. An existing playground, building and gravel parking lot exist to the north of the wetland. A grassed field parking area, dog park and gravel road exist to the east of the wetland. A boardwalk on fill exists to the south of the wetland. A sidewalk and Iron Horse Boulevard exist to the west of the wetland. This wetland is visible from the existing sidewalk, boardwalk and dog park.

Stormwater runoff from the adjacent upland areas enters the wetland via culverts and the water flow has created narrow intermittent watercourses within the wetland. Standing water was observed within the central portion of the wetland area during the inspections. Surface water flows out of the wetland to the east and into the large floodplain wetland associated with the Farmington River via an intermittent watercourse and a pipe under the existing gravel access road. Although standing water was observed within the wetland area, very low surface water flow was observed exiting the wetland during the inspections.

The vegetation within this wetland is diverse and dense. The dominant vegetation includes red maple, white pine, willow, alder, highbush blueberry, silky dogwood, steeplebush, spicebush, elderberry, tussock sedge, skunk cabbage, broadleaf and narrow leaf cattail, sensitive fern, jewelweed and soft rush. See the Dominant Wetland Vegetation Inventory Table – Appendix II.

Northwestern portion of Wetland 1 – looking east from sidewalk (5/15/15).

Helen's Way boardwalk between Wetlands 1 and 2 (5/15/15).

Wetland 2 – Southwest Portion of Study Area Along Iron Horse Boulevard

Wetland 2 is located within the southwestern portion of the study area and is dominated by shallow marsh, shrub swamp and deciduous forested swamp communities. The wetland was delineated by CT flags #1-51. A portion of this wetland was delineated as a Federal wetland (Federal flags #501-552). The wetland is surrounded by fill. A boardwalk exists to the north of the wetland. A gravel road exists to the east and south of the wetland. A sidewalk and Iron Horse Boulevard exist to the west of the wetland. This wetland is visible from the existing sidewalk, boardwalk and gravel road.

Stormwater runoff from the adjacent upland areas enters the wetland via culverts and the water flow has created narrow intermittent watercourses within the wetland. Standing water was observed within the central portion of the wetland area during the inspections. Surface water flows out of the wetland to the east and into the large floodplain wetland associated with the Farmington River via an intermittent watercourse and a pipe under the existing gravel access road. Although standing water was observed within the wetland area, very low surface water flow was observed exiting the wetland during the inspections.

The vegetation within this wetland is diverse and dense and is similar to the vegetation observed within Wetland 1. The dominant vegetation includes red maple, white pine, willow, alder, highbush blueberry, silky dogwood, steeplebush, spicebush, elderberry, tussock sedge, skunk cabbage, broadleaf and narrow leaf cattail, sensitive fern, jewelweed and soft rush. See the Dominant Wetland Vegetation Inventory Table – Appendix II.

Central portion of Wetland 2 - looking east from sidewalk (5/15/15).

Wetland 3 – Eastern Portion of Study Area Associated With Farmington River

Wetland 3 is located along the eastern portion of the study area. The wetland continues out of the study area to the north, east and south. This wetland is part of a large floodplain wetland that is associated with the Farmington River. The western edge of the wetland within the study area was delineated by CT flags #116-187 and 188-195. A portion of this wetland was delineated as a Federal wetland (Federal flags #618-669, 670-748, and 749-759). The wetland is bordered by fill to the west within the project area. A garage/shed building is located along the northwestern edge of the wetland adjacent to the existing gravel road and parking areas. An existing boardwalk is present within this wetland and extends to the east and out of the study area to an open meadow. A gravel road and fill exists to the west of the wetland. This wetland is visible from the existing boardwalk and gravel road. Fill was placed within the wetland in the northeastern portion of the project area. Some of this area is no longer wetland while some of the filled area still qualifies as CT floodplain but is not Federal wetland. This filled area is predominantly mowed grass that is periodically utilized for parking.

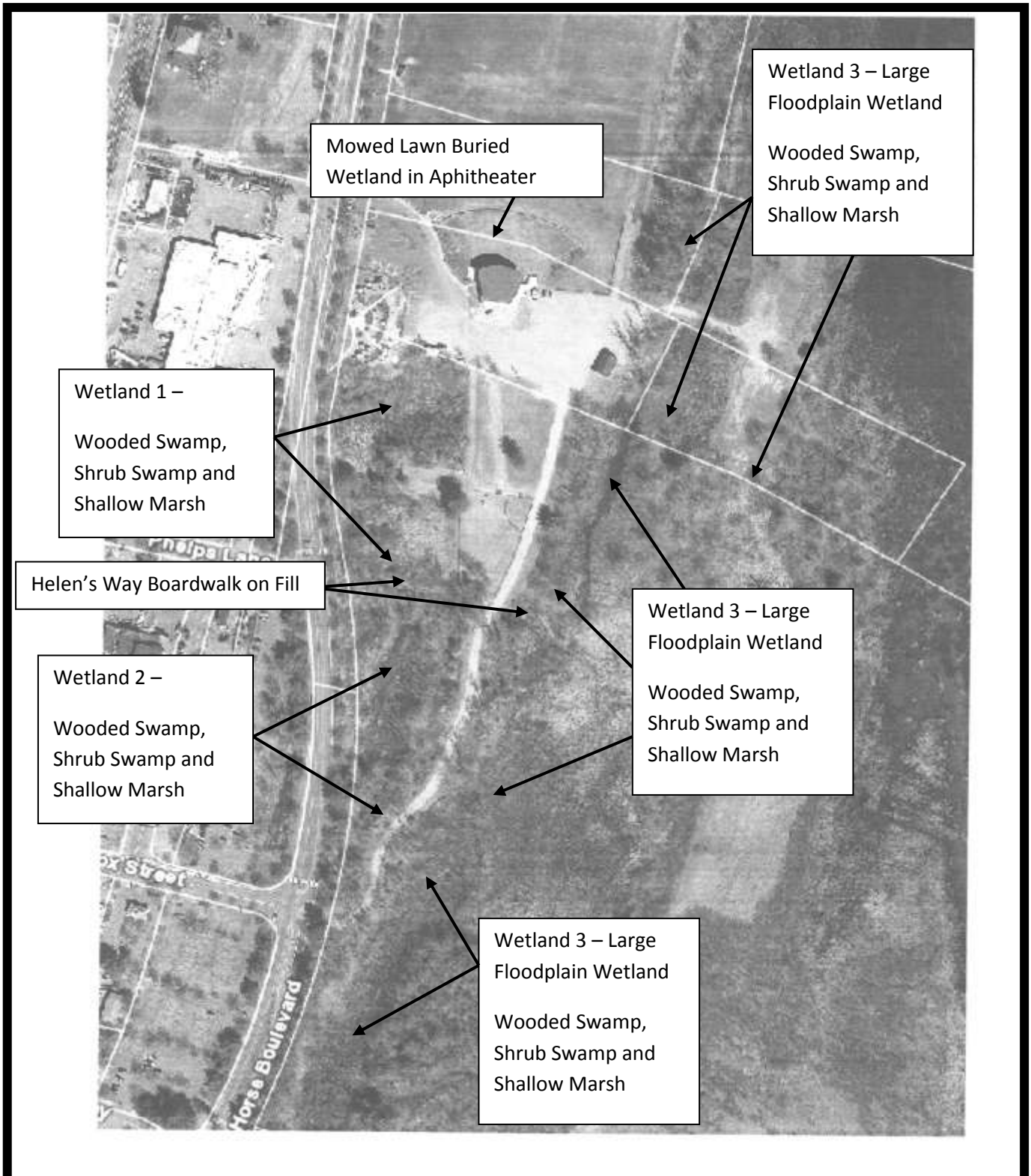
Stormwater runoff from the adjacent upland areas enters the wetland via culverts. Stormwater flow has created narrow intermittent watercourses within the wetland. It appears that some channelization, or ditching, has occurred within the western edge of the wetland near the existing boardwalk. Standing water was observed within portions of this wetland within the study area. Surface water flows easterly towards the Farmington River.

The vegetation within this wetland is diverse and dense and is similar to the vegetation observed within Wetlands 1 and 2. The dominant vegetation includes red maple, white pine, willow, alder, highbush blueberry, silky dogwood, steeplebush, spicebush, elderberry, buttonbush, tussock sedge, skunk cabbage, broadleaf and narrow leaf cattail, sensitive fern, jewelweed and soft rush. See the Dominant Wetland Vegetation Inventory Table – Appendix II.

Wetland 3 – looking north from boardwalk (5/15/15).

Gravel road and fill adjacent to western edge of Wetland 3 (5/15/15).

Boardwalk accessing Wetland 3 from gravel road (5/15/15).



SOIL SCIENCE and ENVIRONMENTAL SERVICES, INC.	Existing Conditions Map - Wetland Simsbury Meadows Study Area, Iron Horse Boulevard, Simsbury, CT	Date 5/15/15 Figure No. 3

Water Quality

According to the CT DEP Water Quality Classifications Map of Connecticut, 2012, and the CT ECO web-site, the groundwater at and around the study area is designated as Class GA which indicates that "the groundwaters are within the area of influence of private and potential public wells. The water is presumed suitable for direct human consumption without need for treatment. The State's goal is to maintain the drinking water quality."

The surface water within the Farmington River near the study site is designated as Class B which indicates that the surface water is "assumed to have some degradation and is not suitable for drinking without treatment. Designated uses include recreational use: fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation. Discharges restricted to: same as allowed in A and cooling waters, discharges from industrial and municipal wastewater treatment facilities (providing Best Available Treatment and Best Management Practices are applied), and other discharges subject to the provisions of section 22a-430 CGS."

Wetland Functional Quality

A Highway Methodology form was completed for each wetland identified within the Simsbury Meadows study area (see Appendix II). Numerous wetland functions are provided by the three existing wetlands. The principal functions provided by Wetlands 1 and 2 include groundwater recharge/discharge, sediment/toxicant retention, nutrient removal and wildlife habitat. The functions provided by the wetlands are limited due to prior filling within and adjacent to the wetlands and the actively utilized upland recreational areas adjacent to the wetlands. Although some filling has occurred adjacent to and within Wetland 3, this wetland provides a greater number of wetland functions due to its large size, dense, diverse vegetation, and connection to other wetland and watercourse communities, including the Farmington River. The principal functions provided by this wetland include groundwater discharge/recharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant retention, nutrient removal, nutrient production and export, shoreline stabilization, wildlife habitat, recreation, educational value, visual/aesthetics, and endangered species habitat. Large floodplain wetland systems, like Wetland 3, generally provide a greater number of wetland functions and are generally notable, high quality areas.

References

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Appendix I – Wetland Delineation

(See separate report prepared by SSES for the Town of Simsbury, dated May 1, 2015)

Sketch Map of approximate CT wetland boundaries – Simsbury Meadows Study Area

Sketch Map of approximate Federal wetland boundaries – Simsbury Meadows Study Area

Appendix II: Highway Methodology Data Forms and Supporting Documents

Table: WETLAND FUNCTION-VALUE EVALUATION FORM

Wetland 1 – Northwest Portion of Project Area, Simsbury Meadows,

Wetland I.D. ***Simsbury, CT***

Total area of wetland _____ Human made? ***No*** Is wetland part of a wildlife corridor? ***Yes*** Or a "habitat island? ***No***

Lat. ***+41°52'34.21"*** Long. ***+-72°47'56.76"***

Adjacent land use: ***fill; boardwalk; roads*** Distance to nearest roadway or development ***0' (fill)***

Prepared by ***JLB*** Date ***5/14/15***

Dominant wetland systems present ***PFO1E; PSS1E; PEM2E*** Contiguous undeveloped buffer zone present ***No (fragmented)***

Wetland Impact:
Type: ***N/A*** Area ***N/A***

Is the wetland a separate hydraulic system? ***No*** If not, where does the wetland lie in the drainage basin? ***Low***

Evaluation based on:
Office ***Y*** Field ***Y***
Corps manual wetland delineation
Completed? Y ***X*** N _____

How many tributaries contribute to the wetland? ***0*** Wildlife & vegetation diversity/abundance ***(see attached)***

Function/Value	Occurrence Y	Occurrence N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	***X***		2,4,5,7,11,12,15,16	***X***	Water quality designated as Class GA within this area of the project site.
Floodflow Alteration	***X***		5,6,7,8,9,10,13,18		Attenuates stormwater flows during storm events.
Fish and Shellfish Habitat		***X***	N/A		No perennial watercourse associates with this wetland.
Sediment/Toxicant Retention	***X***		1,2,3,4,5,8,10,11,13,16	***X***	Dense vegetation traps sediments.
Nutrient Removal	***X***		3,4,8,9,11,12,14	***X***	Dense vegetation utilizes nutrients.
Production Export	***X***		1,2,4,5,7,8,10,11,12,14		Dense, diverse vegetation within the wetland. Nutrients are exported from the wetland via intermittent watercourse.
Sediment/Shoreline Stabilization		***X***	3,5,6,8,9,12,13,14,15		This wetland is not associated with a perennial watercourse.
Wildlife Habitat	***X***		2,6,7,8,11,13,14,16,17, 21	***X***	Dense, diverse vegetation is present.
Recreation		***X***	1,4,7		The wetland is easily accessible for passive viewing.
Educational Scientific Value		***X***	1,2,8		The wetland is easily accessible.
Uniqueness/Heritage		***X***	4,5,6,8,9,12,13,18,24		Within a public area that could be used for education.
Visual Quality/Aesthetics		***X***	1,2,3,4		Wetland vegetation is diverse and provides colorful spring blooms and autumn foliage. Vegetation and standing water contrasts with adjacent upland habitat.
ES Endangered Species Habitat			Reported in the vicinity		See map dated Dec 2014. See CT DEEP NDDB Letter dated 5/15/15. Appendix III.
Other					

* REFER TO BACK UP LIST OF CONSIDERATIONS (ATTACHED)

Table: WETLAND FUNCTION-VALUE EVALUATION FORM

Wetland 2 – Southwest Portion of Project Area, Simsbury Meadows,

Wetland I.D. ***Simsbury, CT***

Total area of wetland _____ Human made? ***No*** Is wetland part of a wildlife corridor? ***Yes*** Or a "habitat island? ***No***

Lat. ***+41°52'30.29"*** Long. ***+-72°47'56.47"***

Adjacent land use: ***fill; boardwalk; roads*** Distance to nearest roadway or development ***0' (fill)***

Prepared by ***JLB*** Date ***5/14/15***

Wetland Impact:

Dominant wetland systems present ***PFO1E; PSS1E; PEM2E*** Contiguous undeveloped buffer zone present ***No (fragmented)***

Type: ***N/A*** Area ***N/A***

Is the wetland a separate hydraulic system? ***No*** If not, where does the wetland lie in the drainage basin? ***Low***

Evaluation based on:

Office ***Y*** Field ***Y***

How many tributaries contribute to the wetland? ***0*** Wildlife & vegetation diversity/abundance ***(see attached)***

Corps manual wetland delineation Completed? Y ***X*** N _____

Function/Value	Occurrence Y	Occurrence N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	***X***		2,4,5,7,11,12,15,16	***X***	Water quality designated as Class GA within this area of the project site.
Floodflow Alteration	***X***		5,6,7,8,9,10,13,18		Attenuates stormwater flows during storm events.
Fish and Shellfish Habitat		***X***	N/A		No perennial watercourse associates with this wetland.
Sediment/Toxicant Retention	***X***		1,2,3,4,5,8,10,11,13,16	***X***	Dense vegetation traps sediments.
Nutrient Removal	***X***		3,4,5,8,9,11,12	***X***	Dense vegetation utilizes nutrients.
Production Export	***X***		1,2,4,5,7,8,10,11,12,14		Dense, diverse vegetation within the wetland. Nutrients are exported from the wetland via intermittent watercourse.
Sediment/Shoreline Stabilization		***X***	3,5,6,8,9,12,13,14,15		This wetland is not associated with a perennial watercourse.
Wildlife Habitat	***X***		2,6,7,8,11,13,16,17	***X***	Dense, diverse vegetation is present.
Recreation		***X***	1,4,7		The wetland is easily accessible for passive viewing.
Educational Scientific Value		***X***	1,2,8		The wetland is easily accessible.
Uniqueness/Heritage		***X***	4,5,6,8,9,12,13,18,24		Within a public area that could be used for education.
Visual Quality/Aesthetics		***X***	1,2,3,4		Wetland vegetation is diverse and provides colorful spring blooms and autumn foliage. Vegetation and standing water contrasts with adjacent upland habitat.
ES Endangered Species Habitat			Reported in the vicinity		See map dated Dec 2014. See CT DEEP NDDB Letter dated 5/15/15. Appendix III.
Other					

* REFER TO BACK UP LIST OF CONSIDERATIONS (ATTACHED)

Table: WETLAND FUNCTION-VALUE EVALUATION FORM

Wetland 3 – Eastern Portion of Project Area, Simsbury Meadows,

Wetland I.D. ***Simsbury, CT***

Total area of wetland _____ Human made? ***No*** Is wetland part of a wildlife corridor? ***Yes*** Or a "habitat island? ***No***

Lat. ***+41°52'31.66"*** Long. ***+-72°47'49.70"***

Adjacent land use: ***fill; boardwalk; roads*** Distance to nearest roadway or development ***0' (fill)***

Prepared by ***JLB*** Date ***5/14/15***

Wetland Impact:

Dominant wetland systems present ***PFO1E; PSS1E; PEM2E*** Contiguous undeveloped buffer zone present ***No (fragmented)***

Type: ***N/A*** Area ***N/A***

Is the wetland a separate hydraulic system? ***No*** If not, where does the wetland lie in the drainage basin? ***Low***

Evaluation based on:

Office ***Y*** Field ***Y***

How many tributaries contribute to the wetland? ***1*** Wildlife & vegetation diversity/abundance ***(see attached)***

Corps manual wetland delineation Completed? Y ***X*** N _____

Function/Value	Occurrence Y	Occurrence N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	***X***		2,4,5,7,11,12,15,16	***X***	Water quality designated as Class GA within this area of the project site.
Floodflow Alteration	***X***		1,5,6,7,8,9,10,13,16, 17,18	***X***	Broad floodplain wetland associated with Farmington River.
Fish and Shellfish Habitat	***X***		1,2,3,4,6,7,8,9,10,14,16,	***X***	This wetland is associated with the Farmington River.
Sediment/Toxicant Retention	***X***		1,2,3,4,5,6,7,8,10,11, 12,13,15,16	***X***	Dense vegetation traps sediments. Large floodplain.
Nutrient Removal	***X***		3,4,5,8,9,11,12	***X***	Dense vegetation utilizes nutrients.
Production Export	***X***		1,2,3,4,5,8,9,11,12,14, 15	***X***	Dense, diverse vegetation within the wetland. Nutrients are exported from the wetland via Farmington River.
Sediment/Shoreline Stabilization	***X***		3,5,6,8,9,12,13,14,15	***X***	This wetland is associated with Farmington River.
Wildlife Habitat	***X***		2,6,7,8,11,13,16,17	***X***	Dense, diverse vegetation is present.
Recreation	***X***		1,4,5,7,9	***X***	The wetland is easily accessible for passive viewing via a boardwalk. Farmington River is utilized for active recreation.
Educational Scientific Value	***X***		1,2,3,4,5,8	***X***	The wetland is easily accessible via an existing boardwalk.
Uniqueness/Heritage	***X***		4,5,6,7,8,9,12,13,14, 16,18,19,22,24,27,28	***X***	Broad floodplain is part of a large wetland corridor associated with Farmington River.
Visual Quality/Aesthetics	***X***		1,2,3,4,5,7,8,9,11,12	***X***	Wetland vegetation is diverse and provides colorful spring blooms and autumn foliage. Vegetation and standing water contrasts with adjacent upland habitat.
ES Endangered Species Habitat	***X***		Reported in the vicinity	***X***	See map dated Dec 2014. See CT DEEP NDDB Letter dated 5/15/15. Appendix III.
Other					

* REFER TO BACK UP LIST OF CONSIDERATIONS (ATTACHED)

Dominant Wetland Vegetation Inventory (4/23, 4/27, 4/28, and 5/15/15)
Simsbury Meadows Study Area,
Iron Horse Boulevard, Simsbury, CT

Scientific Name	Common Name	Indicator Status	Wetland Area
Trees			
Acer rubrum	red maple	FAC	1,2,3
Fraxinus pennsylvanica	ash	FACW	3
Juniperus virginiana	red cedar	FACU	1,3
Pinus strobus	white pine	FACU	1,2,3
Platanus occidentalis	sycamore	FACW-	1, 2
Populus deltoides	cottonwood	FAC	1,3
Prunus serotina	black cherry	FACU	3
Quercus palustris	pin oak	FACW	3
Salix nigra	black willow	OBL	1,2,3
Ulmus americana	elm	FACW-	1,3
Saplings/Shrubs			
Alnus serrulata	alder	OBL	1,2,3
Berberis thunbergii	Japanese barberry	FACU	2
Cephalanthus occidentalis	buttonbush	OBL	3
Cornus alba	red osier dogwood	FACW	3
Cornus amomum	silky dogwood	FACW	1,2,3
Ilex verticillata	winterberry	FACW	1,3
Lindera benzoin	spicebush	FACW-	1,2,3
Lonicera sp.	honeysuckle shrub	---------	1,2,3
Rosa multiflora	multiflora rose	FACU	1,2,3
Salix sp.	willow	FACW	1,2,3
Sambucus nigra	elderberry	FACW	1,2,3
Spiraea tomentosa	steeplebush	FACW	1,2,3
Vaccinium corymbosum	highbush blueberry	FACW-	1,2,3
Viburnum dentatum	arrowwood	FAC	1,2,3
Herbaceous			
Alliaria petiolata	garlic mustard	FACU-	1,2,3
Asclepias incarnate	milkweed	OBL	3
Carex lurida	shallow sedge	OBL	1,2,3
Carex stricta	tussock sedge	OBL	1,2,3
Epilobium sp.	willowherb	FACW	2,3
Equisetum arvense	horsetail	FAC	2,3
Eutrochium maculatum	joe-pye-weed	OBL	1,2,3
Impatiens capensis	jewelweed	FACW	1,2,3
Juncus effusus	soft rush	FACW+	1,2,3
Lemna minor	duckweed	OBL	1
Lythrum salicaria	purple loosestrife	FACW+	1,2,3
Onoclea sensibilis	sensitive fern	FACW	1,2,3
Osmunda cinnamomea	cinnamon fern	FACW	1,2,3
Osmunda regalis	royal fern	OBL	1
Parthenocissus quinquefolia	Virginia creeper	FACU	2,3

Phalaris arundinacea	reed canary grass	FACW	1,2,3
Phragmites australis	common reedgrass	FACW	3
Polygonum arifolium	halberd-leaf tearthumb	OBL	3
Polygonum cuspidatum (Fallopia japonica)	Japanese knotweed	FACU-	1
Scirpus cyperinus	woolgrass	FACW+	2
Solidago sp.	goldenrod	---------	1,2,3
Symplocarpus foetidus	skunk cabbage	OBL	1,2,3
Taraxacum officinale	dandelion	FACU	3
Thalictrum pubescens	tall meadow rue	FACW+	1,2,3
Thelypteris palustris	marsh fern	FACW	1,2,3
Toxicodendron radicans	poison ivy	FAC	1,2,3
Typha angustifolia	narrow-leaf cattail	OBL	1,2,3
Typha latifolia	cattail	OBL	1,2,3
Vernonia noveboracensis	ironweed	FACW	2
Lianas			
Vitis sp.	grape	---------	1,2,3

Indicator Status: Taken from the "National List of Plant Species that Occur in Wetlands:1988 National Summary," Fish and Wildlife Service, U.S. Department of the Interior

OBL: obligate wetland; occur almost always under natural conditions in wetlands
FACW: facultative wetland; usually occur in wetlands , but occasionally found in non-wetlands
FAC: equally likely to occur in wetlands or non-wetlands
UPL: occur almost always under natural conditions in non-wetlands
+ : more frequently found in specified condition
- : less frequently found in specified condition

Dominant Wildlife Inventory (4/23, 4/27, 4/28, and 5/15/15)
Simsbury Meadows Project Site,
Iron Horse Boulevard, Simsbury, CT

Agelaius phoeniceus	red-winged blackbird
Anas platyrhynchos	mallard
Archilochus colubris	ruby-throated hummingbird
Branta canadensis	Canada goose
Buteo jamaicensis	red-tailed hawk
Cardinalis cardinalis	cardinal
Carduelis tristis	American goldfinch
Catharus fuscescens	veery
Ceryle alcyon	kingfisher
Chrysemys p. picta	painted turtle
Corvus brachyrhynchos	American crow
Cyanocitta cristata	blue jay
Dumetella carolinensis	catbird
Geothlypis trichas	common yellowthroat
Hyla c. crucifer	spring peeper
Icterus galbula	oriole
Mephitis mephitis	skunk
Mimus polyglottos	mockingbird
Odocoileus virginianus	white-tailed deer
Parus atricapillus	black-capped chickadee
Picoides pubescens	downy woodpecker
Procyon lotor	raccoon
Quiscalus quiscula	grackle
Sialia sialis	bluebird
Spizella passerina	chipping sparrow
Sturnus vulgaris	starling
Thamnophis s. sirtalis	garter snake
Turdus migratorius	American robin
Zenaida macroura	mourning dove
Zonotrichia albicollis	white-throated sparrow

Species were observed utilizing the study area.

Appendix A

Wetland evaluation supporting documentation and reproducible forms.

Below is an example list of considerations that was used for a New Hampshire highway project. Considerations are flexible, based on best professional judgement and interdisciplinary team consensus. This example provides a comprehensive base, however, and may only need slight modifications for use in other projects.

GROUNDWATER RECHARGE/DISCHARGE— This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland.
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in/or adjacent to the wetland.
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock, does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse.
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse, but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet.
11. Groundwater quality of stratified drift aquifer within or downstream of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e.g. springs).
14. Water temperature suggests it is a discharge site.
15. Wetland shows signs of variable water levels.
16. Gravel or sandy soils present in or adjacent to wetland.
17. Piezometer data demonstrates discharge.
18. Other

FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland.
4. Wetland watershed contains a high degree of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, this wetland can retain higher volumes of water than under normal or average rainfall conditions.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands.
10. In the event of a large storm, this wetland may receive and detain excessive flood water from a nearby watercourse.
11. Valuable properties, structures or resources are located in or near the floodplain downstream from the wetland.
12. The watershed has a history of economic loss due to flooding.
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted.
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland.
18. This wetland contains a high density of vegetation.
19. Other

FISH AND SHELLFISH HABITAT — This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.[1]

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
2. Abundance of cover objects present.

STOP HERE IF THIS WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE

3. Size of this wetland is able to support large fish/shellfish populations.
4. Wetland is part of a larger, contiguous watercourse.
5. Wetland has sufficient size and depth in open water areas so as not to freeze solid and retains some open water during winter.
6. Stream width (bank to bank) is more than 50 feet.
7. Quality of the watercourse associated with this wetland is able to support healthy fish/shellfish populations.
8. Streamside vegetation provides shade for the watercourse.
9. Spawning areas are present (submerged vegetation or gravel beds).
10. Food is available to fish/shellfish populations within this wetland.
11. Barrier(s) to anadromous fish (such as dams, including beaver dams, water falls, road crossing, etc.) are absent from the stream reach associated with this wetland.
12. Evidence of fish is present.
13. Wetland is stocked with fish.
14. The watercourse is persistent.
15. Man-made streams are absent.
16. Water velocities are not too excessive for fish usage.
17. Defined stream channel is present.
18. Other

SEDIMENT/TOXICANT/PATHOGEN RETENTION —This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands, or upstream erod-

ing wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
2. Potential or known sources of toxicants are in the watershed above the wetland.
3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
4. Mineral, fine grained, or organic soils are present.
5. Long duration water retention time is present in this wetland.
6. Public or private water sources occur downstream.
7. The wetland edge is broad and intermittently aerobic.
8. The wetland is known to have existed for more than 50 years.
9. Drainage ditches have not been constructed in the wetland.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

10. Wetland is associated with an intermittent or perennial stream, or a lake.
11. Channelized flows have visible velocity decreases in the wetland.
12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
13. No indicators of erosive forces are present. No high water velocities are present.
14. Diffuse water flows are present in the wetland.
15. Wetland has a high degree of water and vegetation interspersion.
16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation is present by dense vegetation.
17. Other

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands, and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.

CONSIDERATIONS/QUALIFIERS

1. Wetland is large relative to the size of its watershed.
2. Deep water or open water habitat exists.
3. Overall potential for sediment trapping exists in the wetland.
4. Potential sources of excess nutrients present in the watershed above the wetland.
5. Wetland saturated for most of the season. Ponded water is present in the wetland.
6. Deep organic/sediment deposits are present.
7. Slowly drained mineral, fine grained, or organic soils, are present.
8. Dense vegetation is present.
9. Emergent vegetation and/or dense woody stems are dominant.
10. Aquatic diversity/abundance sufficient to utilize nutrients.
11. Opportunity for nutrient attenuation exists.
12. Vegetation diversity/abundance sufficient to utilize nutrients.

STOP HERE IF WETLAND IS NOT ASSOCIATED WITH A WATERCOURSE.

13. Waterflow through this wetland is diffuse.
14. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
15. Water moves slowly through this wetland.
16. Other

PRODUCTION EXPORT (Nutrient) — This function evaluates the effectiveness of the wetland to produce food or usable products for man or other living organisms.

CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.

4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. "Flushing" of relatively large amounts of organic plant material occurs from this wetland.
12. Wetland contains flowering plants which are used by nectar-gathering insects.
13. Indications of export are present.
14. High production levels occurring however, no visible signs of export (assumes export is attenuated).
15. Other

SEDIMENT/SHORELINE STABILIZATION — This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

CONSIDERATIONS/QUALIFIERS

1. Indications of erosion, siltation present.
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
5. A distinct step between the open waterbody or stream and the adjacent land exists (i.e. sharp bank) with dense roots throughout.
6. Wide wetland (>10') bordering watercourse, lake, or pond.
7. High flow velocities in the wetland.
8. Potential sediment sources present upstream.
9. The watershed is of sufficient size to produce channelized flow.
10. Open water fetch is present.
11. Boating activity is present.
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy absorbing emergents and/or shrubs bordering watercourse, lake or pond.
14. Vegetation comprised of large trees and shrubs which withstand major flood events or erosive incidents and stabilize the shoreline on a large scale (feet).
15. Vegetation comprised of dense resilient herbaceous layer which stabilizes sediments and the shoreline on a small scale (inches) during minor flood events or potentially erosive events.
16. Other

WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.[2]

CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake associated with this wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development.
4. Upland surrounding this wetland is undeveloped.
5. More than 40% of this wetland edge is bordered by upland wildlife habitat (e.g.brushland, wood land, active farmland, or idle land) at least 500 feet in width.
6. Wetland contiguous with other wetland systems connected by watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby.

9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present.
11. Dominant wetland class includes deep or shallow marsh or wooded swamp.
12. More than three acres of shallow permanent open water (less than 6.6 feet deep), including streams in or adjacent to wetland are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure (e.g. tree/shrub/vine /grasses/mosses/etc.)
16. Plant/animal indicator species present.
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife, and wetland appears to support varied population diversity/abundance during different seasons.
19. Wetland contains or has potential to contain a high population of insects.
20. Wetland contains or has potential to contain large amphibian populations.
21. Wetland has a high avian utilization or its potential.
22. Indications of less disturbance-tolerant species present.
23. Signs of wildlife habitat enhancement present (birdhouses, nesting boxes, food sources, etc.).
24. Other

RECREATION (Consumptive and Non-Consumptive) — This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting and other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish these resources of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland.
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake, associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. The watercourse associated with this wetland is wide and deep enough to accommodate canoeing and/or non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas.
13. Other

EDUCATIONAL/SCIENTIFIC VALUE — This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened, rare, or endangered species.
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of wetland classes which are accessible or potentially accessible.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.

6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site within safe walking distance to other plant communities.
11. Direct access to perennial stream at potential educational site available.
12. Direct access to pond or lake at potential educational site available.
13. No known safety hazards within the potential educational site.
14. Public access to the potential educational site is controlled.
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.
17. Other

UNIQUENESS/HERITAGE — This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland primarily urban.
2. Upland surrounding wetland developing rapidly.
3. More than 3 acres of shallow permanent open water occur in wetlands (less than 6.6 feet deep) including streams .
4. Three or more wetland classes present.
5. Deep and/or shallow marsh, or wooded swamp dominate.
6. High degree of interspersion of vegetation and/or open water occurring in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses.
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake at potential educational site.
12. Two or more wetland classes visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, bogs, open water) visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants, or plants which turn vibrant colors in different seasons.
16. General appearance of the wetland visible from primary viewing locations is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings occur within the wetland.
21. Presence of pond or pond site and remains of a dam occur within the wetland.
22. Wetland within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, berms, dams, standing structures or associated features occur within the wetland.
24. Wetland contains critical habitat for a state or federally listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the state natural heritage inventory authority as an exemplary natural community.
27. Wetland has local significance because it serves several functional values.

28. Wetland has local significance because it has biological, geological, or other features which are locally rare or unique.
29. Wetland is known to contain an important archaeological site.
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.
32. Other

VISUAL QUALITY/AESTHETICS — This value considers the visual and aesthetic quality or usefulness of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Multiple wetland classes visible from primary viewing locations.
2. Emergent marsh and/or open water visible from primary viewing locations.
3. Diversity of vegetation species visible from primary viewing locations.
4. Wetland dominated by flowering plants, or plants which turn vibrant colors in different seasons.
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations.
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations.
11. Unpleasant odors absent at primary viewing locations.
12. Relatively unobstructed sight line exists through wetland.
13. Other

ES ENDANGERED SPECIES HABITAT — This value considers the suitability of the wetland to support threatened or endangered species.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.
3. Other

1 Although the above example refers to freshwater wetlands, it can also be adapted for marine ecosystems. Below is an example of an adaptation for the fish and shellfish function provided by the National Marine Fisheries Service.

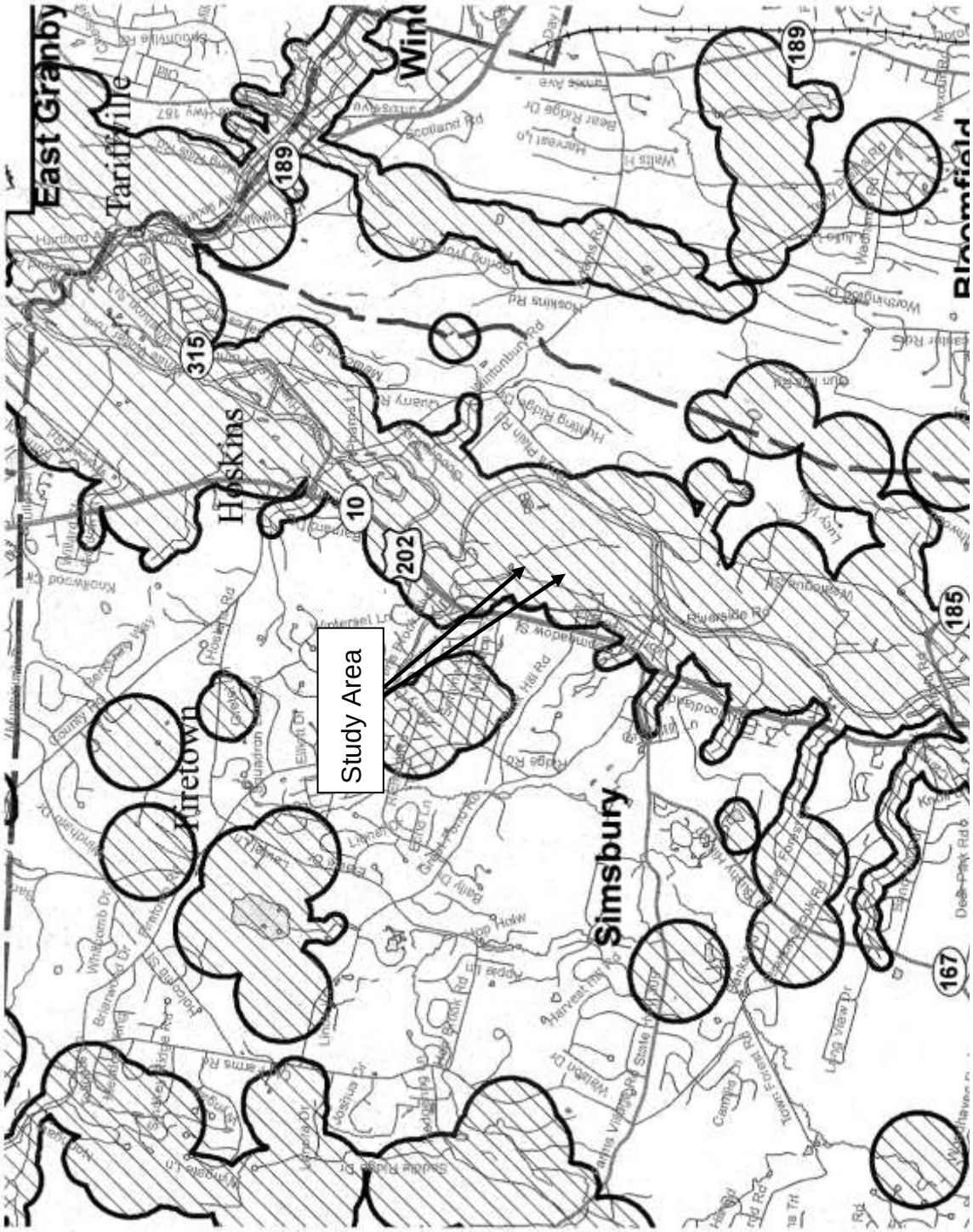
FISH AND SHELLFISH HABITAT — This function considers the effectiveness of wetlands, embayments, tidal flats, vegetated shallows, and other environments in supporting marine resources such as fish, shellfish, marine mammals, and sea turtles.

CONSIDERATIONS/QUALIFIERS (Marine)

1. Special aquatic sites (tidal marsh, mud flats, eelgrass beds) are present.
2. Suitable spawning habitat is present at the site or in the area.
3. Commercially or recreationally important species are present or suitable habitat exists.
4. The wetland/waterway supports prey for higher trophic level marine organisms.
5. The waterway provides migratory habitat for anadromous fish.
6. Other

2 In March 1995 a rapid wildlife habitat assessment method was completed by a University of Massachusetts research team, with funding and oversight provided by the New England Transportation Consortium. The method is called WEThings (wetland habitat indicators for non- game species). It produces a list of potential wetland- dependent mammals, reptiles, and amphibian species that may be present in the wetland. The output is based on observable habitat characteristics documented on the field data form. This method may be used to generate the wildlife species list recommended as backup information to the wetland evaluation form, and to augment the considerations. Use of this method should first be coordinated with the Corps project manager. A computer program is also available to expedite this process.

Appendix III: Natural Diversity Data Base Map



Portion of State of CT DEEP Natural Diversity Data Base Map, Simsbury, CT
Dated December 2014
Map indicates known population of Endangered, Threatened or Special Concern Species or significant natural communities in the study area or in the immediate vicinity of the study area. See included letter, dated May 15, 2015.

CT DEEP Natural Diversity Data Base Letter

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

May 15, 2015

Ms. Jenn Beno
Soil Science and Environmental Services
95 Silo Drive
Rocky Hill, CT 06067

Project: Preliminary Site Assessment of Simsbury Meadows Municipal Development of a Portion of Simsbury Meadows in Simsbury, Connecticut
NDDB Preliminary Assessment No.: 201503324

Dear Jenn,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the proposed preliminary site assessment of Simsbury Meadows Municipal Development of a portion of Simsbury Meadows in Simsbury, Connecticut. According to our records there are known extant species that occur within or very close to the boundaries of this property. I have attached a list of species to this letter. Please be advised that this is a preliminary review and not a final determination. A more detailed review will be necessary to move forward with any subsequent environmental permit applications submitted to DEEP for the proposed project. This letter cannot be used or submitted with your permit applications at DEEP. This preliminary assessment is good for one year.

If you require a DEEP permit for this project you must re-submit a NDDB review. With the NDDB resubmission please include either site surveys of the property or a protection plans for the species included on the attached list. If you choose to do field surveys of the site they should be performed by a qualified botanist or biologist (for animals) when each of the species is most likely present on site. A report summarizing the results of such surveys should include:

1. Survey date(s) and duration
2. Site descriptions and photographs
3. List of component vascular plant species within the survey area (including scientific binomials) or animals present
4. Data regarding population numbers and/or area occupied by State-listed species
5. Detailed maps of the area surveyed including the survey route and locations of State-listed plant or animal species
6. Statement/résumé indicating the botanist's or biologist's qualifications

The report should be sent to the Natural Diversity Data Base (deep.nddbrequest@ct.gov) for further review. **Please note that incomplete reports may not be accepted.**

If you choose to develop protection plans for these species instead of conducting surveys, please provide clear concise procedures and designs that will eliminate any negative impacts from these

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Affirmative Action/Equal Opportunity Employer

project activities on any state-listed species. The protection plans can be submitted with your NDDB resubmission and we will provide our comments as part of the NDDB Determination process so that you can submit the determination with your permit application.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

Species List for NDDB Request

Scientific Name	Common Name	State Status
Freshwater Community - Other Classification		
Alluvial swamp		
Invertebrate Animal		
Alasmidonta heterodon**	Dwarf wedge mussel	E also Federal Endangered
Ligumia nasuta	Eastern pond mussel	SC
Terrestrial Community - Other Classification		
Floodplain forest		
Vascular Plant		
Carex davisii	Davis' sedge	T
Desmodium glabellum	Dillenius' tick-trefoil	SC
Silene stellata	Starry champion	T
Vertebrate Animal		
Heterodon platirhinos	Eastern hognose snake	SC
Lasiurus borealis	Red bat	SC
Lasiurus cinereus	Hoary bat	SC
Rana pipiens	Northern leopard frog	SC

E = Endangered, T = Threatened, SC = Special Concern, * Extirpated

Page 1 of 1