



**Routes 7/15 Interchange  
Norwalk, Connecticut  
State Project No. 102-358**

**Environmental Assessment,  
Draft Section 4(F) Evaluation and  
Environmental Impact Evaluation**

**Appendix F  
Rare, Threatened and Endangered Species (RTE)  
Correspondence**

May 2023

Prepared for:  
Connecticut Department of Transportation  
Federal Highway Administration



**Routes 7/15 Interchange  
Norwalk, Connecticut  
State Project No. 102-358**

**Environmental Assessment,  
Draft Section 4(F) Evaluation and  
Environmental Impact Evaluation**

**Appendix F1  
RTE Surveys**

August 2022

Prepared for:  
Connecticut Department of  
Transportation Federal Highway  
Administration



Stantec Consulting Services Inc  
30 Park Drive, Topsham, ME 04086

November 2, 2016  
File: 192310508 / 500.300

**Attention: John Eberle**  
Stantec Consulting Services Inc  
55 Church Street, Suite 601  
New Haven, CT 06510

**Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat  
Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**

Dear John,

On October 17, 2016, Stantec Consulting Services Inc. (Stantec) completed a rare, threatened, and endangered (RTE) plant survey and habitat characterization of the proposed Route 7 and Route 15 Interchange Project Site in Norwalk, Connecticut (Figure 1; hereafter referred to as project area). The purpose of the field survey was to locate existing populations of RTE plant species, identify the habitats present within the project area, and evaluate each habitat's potential to support RTE plant populations. This report summarizes the results of these field efforts.

## **METHODOLOGY**

Prior to completing field surveys, a brief desktop assessment was completed by reviewing aerial imagery as well as the results of a wetland and watercourse delineation completed by BL Companies in 2016 to preliminarily identify the various natural community types present within the project area. The desktop assessment was used to target field surveys within natural communities that may support RTE plant populations.

Following the desktop assessment, a qualified botanist conducted a meander field survey to search for RTE plant species within habitat areas identified to be potentially suitable during the desktop analysis, characterize the existing habitat conditions within the project area, and evaluate the potential of the existing habitats within the project area to support RTE plants that may not have been identifiable at the time of the field survey (e.g., spring ephemerals which would not be identifiable during a fall field survey). Meander surveys involve characterizing the dominant vegetation types, current conditions (including evidence of past disturbances and invasive plants), and indicator plant species (e.g., plant species that are frequently associated with RTE plant populations and/or indicate more unique microhabitat conditions often associated with RTE plant populations). Any rare plant population documented was located with a Trimble® GeoExplorer 7X GPS receiver. Representative photographs were taken throughout the various community types observed within the project area.



November 2, 2016

John Eberle

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**Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**

## RESULTS

No RTE plants were documented during the October 17, 2016 field survey. Many areas within the project area have been substantially disturbed because of past land use such as urban development and roadways and are dominated by invasive plant species. However, a few areas contain potentially suitable RTE plant habitat and warrant follow-up field surveys during early summer months to search for additional associated RTE plant species. The following sections describe and characterize the habitats through the project area. Representative site photographs are included in Appendix A. For purposes of this report, the project area has been arbitrarily divided into 4 survey quadrants:

- Northeast Survey Quadrant: The area north of Route 15 and east of Route 7,
- Northwest Survey Quadrant: The area north of Route 15 and west of Route 7,
- Southwest Survey Quadrant: The area south of Route 15 and west of Route 7, and
- Southeast Survey Quadrant: The area south of Route 15 and east of Route 7.

### NORTHEAST SURVEY QUADRANT

The upland forests include small patches of unexceptional hardwoods forests typical of urban landscape dominated by red oak (*Quercus rubra*)<sup>1</sup>, sugar maple (*Acer saccharum*), and pignut hickory (*Carya glabra*). The understory is relatively dense with a high proportion of non-native invasive species<sup>2</sup>. Dominant understory vegetation includes poison-ivy (*Toxicodendron radicans*), Norway maple (*Acer platanoides*) saplings, burning-bush (*Euonymus alatus*), white ash (*Fraxinus americanus*), Asian bittersweet (*Celastrus orbiculatus*), garlic-mustard (*Alliaria petiolata*), rambler rose (*Rosa multiflora*), common wormwood (*Artemisia vulgaris*), and climbing nightshade (*Solanum dulcamara*). Based on the past land disturbances to these forested areas and predominance of invasive species, these areas contain a low potential for RTE plant species and follow-up field surveys are not warranted.

The Norwalk River flows southerly through the survey quadrant. The riparian area of the Norwalk River within this survey quadrant is narrow, bordered on both banks by existing urban development. The understory along the eastern bank is characterized by abundant invasive plant species including rambler rose, Asian bittersweet, Japanese knotweed (*Fallopia japonica*), and tree-of-heaven (*Ailanthus altissima*). The western embankment has been cleared of canopy vegetation and consists of Japanese knotweed, poison-ivy, garlic mustard, lance-leaved American-aster (*Symphyotrichum lanceolatum*), and purple loosestrife (*Lythrum salicaria*). This

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<sup>1</sup> Plant species nomenclature follows *Flora Novae Angliae*. Haines, A. 2013. *Flora Novae Angliae: A Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England*. Yale University Press, New Haven, CT.

<sup>2</sup> Invasive species status is based on the Connecticut Invasive Plant List, November 2014, Connecticut Invasive Plants Council





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**Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**

habitat area similarly contains low potential for RTE plant species based on the past vegetation disturbances and predominance of invasive species. Therefore, follow-up field surveys are not warranted.

A large wetland complex is located in the northwest portion of this survey quadrant in the vicinity of Route 7. The wetland includes both forested and emergent wetland areas. The emergent wetland areas are dominated by narrow-leaved cat-tail (*Typha angustifolia*), common reed (*Phragmites australis*), and purple loosestrife. The forested wetland areas include red maple (*Acer rubrum*), tulip-tree (*Liriodendron tulipifera*), and American hornbeam (*Carpinus caroliniana*) trees with northern spicebush (*Lindera benzoin*), northern lady fern (*Athyrium angustum*), cinnamon fern (*Osmundastrum cinnamomeum*), carrion-flower (*Smilax rotundifolia*), sweet wood-reed (*Cinna arundinacea*), rambler rose, jewelweed (*Impatiens capensis*), and Asian bittersweet in the understory. The density of non-native invasive species and disturbances within this habitat area limits the potential for RTE plants. Therefore, follow-up field surveys are not warranted.

An early successional upland woodland dominated by eastern red cedar (*Juniperus virginiana*) and common wormwood is located south of the wetland complex adjacent to Route 7. The density of non-native invasive or otherwise "weedy" species (e.g., common wormwood) limits the potential for RTE plants within these habitat areas. Therefore, follow-up field surveys are not warranted.

#### **NORTHWEST SURVEY QUADRANT**

The survey quadrant to the north of Route 15 and west of Route 7 includes small blocks of fragmented natural communities. An existing transmission line bisects this area and is dominated by weedy species such as common wormwood. A narrow wooded strip is present between Route 7 and the transmission line which is densely vegetated by common wormwood and autumn-olive (*Elaeagnus umbellata*). The upland forests along Perry Avenue are similar to those in the northeast survey quadrant and include sugar maple, red oak, and scarlet oak (*Quercus coccinea*) trees. Similar to the northeast survey quadrant, the understory is characterized by native and non-native weedy species such as rambler rose, Asian bittersweet, wisteria (*Wisteria* sp.), garlic-mustard, carrion-flower, and poison-ivy. Based on the fragmented nature of these communities and predominance of invasive species, there is low potential for RTE plant species in this habitat area. Therefore, follow-up field surveys are not warranted.

#### **SOUTHWEST SURVEY QUADRANT**

The survey quadrant to the south of Route 15 and west of Route 7 includes small blocks of fragmented forested and shrub communities similar to those located in the northern survey quadrants. A small area with rocky outcrops is located along the Route 15 exit ramp to Route 7 south and includes eastern red cedar, red oak, carrion-flower, little bluestem (*Schizachyrium scoparium*), lopsided rush (*Juncus secundus*), and forked bluecurls (*Trichostema dichotomum*).

Design with community in mind



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**Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**

Although no rare plants were located at the time of the October 17, 2016 field survey, follow-up field surveys for RTE plants are recommended to target species identifiable in the late spring or early summer if impacts to rocky outcrop habitat areas are proposed by the project.

### **SOUTHEAST SURVEY QUADRANT**

The survey quadrant to the south of Route 15 and east of Route 7 contains upland and riparian forests that are slightly larger in area and with somewhat fewer invasive species compared with the forested communities in the northern survey quadrants. A rich-mesic riparian floodplain forest and scrub-shrub wetland is present to the west of the Norwalk River. The floodplain forest includes silver maple (*Acer saccharinum*), red maple, black cherry (*Prunus serotina*), and green ash (*Fraxinus pennsylvanica*) trees and an understory with Asian bittersweet, garlic-mustard, carrion-flower, sensitive fern (*Onoclea sensibilis*), ostrich fern (*Matteuccia struthiopteris*), climbing spindle-tree (*Euonymus fortunei*), Virginia-creeper (*Parthenocissus quinquefolia*), northern spicebush, multiflora rose, white snakeroot (*Ageratina altissima*), Japanese knotweed, wine raspberry (*Rubus phoenicolasius*), Japanese honeysuckle (*Lonicera japonica*), poison ivy, and jumpseed (*Persicaria virginiana*). The associated shrub wetland is dominated by common reed, purple loosestrife, rambler rose, and swamp-loosestrife (*Decodon verticillatus*).

A steep hardwood-dominated slope with rocky outcrops is present to the west of an active railroad corridor which runs north-south adjacent to the Norwalk River. The forest is dominated by red oak, scarlet oak, sugar maple, and mountain chestnut oak (*Quercus montana*). The understory is generally sparsely vegetated with mountain laurel (*Kalmia latifolia*), American beech (*Fagus grandifolia*), marginal wood fern (*Dryopteris marginalis*), Pennsylvania sedge (*Carex pennsylvanica*), ribbed sedge (*Carex virescens*), American witch-hazel (*Hamamelis virginiana*), black huckleberry (*Gaylussacia baccata*), and coastal sweet-pepperbush (*Clethra alnifolia*). The forest includes several rocky outcrops over 30 feet tall.

Although no RTE plants were documented at the time of the field survey, habitat conditions are potentially suitable for some RTE plants that are known from the surrounding region, including starry campion (*Silene stellata*), which has been documented along the Norwalk River downstream of the project area. Follow-up field surveys in early summer are recommended in the floodplain forest and the hardwood forest in the vicinity of the rocky outcroppings to target RTE plants (Figure 1). The remaining habitat areas within the eastern portion of the survey quadrant are similar to the hardwood forests observed in the other survey quadrants and have low potential for RTE plants.

### **CONCLUSION**

No RTE plant populations were located during the October 17, 2016 field surveys. Overall, the potential for RTE plants to occur within the project area is low and limited to specific habitat areas within the southern survey quadrants. Most areas within the project area have anthropogenic



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**Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**

disturbances within the existing natural community areas, including adjacent development and a predominance of non-native plant species, including numerous invasive species. However, a rich-mesic floodplain forest and an associated rocky slope to the west of the Norwalk River and south of Route 15, as well as rocky outcrop habitat areas along the Route 15 exit ramp to Route 7 south, contain habitat which may support RTE plants that were not identifiable during the October field survey. Should there be impacts proposed for these areas, follow-up field surveys during early summer months are recommended to further evaluate the potential for RTE plant populations.

Please let me know if you have any questions on the information presented in this report.

Regards,

**Stantec Consulting Services Inc.**

Matt Arsenault  
Botanist / Ecologist  
Phone: (207) 406-5488  
Fax: (207) 729-2715  
matt.arsenault@stantec.com

Attachment: Figure 1 – RTE Survey Area Map  
Appendix A – Representative Photographs

c. Joy Prescott, Stantec



November 2, 2016

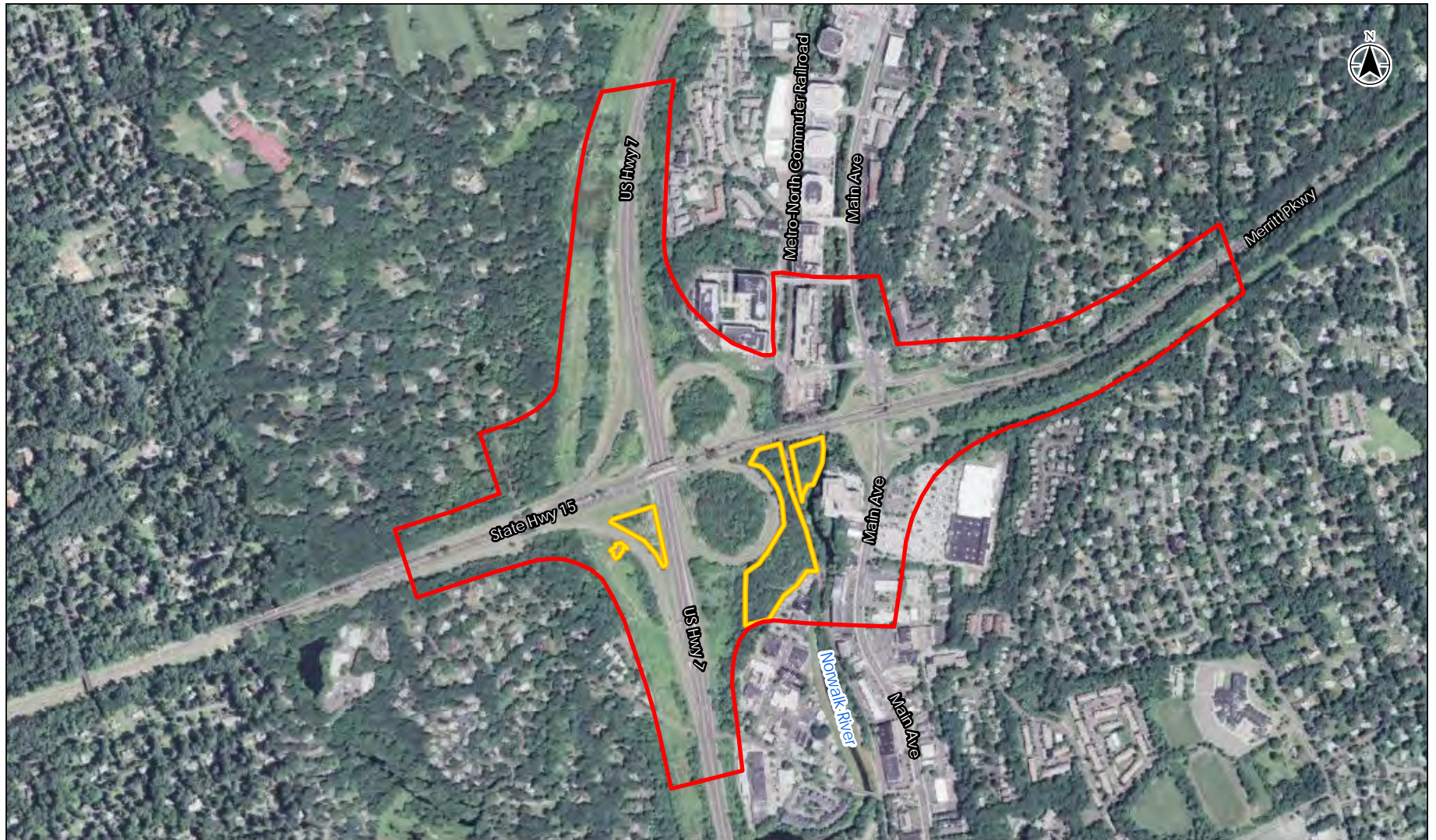
John Eberle

FIGURES

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7  
& Route 15 Interchange, Norwalk, Connecticut

**FIGURES**





#### Legend

- RTE Survey Area (approx.)
- Recommended Follow-Up Survey Locations

0 500 1,000  
Feet  
1 inch = 1,000 feet (At page size of 8.5"x11")

#### Notes

1. Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
2. 2015 National Agriculture Imagery Program (NAIP) aerial orthorectified imagery provided by USDA's Farm Service Agency.



Project Location  
Norwalk, CT  
192310508  
Prepared by EMK on 2016-10-31  
Quality Review by KWH on 2016-10-31  
Independent Review by MPA on 2016-11-01

Client/Project  
ConnDOT  
Route 7 - Route 15 Interchange  
Norwalk, CT

Figure No.

1

Title

RTE Survey Area Map

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.



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John Eberle

APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7  
& Route 15 Interchange, Norwalk, Connecticut

## APPENDIX A – REPRESENTATIVE PHOTOGRAPHS





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 1. Small perennial stream with associated densely vegetated riparian area in the Northeast Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 2. Western embankment of Norwalk River in the Northeast Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 3. Forested wetland within the Northeast Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 4. Emergent wetland within the Northeast Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.



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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: **Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**



Photo 5. Looking south at densely vegetated wooded strip between Route 7 and transmission line within the Northwest Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: **Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**



Photo 6. Hardwood forest within the Northwest Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: **Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut**



Photo 7. Rocky woodland within the Southwest Survey Quadrant. Follow-up survey for RTE plant species recommended. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 8. Rich-mesic floodplain forest along Norwalk River within the Southeast Survey Quadrant. Follow-up survey for RTE plant species recommended. Stantec. October 17, 2016.





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John Eberle

APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 9. Rocky hardwood forest within the Southeast Survey Quadrant. Follow-up survey for RTE plant species recommended. Stantec. October 17, 2016.





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APPENDIX A – REPRESENTATIVE PHOTOGRAPHS

Reference: Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut



Photo 10. Hardwood forest within the Southeast Survey Quadrant. Low potential for RTE plant species. Stantec. October 17, 2016.





Stantec Consulting Services Inc.  
30 Park Drive, Topsham ME 04086-1737

August 8, 2018  
File: 192310508

Attention: John Eberle  
Stantec Consulting Services Inc.  
55 Church Street, Suite 601  
New Haven, CT 06510

Dear John,

**Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut**

On June 26, 2018, Stantec Consulting Services Inc. (Stantec) conducted a follow-up survey for rare, threatened, and endangered (RTE) plant species at the proposed Route 7 and Route 15 interchange project area in Norwalk, Connecticut (hereafter, project). The surveys were conducted in response to recommendations made by Stantec during an initial field survey on October 17, 2016, where it was noted that four areas within the project area provided potentially suitable habitat for RTE plant species, but that potential presence could not be fully assessed due to the seasonal timing of the initial survey (i.e., early fall).<sup>1</sup> Follow-up surveys were conducted in 2018 within the four areas identified during the initial October 2016 survey (Figure 1) by Matt Arsenault, a professional botanist at Stantec (see Appendix A for professional resume). Staff from the Connecticut Department of Transportation accompanied Stantec for a portion of the survey. No RTE plants were identified during the 2018 surveys. This report presents the results of these efforts.

## METHODOLOGY

Stantec conducted a meander-based field survey to search for RTE plant species within the four habitat areas previously identified for follow-up surveys. Species targeted included those present on *Connecticut's Endangered, Threatened, and Special Concern Species 2015*<sup>2</sup> list. Meander surveys involve characterizing the dominant vegetation types, current conditions (including evidence of past disturbances and invasive plants), and indicator plant species (e.g., plant species that are frequently associated with RTE plant populations and/or indicate more unique microhabitat conditions often associated with RTE plant populations). Any rare plant population documented was located with a GPS-enabled tablet with submeter locational accuracy. Representative photographs were taken within the surveyed areas.

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<sup>1</sup> Stantec Consulting Services Inc., November 2, 2016. *Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut*.

<sup>2</sup> State of Connecticut Department of Energy and Environmental Protection. 2015. *Connecticut's Endangered, Threatened, and Special Concern Species 2015*.

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut

## RESULTS

No RTE plants were observed during the June 26, 2018 field survey. The following characterizes the four survey areas from west to east.

The western-most survey areas west of the Route 7 on-ramp from Route 15 consists of a small woodland and ledge system characterized by eastern red cedar (*Juniperus virginiana*), scarlet oak (*Quercus coccinea*), carrion-flower (*Smilax rotundifolia*), common wormwood (*Artemisia vulgaris*), little bluestem (*Schizachyrium scoparium*), lopsided rush (*Juncus secundus*), forked bluecurls (*Trichostema dichotomum*), and rambler rose (*Rosa multiflora*) (Appendix B, Photo 1). The survey area is adjacent to an open transmission line corridor dominated by common wormwood. No further surveys are recommended for this location.

The survey area to the east of the above area and located between the Route 15 ramp to Route 7 and Route 7 is an oak woodland system dominated by red oak (*Quercus rubra*), eastern red cedar, and bigtooth aspen (*Populus grandidentata*) (Appendix B, Photo 2). The understory includes black huckleberry (*Gaylussacia baccata*), hillside blueberry (*Vaccinium pallidum*), sweet-fern (*Comptonia peregrina*), yellow wild indigo (*Baptisia tinctoria*), little bluestem, gray goldenrod (*Solidago nemoralis*), Pennsylvania sedge (*Carex pensylvanica*), bristly greenbriar (*Smilax hispida*), and whorled yellow-loosestrife (*Lysimachia quadrifolia*). The survey area includes several open ledges. No further surveys are recommended for this location.

A steep hardwood-dominated slope with rocky outcrops is present to the east of Route 7 and west of an active railroad corridor adjacent to the Norwalk River (Appendix B, Photos 3–4). The forest is dominated by red oak, scarlet oak, sugar maple (*Acer saccharum*), and mountain chestnut oak (*Quercus montana*). The understory is generally sparsely vegetated with mountain laurel (*Kalmia latifolia*), American beech (*Fagus grandifolia*), marginal wood fern (*Dryopteris marginalis*), Pennsylvania sedge, blue-stem goldenrod (*Solidago caesia*), American shinleaf (*Pyrola americana*), ribbed sedge (*Carex virescens*), American witch-hazel (*Hamamelis virginiana*), black huckleberry, hillside blueberry, and coastal sweet-pepperbush (*Clethra alnifolia*). The forest includes several rocky outcrops over 30 feet tall. No further surveys are recommended for this location.

A rich-mesic riparian floodplain forest and scrub-shrub wetland is present to the west of the Norwalk River and east of the railroad tracks (Appendix B, Photo 5). The floodplain forest includes silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), and green ash (*Fraxinus pennsylvanica*) trees and an understory with Asian bittersweet (*Celastrus orbiculatus*), garlic-mustard (*Alliaria petiolata*), skunk-cabbage (*Symplocarpus foetidus*), white cut grass (*Leersia virginica*), broad-leaved enchanter's-nightshade (*Circaea canadensis*), carrion-flower, sensitive fern (*Onoclea sensibilis*), ostrich fern (*Matteuccia struthiopteris*), climbing spindle-tree (*Euonymus fortunei*), Virginia-creeper (*Parthenocissus quinquefolia*), northern spicebush, multiflora rose, white snakeroot (*Ageratina altissima*), Japanese knotweed (*Fallopia japonica*), wine raspberry (*Rubus phoenicolasius*), Japanese honeysuckle (*Lonicera japonica*), poison-ivy (*Toxicodendron radicans*), and jumpseed (*Persicaria virginiana*). No further surveys are recommended for this location.

August 8, 2018  
John Eberle  
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Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut

## CONCLUSIONS

The 2018 follow-up field survey was conducted at an appropriate time of year to assess the presence of RTE plant species within the project area. No observations of RTE plant species were made within the 2018 survey areas. Therefore, no further RTE plant surveys are recommended for the project.

Please let me know if you have any questions.

Regards,

**Stantec Consulting Services Inc.**



**Matt Arsenault** CE, NHCWS  
Botanist / Ecologist

Phone: (207) 406-5488  
Fax: (207) 729-2715  
matt.arsenault@stantec.com

Attachment: Figure 1. RTE Survey Area Map  
Appendix A. Professional Resume  
Appendix B. Representative Photographs

August 8, 2018

John Eberle

Figures

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut

## FIGURES





August 8, 2018

John Eberle

Appendices

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut

## **APPENDIX A. PROFESSIONAL RESUME**

# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager



Matt is a Certified Ecologist and nationally recognized expert Botanist responsible for performing ecological and botanical assessments and characterizations; natural resource inventories including rare, threatened, and endangered species surveys; wetland delineations and function and value assessments; wildlife population surveys; long-term biological monitoring; and water quality monitoring surveys. For over 15 years, Matt has worked on a multitude of ecological projects, including natural community and rare plant and wildlife survey projects throughout the northeastern, northcentral, mid-Atlantic, and southern United States. These projects have ranged from general reconnaissance observations to quantitative, community- and species-specific surveys. These projects have involved detailed natural community mapping and analysis. He has also provided expert witness testimony regarding the findings of various ecological field studies. Matt has taught many workshops, led field trips, and published manuscripts on plant identification and ecology.

## EDUCATION

BS, Botany, summa cum laude honors, University of Maine, Orono, Maine, 2003

Wetland Delineation Methods, University of New Hampshire, Durham, New Hampshire, 2005

10-Hour Construction Safety & Health Certified, OSHA, Topsham, Maine, 2009

40-hour HAZWOPER Certified, OSHA, Topsham, Maine, 2010

Heartsaver CPR Certified, SOLO, Topsham, Maine, 2016

OSHA 8-Hour HAZWOPER Refresher Certification, Topsham, Maine, 2016

Member, New England Plant Conservation Program Task Force, New England Wildflower Society

Member, New England Botanical Club

Member, Friends of the Maine Herbarium, The University of Maine Herbaria

Member, Josselyn Botanical Society of Maine

Member, Ecological Society of America

Member, Maine Association of Wetland Scientists

## REGISTRATIONS

Certified Wetland Scientist #278, New Hampshire Joint Board

Ecologist, Ecological Society of America

## MEMBERSHIPS

Survey-approved Botanist, Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program

Member, Maine Natural Areas Program (Botanical Advisory Group)

## PROJECT EXPERIENCE

Rare Plant Surveys, Pleasure Beach State Park, Bridgeport, Connecticut (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys at a coastal project site in southern Connecticut. Rare plant surveys were completed during appropriate periods of the growing season to target seaside threeawn (*Aristida tuberculosa*), eastern prickly-pear (*Opuntia humifusa*), northern blazing-star (*Liatris novae-angliae*), and sickle-leaved silk-grass (*Pityopsis falcata*). Prepared detailed*

\* denotes projects completed with other firms



# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager

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## Rare Plant Surveys, Private Development, Tolland County, Connecticut (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys associated with a proposed development site in Tolland County, Connecticut. A landscape analysis was completed prior to field surveys to identify habitats with potential for rare plant species. Meander surveys were completed throughout the project area to locate rare plants and characterize the natural communities present. A detailed report of the findings was prepared for the client summarizing the results of the field surveys.*

## Rare Plant Surveys, Route 7 & 15 Interchange Project, Norwalk, Connecticut (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys associated with a proposed roadway improvement project. A landscape analysis was completed prior to field surveys to identify habitats with potential for rare plant species. Meander surveys were completed throughout the project area to locate rare plants and characterize the natural communities present. A detailed report of the findings was prepared for the client summarizing the results of the field surveys.*

## Rare Plant Monitoring, Groton-New London Airport, Groton, Connecticut (Lead Botanist)

*Lead Botanist responsible for completing annual monitoring of yellow thistle (*Cirsium horridulum*) at a regional airport in coastal Connecticut. Completed annual counts of flowering and vegetative individuals to evaluate population trends over time. Prepared detailed report for state agencies of the field monitoring results.*

## Rare Plant Surveys, Shoreline Greenway Trail, East Haven, Connecticut (Field Manager)

*Field Manager responsible coordinating and overseeing field surveys targeting rare plants at a proposed recreational trail development site in southern Connecticut. Oversaw implementation of field methods and provided quality controls of field data and reporting. Species targeted during the field surveys included bitter panicgrass (*Panicum amarum*), Hervey's aster (*Eurybia xherveyi*), bracted orache (*Atriplex glabriuscula*), and bearded sprangletop (*Leptochloa fusca*).*

## Rare Plant Surveys, Silver Sands State Park, Milford, Connecticut (Field Manager)

*Field Manager responsible coordinating and overseeing field surveys targeting rare plants at a proposed state park expansion site in southern Connecticut. Oversaw implementation of field methods and provided quality controls of field data and reporting. Prepared an Incidental Take Permit application for unavoidable impacts which detailed proposed on-site mitigation efforts including transplanting and long-term monitoring.*

## Rare Plant Survey, Lower Chichester, Pennsylvania (Lead Project Scientist)

*Lead Project Scientist responsible for performing a rare plant survey and natural community characterization of a proposed development site.*

## Rare Plant Surveys, Old Farms Road, Avon, Connecticut (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys associated with a proposed road and bridge replacement project in Avon, Connecticut. Species targeted and identified within the project area included Davis' sedge (*Carex davisii*), Virginia waterleaf (*Hydrophyllum virginianum*), Wiegand's rye grass (*Elymus wiegandii*). Prepared a detailed report of the findings, consulted with state regulatory agencies to reach an agreement on appropriate mitigation, and prepared an incidental take permit application for unavoidable impacts to rare plant species. Conducted transplanting Davis' sedge and Virginia waterleaf ahead of construction activities.*

## Rare Plant Surveys, Massachusetts Department of Transportation, Sheffield, Massachusetts (Lead Botanist)

*Lead Botanist responsible for conducting surveys for rare plants and evaluating after-the-fact impacts to rare plants associated with an emergency slope stabilization project. Prepared study plan for review and approval by the Massachusetts Natural Heritage and Endangered Species Program prior to completing field surveys. Field surveys targeted Tuckerman's sedge (*Carex tuckermanii*) and small dropseed (*Sporobolus neglectus*) as well as other state-listed species. Documented populations of Tuckerman's sedge. Prepared detailed report of findings.*

\* denotes projects completed with other firms



# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager

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## Rare Plant Surveys, Worcester, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along a transmission line corridor in Worcester, Massachusetts. Meander surveys were conducted in habitats suitable for rare plants. Species targeted included smooth rockcress (Boechera laevigata) and downy wild rye (Elymus villosus).*

## New England Floristic Quality Assessment Index Development Project (Expert Botanist)

*Selected as an Expert Botanist to participate in the development of a Floristic Quality Assessment Index (FQAI) for New England. Duties included reviewing comprehensive vascular plant species lists for Maine and assigning a Coefficient of Conservatism value to each species based on direct knowledge of species tolerance for disturbances and affinities for particular habitats.*

## Rare Plant Surveys, National Grid, Providence County, Rhode Island (Project Manager and Lead Botanist)

*Lead Botanist responsible for conducting surveys for rare plants along an approximately 14-mile transmission line corridor. Field efforts documented numerous populations of state-listed species including bur-reed sedge (Carex sparganioides), floodplain avens (Geum laciniatum), orange-fruited horse-gentian (Triosteum aurantiacum), slender-leaved agalinis (Agalinis tenuifolia), fern-leaved false foxglove (Aureolaria pedicularia), pink-corydalis (Capnoides sempervirens), woodland sunflower (Helianthus divaricatus), and forest lousewort (Pedicularis canadensis). Prepared detailed report of findings.*

## Rare Plant Surveys, Grafton County, New Hampshire (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys at a project site on the Connecticut River in Grafton County, New Hampshire. Rare plant species located included great St. John's-wort (Hypericum ascyron), Kalm's lobelia (Lobelia kalmii), fen grass-of-Parnassus (Parnassia glauca), sticky false asphodel (Triantha glutinosa), and Virginia stickseed (Hackelia virginiana). Prepared detailed report for client and state agencies.*

## Hoosac Wind Project, Florida, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing annual monitoring of large-leaved goldenrod (Solidago macrophylla) at the Hoosac Wind Project in western Massachusetts. Data were collected on transplant success and establishment as well as seed germination success. Prepared detailed reports for client and state agencies.*

## Rare Plant Surveys, Mount Wachusett, Princeton, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys associated with a road rehabilitation project by the Massachusetts Department of Conservation and Recreation on Mt. Wachusett. Targeted plant species included narrow false oat (Trisetum spicatum), Back's sedge (Carex backii), Bartram's shadbush (Amelanchier bartramiana), millet grass (Milius effusum), and adder's-tongue fern (Ophioglossum pusillum).*

## Significant Ecological Evaluations, Coos County, New Hampshire (Lead Project Scientist)

*Lead Project Scientist responsible for performing a broad-spectrum survey and evaluation of significant natural resources within an approximately 60,000-acre project area in northern New Hampshire. Evaluations included rare plant and wildlife surveys, wildlife habitat characterizations, reconnaissance wetland and stream surveys, and natural community characterizations.*

## Rare Plant Survey, Londonderry, New Hampshire (Lead Project Scientist)

*Lead Project Scientist responsible for performing a rare plant survey and natural community characterization of a proposed development site. Documented long-leaved bluet (Houstonia longiofolia) as part of the survey efforts.*

## Rare Plant Surveys, Eversource Line 1211, Pittsfield, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along an existing transmission line corridor ahead of scheduled maintenance activities. Efforts included preparation of study plan, coordination with regulatory agencies, and targeted surveys for barren-strawberry (Geum fragarioides), chestnut-colored sedge (Carex castanea), crooked-stem aster (Symphyotrichum prenanthoides), and hairy honeysuckle (Lonicera hirsuta). Prepared detailed report of survey efforts.*

\* denotes projects completed with other firms

# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager

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Proposed Transmission Line Natural Resource Identification, Penobscot and Aroostook Counties, Maine (Project Scientist)

*Project Scientist responsible for completing vernal pool surveys, wetland delineations, and rare plant surveys along over 40 miles of a proposed transmission line corridor in northern Maine. Coordinated with the State agencies regarding potential impacts to several species of rare plants that were identified within the project corridor, including northern bog sedge (Carex gynocrates), showy lady's-slipper (Cypripedium reginae), marsh valerian (Valeriana uliginosa), and lesser yellow-water crowfoot (Ranunculus gmelinii).*

Saddleback Maine Ski Area Expansion, Rangeley and Dallas Plantation, Maine (Field Manager and Lead Project Scientist)

*Field Manager and Lead Project Scientist responsible for completing landscape analyses and field surveys to identify and characterize the existing natural resources present on Saddleback Mountain in western Maine prior to construction of a proposed development. Provided detailed analyses and expert witness testimony relative to the potential effects of the proposed development on significant natural resources including plants and wildlife and their associated habitats.*

Rare Plant Surveys, Vermont Agency of Transportation, Georgia, Vermont (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys at a proposed culvert replacement project. Surveys identified two state listed species: Fernald's sedge (Carex merritt-fernaldii) and short-beaked sedge (Carex brevior). Coordinated with client and state heritage program staff regarding avoidance and minimization measures to avoid adverse impacts to rare plant populations.*

Long-term Saltmarsh Vegetation Monitoring, Town of Old Orchard Beach, Old Orchard Beach, Maine (Lead Botanist)

*Lead Botanist responsible for monitoring annual changes in saltmarsh vegetation and evaluating potential effects of downgradient tidal gates installed at a road crossing on the saltmarsh hydrology.*

ForSAFE-Veg Model Setup and Evaluation Project: Northern Hardwood Forest Ecosystem (Expert Botanist)

*Selected as an Expert Botanist to participate in the setup of the ForSAFE-Veg model (an integrated forest ecosystem model) to simulate ecosystem biogeochemistry and ground vegetation composition in Northern Hardwood Forest ecosystems in the Northeastern U.S. relative to climate change and air pollution. Duties included participating in meetings with other regional botanists to review vegetation characteristic of northern hardwood forests in order to assign values to each species relative to their colonization ability, rooting depths, shading heights, palatability, temperature ranges, shade tolerance, water requirements, nitrogen needs, and pH tolerance for model calibration.*

Significant Ecological Resource Evaluations, Moosehead Lake Region, Piscataquis and Somerset Counties, Maine (Field Manager and Lead Project Scientist)

*Field Manager and Lead Project Scientist responsible for coordinating and conducting field efforts on over 300,000 acres of forest land in northern Maine. Efforts included completing a landscape analysis focused on identifying areas likely to support significant natural resources including large wetland systems, exemplary natural communities, and rare, threatened, and endangered species of plants and wildlife and their associated habitats. Subsequent field surveys targeted areas to identify and characterize the existing natural resources and their overall landscape significance. Species-specific targeted surveys were conducted for several species of sensitive wildlife including rusty blackbird, Bicknell's thrush, and Clayton's copper butterfly. Documented numerous locations of rare plants including beaked sedge (Carex rostrata), sparse-flowered sedge (Carex tenuifolia), livid sedge (Carex livida), northern bog sedge (Carex gynocrates), Moor rush (Juncus stygius), greater creeping rush (Juncus subtilis), showy lady's-slipper (Cypripedium reginae), Hornemann's willow-herb (Epilobium hornemannii), and boreal bedstraw (Galium kamtschaticum). Conducted detailed analyses and provided expert witness testimony relative to the potential effects of a proposed development and conservation easements on the significant natural resources present within the project area.*

\* denotes projects completed with other firms

# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager

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## Rare Plant Surveys and Transplanting, Pine Street Boat Launch, Walpole, New Hampshire (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys at a proposed dredge site on the Connecticut River in Walpole, New Hampshire. Field surveys targeted several plant species including Vasey's pondweed (Potamogeton vaseyi), grass-leaved mud-plantain (Heteranthera dubia), long-leaved pondweed (Potamogeton nodosus), pygmy-weed (Crassula aquatica), and awned flatsedge (Cyperus squarrosus). Participated in consultation with the New Hampshire Natural Heritage Bureau to determine appropriate compensatory mitigation requirements for unavoidable impacts to the rare plant populations. Prepared rare plant transplanting plan. Conducted transplanting to relocate rare aquatic plants outside of project area and conducted long-term monitoring to assess overall viability of rare plant populations.*

## Rare Plant Surveys, Eversource Line 1447, South Hadley, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along an existing transmission line corridor ahead of scheduled maintenance activities. Efforts included preparation of study plan, coordination with regulatory agencies, and targeted surveys for Gray's sedge (Carex grayi), cattail sedge (Carex typhina), winged monkey-flower (Mimulus alatus), swamp dock (Rumex verticillatus), and Tuckerman's sedge (Carex tuckermanii). Prepared detailed report of survey efforts. Coordinated with client and regulatory agencies on measures to implement to avoid potential impacts to rare plants.*

## Rare Plant Surveys, Eversource Line 1113, Amherst and Granby, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along an existing transmission line corridor ahead of scheduled maintenance activities. Efforts included preparation of study plan, coordination with regulatory agencies, and targeted surveys for violet wood-sorrel (Oxalis violacea), green rock-cress (Boechera missouriensis), and large-bracted tick-trefoil (Desmodium cuspidatum). Prepared detailed report of survey efforts. Coordinated with client a on measures to implement to avoid potential impacts to rare plants.*

## Rare Plant Surveys, Eversource Line 1447, South Hadley, Massachusetts (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along an existing transmission line corridor ahead of scheduled maintenance activities. Efforts included preparation of study plan, coordination with regulatory agencies, and targeted surveys for Gray's sedge (Carex grayi), cattail sedge (Carex typhina), winged monkey-flower (Mimulus alatus), swamp dock (Rumex verticillatus), and Tuckerman's sedge (Carex tuckermanii). Prepared detailed report of survey efforts. Coordinated with client and regulatory agencies on measures to implement to avoid potential impacts to rare plants.*

## Rare Plant Surveys, Number Nine Wind Project, Aroostook County, Maine (Lead Botanist)

*Lead Botanist responsible for completing de novo rare plant surveys at a proposed wind project site in Aroostook County, Maine. Tasks included the completion of a landscape analysis to identify areas within the project area with potential habitat for rare plants. Follow-up field surveys were completed to identify rare plants and natural communities within the project area. Several new locations of rare plants were located as a result of the field surveys including Goldie's fern (Dryopteris goldiana), male fern (Dryopteris filix-mas), showy lady's-slipper (Cypripedium reginae), northern bog sedge (Carex gynocrates), marsh valerian (Valeriana uliginosa), lesser yellow water crowfoot (Ranunculus gmelinii), and swamp honeysuckle (Lonicera oblongifolia). A detailed report of the field results was prepared and included with permit applications.*

## Rare Plant Surveys and Baseline Water Quality Monitoring, Downeast Wind Project, Washington County, Maine (Field Scientist)

*Field Scientist responsible for establishing baseline water quality conditions of several streams associated with a proposed wind energy development facility in eastern Maine. Streams were monitored by completing an inventory and analysis of benthic macroinvertebrate species through systematic sampling and analytical methods. Also completed extensive rare plant surveys throughout the proposed project area. Field efforts identified numerous new locations for a state listed species: Canada mountain-rice grass (Piptatherum canadense).*

\* denotes projects completed with other firms

# Matthew Arsenault

Certified Ecologist, Botanist, Senior Project Manager

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Rare Plant Surveys, Portland Pipeline, Northern Vermont (Lead Botanist)

*Lead Botanist responsible for completing rare plant surveys along an existing pipe line corridor ahead of scheduled maintenance activities. Completed meander surveys in vicinity of proposed impact area to locate rare plants. Several locations of rare plants were identified including grass-leaved rush (Juncus marginatus), lance-leaved violet (Viola lanceolata), swamp honeysuckle (Lonicera villosa), northern sweet-coltsfoot (Petasites frigidus), Lake Huron bog green orchid (Platanthera huronensis), and yellow lady's-slipper (Cypripedium parviflorum var. pubescens)*

## PUBLICATIONS AND PRESENTATIONS

**Arsenault, M.**, G.H. Mittelhauser, D. Cameron, A. Dibble, A. Haines, S. Rooney, and J. Weber. The Sedges of Maine - A Field Guide to Cyperaceae. University of Maine Press, Orono, Maine, 2013.

Campbell, C.S., R.C. Evans, D.R. Morgan, T.A. Dickinson, and **M.P. Arsenault**. Phylogeny of subtribe Pyrinae (formerly the Maloideae, Rosaceae): Limited resolution of a complex evolutionary history. *Plant Systematics and Evolution*. 266 119–145, 2007.

Potter, D., T. Eriksson, R. Evans, S.-H. Oh, J. Smedmark, D. Morgan, M. Kerr, K. Robertson, **M. Arsenault**, and C. Campbell. Rosaceae phylogeny and classification. *Plant Systematics and Evolution*. 266 5–43, 2007.

Campbell, C.S, W.A. Wright, M. Cox, T.F. Vining, C.S. Major, **M.P. Arsenault**. Nuclear ribosomal DNA internal transcribed spacer 1 (ITS1) in *Picea* (Pinaceae): Sequence divergence and structure. *Molecular Phylogenetics and Evolution*, 35: 165–185, 2005.

**Arsenault, M.** Discovery of *Saxifraga cespitosa* in Maine. *Rhodora*. In press.

**Arsenault, M.** and A. Haines. Rediscovery of *Carex typhina* (Cyperaceae) in Maine. *Rhodora*, 106:52–54, 2004.

**Arsenault, M.**, J. Presby-Germano, A. Klein, W. Wright, and C. Campbell. Incongruence between three genomes in phylogenetic studies within *Picea* (Pinaceae). Presented at the Botany 2003 conference, Alabama, 2003.

**Arsenault, M.**, K. Carifa, C. Samorajczyk, S. Hildt, and J. Simmons. Adaptive management for balancing safety and a rare plant at a regional airport. Poster presented at the International Conference on Ecology and Transportation, Raleigh, North Carolina, 2015.

Mittelhauser, G.H, **M. Arsenault**, D. Cameron, E. Doucette. Field Guide to the Grasses and Rushes of Maine. University of Maine Press, Orono, Maine. In press.

Presentation: Charismatic Sedges. *New England Wildflower Society*, 2014.

Presentation: The Genus *Galium*. *Josselyn Botanical Society Annual Meeting*, 2005.

Presentation: Natural Resource Inventories. Maine Land Trust Conference. *Maine Coast Heritage Trust*, 2007.

Presentation: Winter Twig Identification. *Stantec Consulting*, 2008, *Maine Association of Wetland Scientists*, 2016.

Presentation: *Carex* Identification. *Maine Association of Wetland Scientists*, 2009.

\* denotes projects completed with other firms

August 8, 2018

John Eberle

Appendices

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut

## **APPENDIX B. REPRESENTATIVE PHOTOGRAPHS**



August 8, 2018  
John Eberle  
Appendices

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut



Photo 1. Small woodland-ledge system west of Route 7. Stantec. June 26, 2018.



Photo 2. Oak woodland between Route 7 on-ramp and Route 7 Stantec. June 26, 2018.



August 8, 2018  
John Eberle  
Appendices

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut



Photo 3. Rock hardwood forest east of Route 7 and west of railroad tracks. Stantec. June 26, 2018.



Photo 4. Rock hardwood forest east of Route 7 and west of railroad tracks. Stantec. June 26, 2018.

August 8, 2018

John Eberle

Appendices

Reference: 2018 Follow-up Rare, Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut



Photo 5. Rich mesic floodplain wetland along Norwalk River east of railroad tracks. Stantec. June 26, 2018.



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To: John Eberle, Project Manager  
New Haven CT Office

From: Matt Arsenault, Botanist / Ecologist  
Topsham, ME Office

File: 192310508

Date: October 18, 2019

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**Reference: Updated Rare Threatened, and Endangered Species Desktop Analysis; Routes 7/15 Interchange, Norwalk, Connecticut**

The Connecticut Department of Transportation proposes modifications to the Routes 7/15 interchange in Norwalk, Connecticut (Project). In 2016, Stantec Consulting Services Inc. (Stantec) conducted a desktop assessment and subsequent field survey and habitat assessment for rare, threatened, and endangered (RTE) plant species within the areas proposed for development.<sup>1</sup> Follow-up seasonally-appropriate field surveys were conducted in 2018 in response to recommendations made by Stantec after the initial 2016 survey.<sup>2</sup> No RTE species were observed within the Project area based on the 2016 and 2018 efforts.

In 2019, the Project area was expanded to include areas beyond those that were initially evaluated in 2016 and 2018 (Figure 1). Therefore, Stantec conducted a desktop assessment in October 2019 to evaluate the potential for RTE plant species to occur within the expanded Project area and assess whether additional field surveys are warranted. This memo summarizes the results of the revised desktop assessment.

## METHODOLOGY

Stantec reviewed the current Project area with publicly available information including aerial imagery available through Google Earth (including Google Street View®), Connecticut Department of Energy and Environmental Protection Natural Diversity Data Base (NDDDB) maps (June 2019), topography, and delineated wetlands and watercourses.

## RESULTS

The revised Project area has been expanded to the north and south along Route 7 compared with the initial Project area that was evaluated in 2016 and 2018. The original Project area was centered primarily on the interchange ramps at Route 7 and Route 15, as well as Main Avenue. The expanded Project area includes an approximate 0.7-mile section extending to the south of the previous Project area along Route 7 as well as an approximately 0.26-mile section that extends north along Route 7 beyond the previous Project area limits. The expanded Project area to the south is restricted to the existing Route 7 roadway and does not intersect undeveloped areas. Further, the proposed Project activities within the expanded Project area to the south are anticipated to be limited to roadway work such as line painting and signage, and no expansion of the roadway footprint itself. The expanded Project area to the north includes wetland and upland terrestrial areas within approximately 200 feet of the existing Route 7 roadway.

Since the additional segment of the Project area to the south is restricted to the existing Route 7 paved roadway, there is no potential for RTE plant species to occur in the area. This is supported by the updated

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<sup>1</sup> Stantec. 2016. Rare, Threatened, and Endangered Species Survey Report and Habitat Characterization, Route 7 & Route 15 Interchange, Norwalk, Connecticut. November 2.

<sup>2</sup> Stantec. 2018. 2018 Follow-up Rare Threatened, and Endangered Plant Species Report; Route 7 and Route 15 Interchange Project, Norwalk, Connecticut. August 8.

October 18, 2019

Page 2 of 2

Reference: Updated Rare Threatened, and Endangered Species Desktop Analysis; Routes 7/15 Interchange, Norwalk, Connecticut

NDDB maps, which do not indicate the presence of RTE species within this area. Therefore, no additional field surveys are recommended in the southern portion of the expanded Project area.

The expanded northern portion of the Project area includes an open transmission line corridor to the west of Route 7 and abuts commercial and residential developments to the east, with a narrow fringe of forested and densely-vegetated shrub-dominated terrestrial habitats. Based on a review of available imagery, the habitat conditions within the expanded Project area to the north of the previous survey area are consistent and contiguous with those surveyed previously and include a predominance of non-native invasive species, most evidently Asian bittersweet (*Celastrus orbiculatus*), common wormwood (*Artemisia vulgaris*), tree-of-heaven (*Ailanthus altissima*), and autumn-olive (*Elaeagnus umbellatus*) growing in dense colonies. The prevalence of non-native vegetation has reduced the overall habitat quality and limits opportunities for RTE populations to persist amongst the dense vegetated colonies that have become established in the Project area. Due to the density of non-native vegetation and consistency with previously surveyed habitats where no RTE species were observed or suspected, further field surveys for RTE plants are not recommended in the expanded northern portion of the Project area.

Please let me know if you have any questions.

**Stantec Consulting Services Inc.**



**Matt Arsenault**

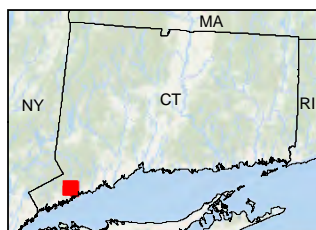
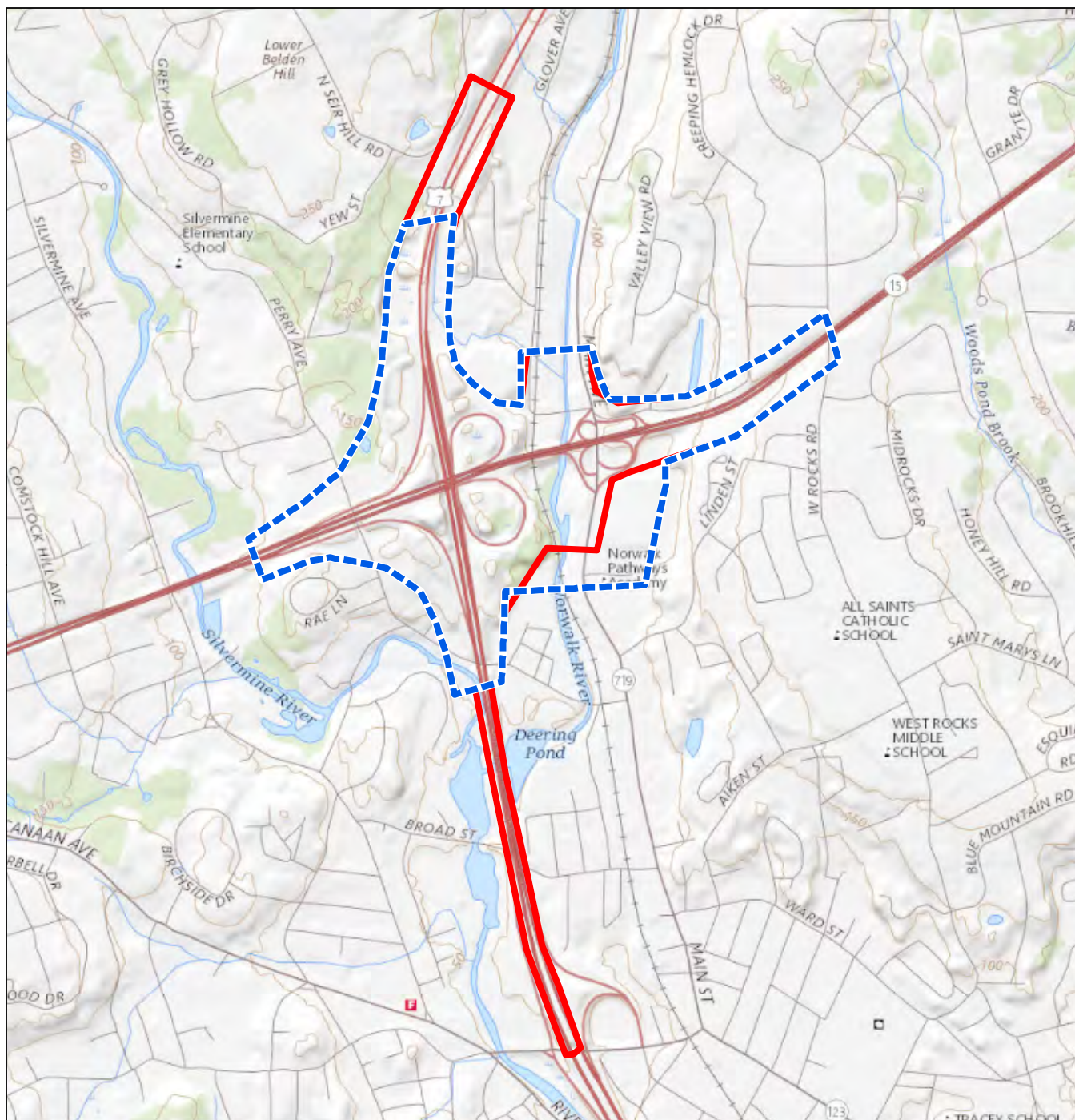
Botanist / Ecologist – Sr. Project Manager

Phone: 207 406 5488

Fax: 207 729 2715

matt.arsenault@stantec.com

Attachment: Figure 1 – Project Location Map



**Notes**  
 1. Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere  
 2. Data Sources: Stantec  
 3. Background: USGS The National Map, US Topo Maps.

**Legend**  
 Project Area  
 2016 & 2018 RTE Survey

0 2,000 Feet  
 (At original document size of 8.5x11)  
 1:24,000



**Project Location**  
 Norwalk, CT  
 Prepared by KWH on 2019-10-07  
 TR by MPA on 2019-10-07  
 IR Review by JH on 2019-10-xx  
 Client/Project  
 Route 7/15 Interchange  
 Connecticut Department of Transportation (CTDOT)  
 192310508

**Figure No.**  
**1**  
**Title**  
**Project Location Map**





**Routes 7/15 Interchange  
Norwalk, Connecticut  
State Project No. 102-358**

**Environmental Assessment,  
Draft Section 4(F) Evaluation and  
Environmental Impact Evaluation**

**Appendix F2  
CTDEEP National Diversity Database (NDDB)  
Mapping  
August 2022**

Prepared for:  
Connecticut Department of Transportation Federal  
Highway Administration



NATURAL DIVERSITY DATA BASE AREAS

NORWALK, CT

LEGEND

- State and Federal Listed Species
- Critical Habitat
- State Boundary
- County Boundary
- Town Boundary
- Interstate
- US Route
- State Route
- Ramp
- Street
- Ferry
- Railroad
- Watercourse
- Intermittent Watercourse
- Shore
- Drainage Ditch
- Dam
- Dredged Channel
- Aqueduct
- Water
- Intermittent Water
- Flats
- Rocks
- Inundated Area
- Marsh
- Cranberry Bog
- Dam
- Fish Hatchery
- Aqueduct
- Sewage Pond
- Water Tank

EXPLANATION

This map depicts general locations of state and federal listed species and critical habitats. The map is intended to be used as a pre-screening tool to determine the potential for impacts on state listed species and the need for a Natural Diversity Data Base review. To use the map, locate the project boundaries and any additional affected areas on the map. If the project is within a shaded area there may be a potential conflict with a listed species or natural community. For more information complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007) and submit to the Natural Diversity Data Base along with the required maps and information. More detailed instructions are available along with the request form on the Department of Energy and Environmental Protection (DEEP) webpage. [www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest)

Use the CTECO Interactive Map Viewers at <http://cteco.uconn.edu> to more precisely search for and locate sites and to view NDDB Areas with aerial imagery.

Date of Map: December 2020  
Natural Diversity Data Base Digital Data

For more information about State Listed Species, contact DEEP, Bureau of Natural Resources, Wildlife Division. email: [deep.nddbrequest@ct.gov](mailto:deep.nddbrequest@ct.gov)  
Tel: 860-424-3011

DATA SOURCES

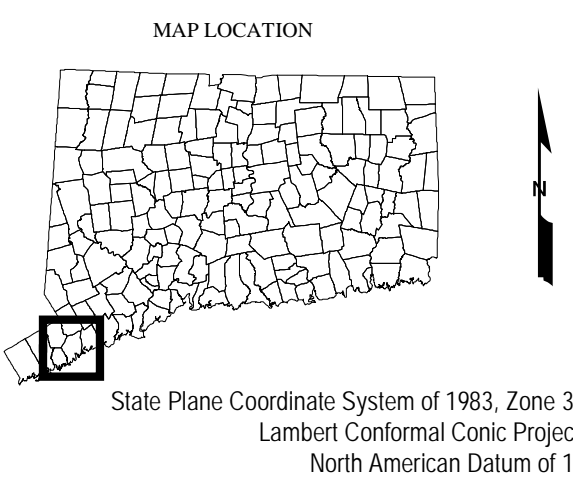
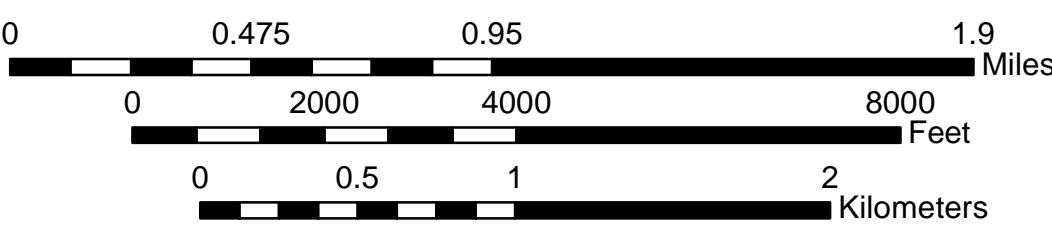
\*NDDB Information - Locations of state and federal listed species and critical habitats are based on data collected by the Connecticut Department of Energy & Environmental Protection, private conservation groups and the scientific community and compiled by the Natural Diversity Data Base (NDDB). The information is not necessarily the result of comprehensive or site-specific field investigations; in some cases locations have been derived from literature or museum searches or historic records. Exact locations have been buffered to produce generalized locations. The exact species or community location falls somewhere within the shaded area and not necessarily in the center. Information on this map does not include Natural Area Preserves, designated wetland areas or wildlife concentration areas.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION

This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

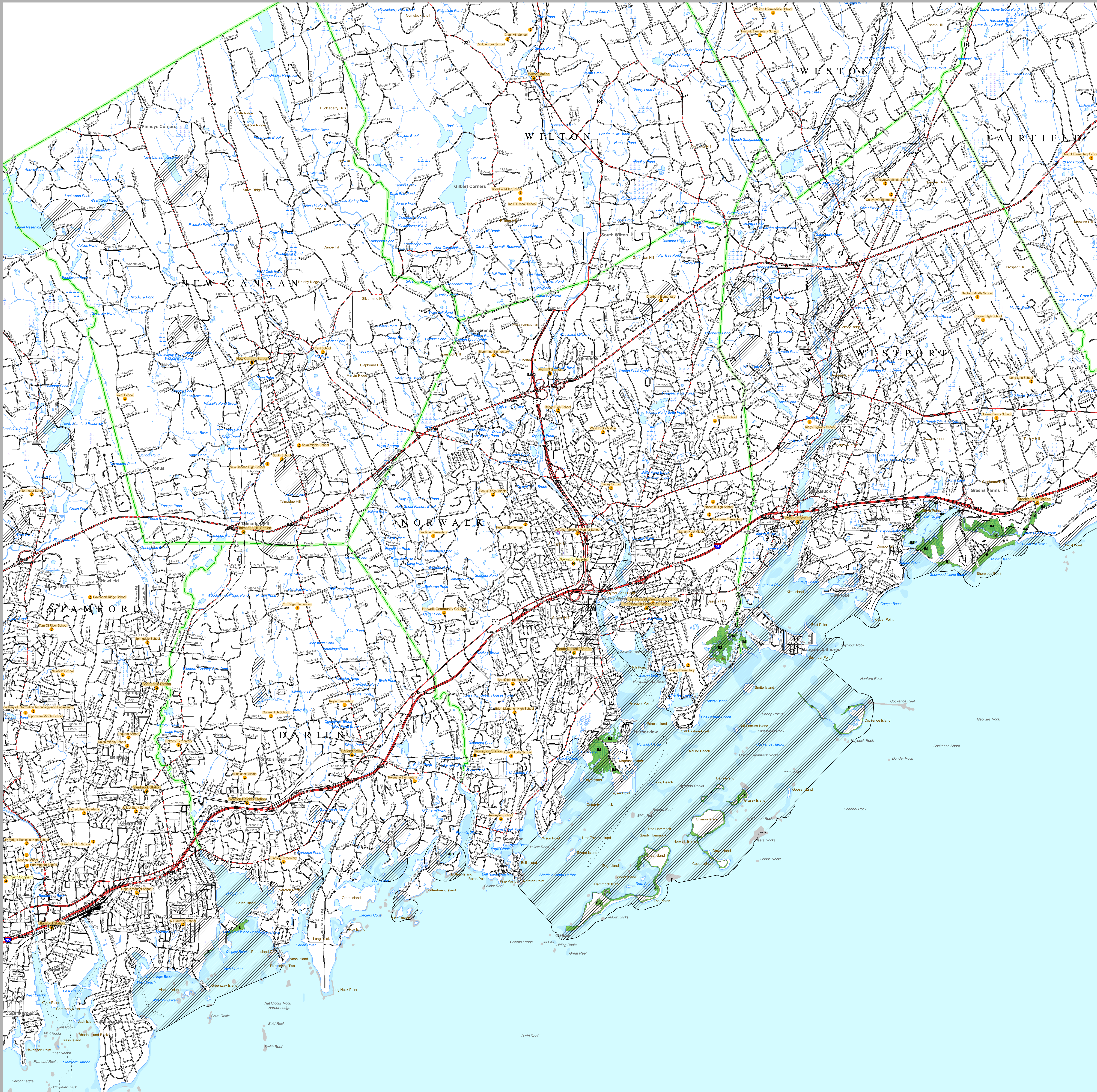
MAPS AND DIGITAL DATA - Visit the CT ECO website ([www.cteco.uconn.edu](http://www.cteco.uconn.edu)) for this map and a variety of others. Visit the DEEP website ([www.ct.gov/deep/gis](http://www.ct.gov/deep/gis)) to download the base map digital spatial data shown on this map.



Connecticut Department of  
Energy & Environmental Protection  
Bureau of Natural Resources  
Wildlife Division

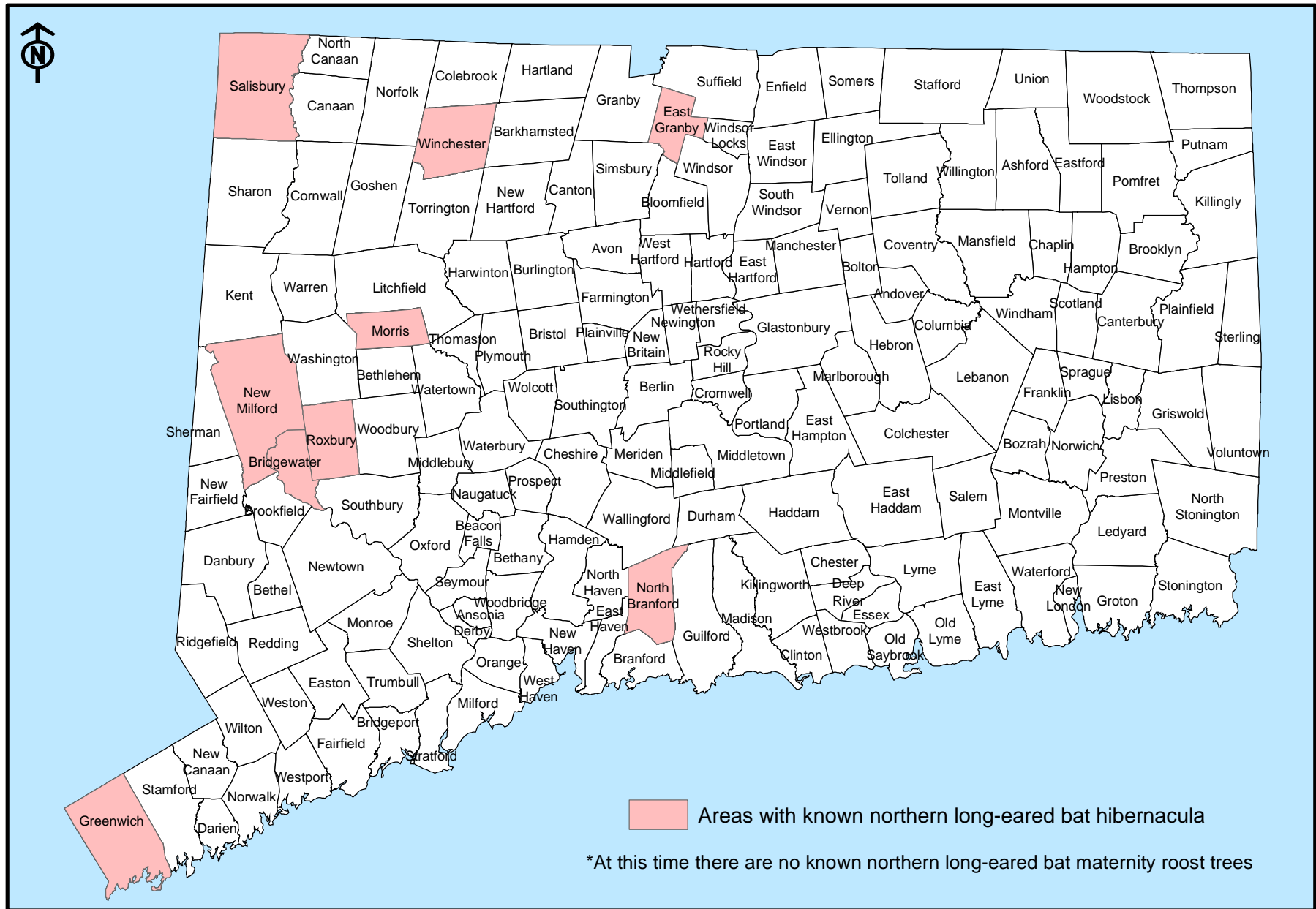
Map prepared by CT DEEP

Map is not colorfast  
Protect from light and moisture





# Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance



March 6, 2019

For information on federal requirements visit <http://www.fws.gov/midwest/endangered/mammals/nlebat/>





**Routes 7/15 Interchange  
Norwalk, Connecticut  
State Project No. 102-358**

**Environmental Assessment,  
Draft Section 4(F) Evaluation and  
Environmental Impact Evaluation**

**Appendix F3  
CTDEEP Fisheries Correspondence**

August 2022

Prepared for:  
Connecticut Department of  
Transportation Federal Highway  
Administration

From: [Gephard, Steve](#)  
To: [Riley, Jake](#)  
Cc: [Hunt, Jessica](#); [Savoy, Tom](#)  
Subject: RE: sturgeon in the Norwalk River?  
Date: Monday, October 02, 2017 4:30:27 PM

---

Jake,

I can say with much confidence that neither species of sturgeon probably ever were found above the Rt. 15 interchange and with certainty that they never will in the future.

Once the Flock Process Dam is removed, we expect that both Alewife and Blueback Herring will be found at the project location. What this means for design and construction is that any work at the stream crossing must maintain conditions that allow fish to pass upstream. That is a low hurdle and one we'd make you meet regardless of the presence of herring. If the dam has been removed when your project is constructed, we would attach a permit condition with a time of year restriction: no unconfined in-stream work between April 1 and June 30. Since this is a stocked trout stream, such a TOY restriction would probably be put into place regardless of the status of blueback herring. Therefore, I don't think these species will have a big impact on the project.

Steve

Stephen Gephard  
Supervising Fisheries Biologist  
Diadromous Fisheries *and* Habitat Conservation and Enhancement programs  
Fisheries Division  
Connecticut Department of Energy and Environmental Protection  
P.O. Box 719, Old Lyme, CT 06371  
P: 860.447.4316 | F: 860.434.6150: [steve.gephard@ct.gov](mailto:steve.gephard@ct.gov)



**NOTE: Due to staff reductions, the Inland Fisheries Division and the Marine Fisheries Division have been merged into one division. Effective immediately, all DEEP fisheries staff are part of one division called the Fisheries Division.**

[www.ct.gov/deep](http://www.ct.gov/deep)

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**From:** Riley, Jake [mailto:[Jake.Riley@stantec.com](mailto:Jake.Riley@stantec.com)]  
**Sent:** Monday, October 02, 2017 3:19 PM  
**To:** Gephard, Steve <[Steve.Gephard@ct.gov](mailto:Steve.Gephard@ct.gov)>  
**Cc:** Hunt, Jessica <[Jessica.Hunt@stantec.com](mailto:Jessica.Hunt@stantec.com)>; Savoy, Tom <[Tom.Savoy@ct.gov](mailto:Tom.Savoy@ct.gov)>  
**Subject:** RE: sturgeon in the Norwalk River?

Hi Steve,

Many thanks for your response.

The project location is well above Burnell Boulevard and even the Silvermine River. The project area is the Route 15 crossing of the Norwalk River (upstream of Perry Ave), well upstream of salt wedge and tidal influence. Given this upstream project location and upstream access - is it very unlikely that Sturgeon would be present in the vicinity? What about herring even after the removal of the Flock Process Dam?

Thank you for all of you input and help.

Jake

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**From:** Gephard, Steve [mailto:[Steve.Gephard@ct.gov](mailto:Steve.Gephard@ct.gov)]  
**Sent:** Wednesday, September 20, 2017 8:41 AM  
**To:** Riley, Jake <[Jake.Riley@stantec.com](mailto:Jake.Riley@stantec.com)>  
**Cc:** Hunt, Jessica <[Jessica.Hunt@stantec.com](mailto:Jessica.Hunt@stantec.com)>; Savoy, Tom <[Tom.Savoy@ct.gov](mailto:Tom.Savoy@ct.gov)>  
**Subject:** RE: sturgeon in the Norwalk River?

Jake,

I assume that you are referring to the railroad bridge just upstream of Burnell Blvd. We have documented anadromous river herring upstream of that point in the past—all the way to the tributary Silvermine River and the base of the Flock Process Dam, which is targeted for removal soon. That drop at the railroad bridge looks substantial at times but not at other times so I assume that it is still tidal at that point and high tidal stages drown out the drop. I have no knowledge of sturgeon in the Norwalk or would speculate whether or not they could/would go over that drop.

Any project that will be implemented downstream of Perry Avenue in Norwalk before July of 2018 will need time of year restrictions to protect river herring runs—no instream work between April 1 and June 30. Any project implemented after January 2019 downstream of Rt. 33 in Wilton will need such time of year restrictions.

Steve

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**From:** Riley, Jake [mailto:[Jake.Riley@stantec.com](mailto:Jake.Riley@stantec.com)]  
**Sent:** Tuesday, September 19, 2017 1:35 PM  
**To:** Gephard, Steve <[Steve.Gephard@ct.gov](mailto:Steve.Gephard@ct.gov)>  
**Cc:** Hunt, Jessica <[Jessica.Hunt@stantec.com](mailto:Jessica.Hunt@stantec.com)>; Savoy, Tom <[Tom.Savoy@ct.gov](mailto:Tom.Savoy@ct.gov)>



**Subject:** FW: sturgeon in the Norwalk River?

Hi Steve,

Tom Savoy pass along your info. We are working on a bridge project in the Norwalk River near the junction of 7 and were just wondering if you know how far anadromous fish have unimpeded access up the Norwalk River? Also, are you aware of any RTE species in that area of the Norwalk River?

Many thanks for your help, Steve!

Thanks, Jake

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**From:** Savoy, Tom [<mailto:Tom.Savoy@ct.gov>]

**Sent:** Thursday, September 14, 2017 3:43 PM

**To:** Riley, Jake <[Jake.Riley@stantec.com](mailto:Jake.Riley@stantec.com)>

**Subject:** RE: sturgeon in the Norwalk River?

I'm not sure. We do have some kind of Dam Safety Unit but unclear which Department they work in.

Steve Gephard may have some personal knowledge about the river if you want to try him.

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**From:** Riley, Jake [<mailto:Jake.Riley@stantec.com>]

**Sent:** Thursday, September 14, 2017 12:41 PM

**To:** Savoy, Tom <[Tom.Savoy@ct.gov](mailto:Tom.Savoy@ct.gov)>

**Cc:** Hunt, Jessica <[Jessica.Hunt@stantec.com](mailto:Jessica.Hunt@stantec.com)>

**Subject:** RE: sturgeon in the Norwalk River?

Hi Tom,

Many thanks for all the info on the Norwalk River – it is much appreciated.

Do you know who at CTDEEP we could check in with and determine whether the obstructions/dam near "Irving Freese Park" (-73.41451, 41.119082) at Norwalk River is impassable? And confirm the lack of salinity at the project site? I assume that far upstream it is fresh.

Thanks Tom.

Jake

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**Routes 7/15 Interchange  
Norwalk, Connecticut  
State Project No. 102-358**

**Environmental Assessment,  
Draft Section 4(F) Evaluation and  
Environmental Impact Evaluation**

**Appendix F4  
USFWS Correspondence**

August 2022

Prepared for:  
Connecticut Department of  
Transportation Federal Highway  
Administration

New England  
Ecological ServicesField Office  
Species List  
July 22, 2022





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

July 22, 2022

Project Code: 2022-0066491

Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

*Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.*

### **About Official Species Lists**

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

### **Endangered Species Act Project Review**

Please visit the **"New England Field Office Endangered Species Project Review and Consultation"** website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

**\*NOTE\*** Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat Update** - Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

#### *Additional Info About Section 7 of the Act*

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the

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ESA. The species' occurrence on an official species list does not convey a requirement to consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

### **Migratory Birds**

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

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## Project Summary

Project Code: 2022-0066491

Event Code: None

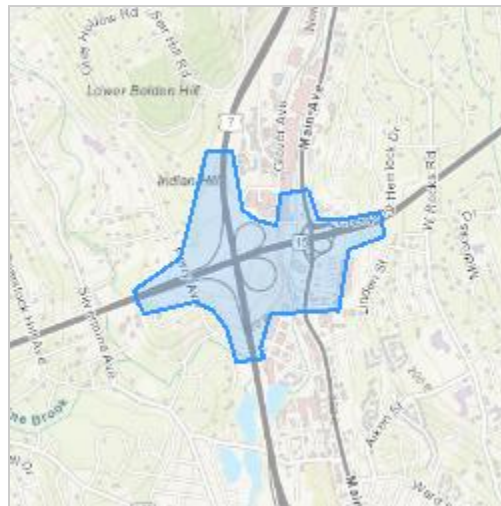
Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The project entails the reconstruction and reconfiguration of the Route 7 and Route 15 (Merritt Parkway) Interchange at Interchange 39 as well as reconstruction and reconfiguration of Interchange 40 (Route 15 and Main Avenue.). The purpose of the project is to make full connections between Route 7 and Route 15 (Merritt Parkway) currently missing in certain directions. The work will include reconfiguration and construction of new highway ramps, local road network improvement, new bridges, existing bridges rehabilitation along with construction of new signalized intersections. Some of the new bridge construction and/or rehabilitations will span the Norwalk River.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.14165095,-73.42902485605754,14z>



Counties: Fairfield County, Connecticut

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## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## **IPaC User Contact Information**

Agency: Connecticut Department of Transportation  
Name: Andrew Davis  
Address: 2800 Berlin Turnpike  
City: Newington  
State: CT  
Zip: 06131  
Email: andrew.h.davis@ct.gov  
Phone: 8605942157

## **Lead Agency Contact Information**

Lead Agency: Federal Highway Administration

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USFWS Verification Letter  
July 22, 2022



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

July 22, 2022

Project code: 2022-0066491

Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Subject: Verification letter for the 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.' project under the January 5, 2016, Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-eared Bat and Activities Excepted from Take Prohibitions.

Dear Andrew Davis:

The U.S. Fish and Wildlife Service (Service) received on July 22, 2022 your effects determination for the 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. This IPaC key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's January 5, 2016, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from "take"<sup>[1]</sup> prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under ESA Section 7(a)(2) with respect to the northern long-eared bat.

Please report to our office any changes to the information about the Action that you submitted in IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation. If the Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.



This IPaC-assisted determination allows you to rely on the PBO for compliance with ESA Section 7(a)(2) only for the northern long-eared bat. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

If the Action may affect other federally listed species besides the northern long-eared bat, a proposed species, and/or designated critical habitat, additional consultation between you and this Service office is required. If the Action may disturb bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act is recommended.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

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**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

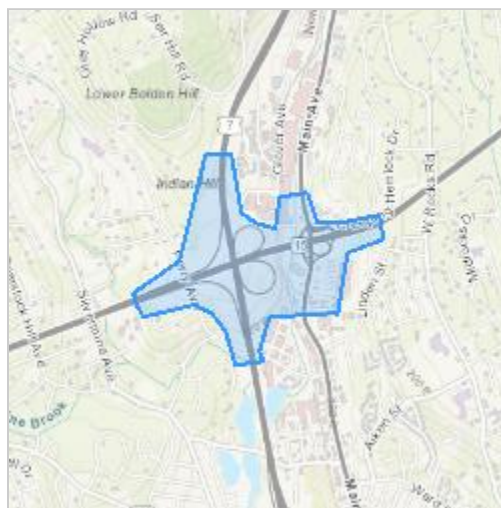
Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

**2. Description**

The following description was provided for the project 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.':

The project entails the reconstruction and reconfiguration of the Route 7 and Route 15 (Merritt Parkway) Interchange at Interchange 39 as well as reconstruction and reconfiguration of Interchange 40 (Route 15 and Main Avenue.). The purpose of the project is to make full connections between Route 7 and Route 15 (Merritt Parkway) currently missing in certain directions. The work will include reconfiguration and construction of new highway ramps, local road network improvement, new bridges, existing bridges rehabilitation along with construction of new signalized intersections. Some of the new bridge construction and/or rehabilitations will span the Norwalk River.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.14165095,-73.42902485605754,14z>

**Determination Key Result**

This Federal Action may affect the northern long-eared bat in a manner consistent with the description of activities addressed by the Service's PBO dated January 5, 2016. Any taking that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o). Therefore, the PBO satisfies your responsibilities for this Action under ESA Section 7(a)(2) relative to the northern long-eared bat.

**Determination Key Description: Northern Long-eared Bat 4(d) Rule**

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for Federal actions is to assist determinations as to whether proposed actions are consistent with those analyzed in the Service's PBO dated January 5, 2016.

Federal actions that may cause prohibited take of northern long-eared bats, affect ESA-listed species other than the northern long-eared bat, or affect any designated critical habitat, require ESA Section 7(a)(2) consultation in addition to the use of this key. Federal actions that may affect species proposed for listing or critical habitat proposed for designation may require a conference under ESA Section 7(a)(4).

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## Determination Key Result

This project may affect the threatened Northern long-eared bat; therefore, consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) is required. However, based on the information you provided, this project may rely on the Service's January 5, 2016, *Programmatic Biological Opinion on Final 4(d) Rule for the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions* to fulfill its Section 7(a)(2) consultation obligation.

## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?  
Yes
2. Have you determined that the proposed action will have "no effect" on the northern long-eared bat? (If you are unsure select "No")  
No
3. Will your activity purposefully **Take** northern long-eared bats?  
No
4. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?  
**Automatically answered**  
No
5. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at [www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0](http://www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0).

Yes

6. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?  
No
  7. Will the action involve Tree Removal?  
Yes
-



8. Will the action only remove hazardous trees for the protection of human life or property?

*No*

9. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

*No*

10. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

*No*

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## Project Questionnaire

**If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.**

1. Estimated total acres of forest conversion:

2.0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

**If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.**

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

**If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.**

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

**If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.**

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

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## **IPaC User Contact Information**

Agency: Connecticut Department of Transportation  
Name: Andrew Davis  
Address: 2800 Berlin Turnpike  
City: Newington  
State: CT  
Zip: 06131  
Email: andrew.h.davis@ct.gov  
Phone: 8605942157

## **Lead Agency Contact Information**

Lead Agency: Federal Highway Administration

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New England  
Ecological ServicesField Office  
Species List  
April 20, 2023





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

April 20, 2023

Project Code: 2022-0066491

Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

*Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.*

### **About Official Species Lists**

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New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

### **Endangered Species Act Project Review**

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

**\*NOTE\*** Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

**Northern Long-eared Bat - (Updated 4/12/2023)** The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at [newengland@fws.gov](mailto:newengland@fws.gov) to see if reinitiation is necessary.

#### *Additional Info About Section 7 of the Act*

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

**Candidate species** that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

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consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

### **Migratory Birds**

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

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## PROJECT SUMMARY

Project Code: 2022-0066491

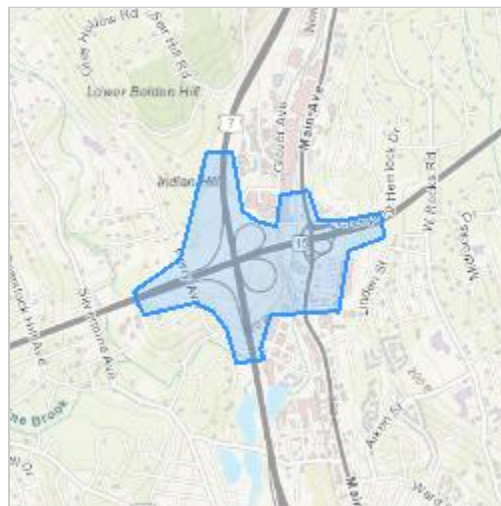
Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The project entails the reconstruction and reconfiguration of the Route 7 and Route 15 (Merritt Parkway) Interchange at Interchange 39 as well as reconstruction and reconfiguration of Interchange 40 (Route 15 and Main Avenue.). The purpose of the project is to make full connections between Route 7 and Route 15 (Merritt Parkway) currently missing in certain directions. The work will include reconfiguration and construction of new highway ramps, local road network improvement, new bridges, existing bridges rehabilitation along with construction of new signalized intersections. Some of the new bridge construction and/or rehabilitations will span the Norwalk River.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.14179665,-73.42898840700116,14z>



Counties: Fairfield County, Connecticut

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## **IPAC USER CONTACT INFORMATION**

Agency: Connecticut Department of Transportation

Name: Andrew Davis

Address: 2800 Berlin Turnpike

City: Newington

State: CT

Zip: 06131

Email: andrew.h.davis@ct.gov

Phone: 8605942157

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Federal Highway Administration

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New England  
Ecological ServicesField Office  
NLEB Concurrence Letter  
April 20, 2023





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104



In Reply Refer To:

April 20, 2023

Project code: 2022-0066491

Project Name: Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

Federal Nexus: yes

Federal Action Agency (if applicable): Federal Highway Administration

**Subject:** Federal agency coordination under the Endangered Species Act, Section 7 for 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.'

Dear Andrew Davis:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 20, 2023, for 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.' (here forward, Project). This project has been assigned Project Code 2022-0066491 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

### **Ensuring Accurate Determinations When Using IPaC**

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (DKey), invalidates this letter.

### **Determination for the Northern Long-Eared Bat**

Based upon your IPaC submission and a standing analysis completed by the Service, your project has reached the determination of “May Affect, Not Likely to Adversely Affect” the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat that was not considered when completing the determination key.

### **15-Day Review Period**

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat DKey.

### **Other Species and Critical Habitat that May be Present in the Action Area**

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2022-0066491 associated with this Project.

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**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

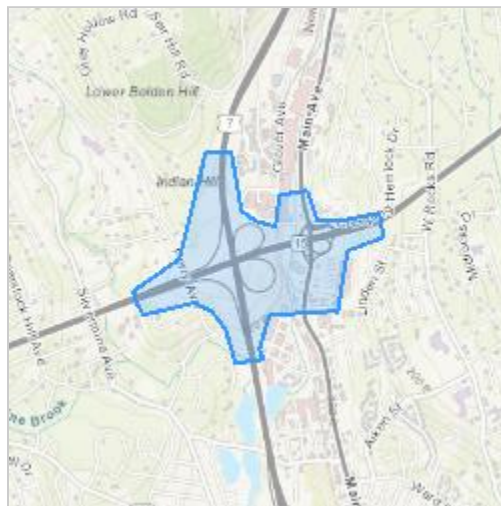
Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.

**2. Description**

The following description was provided for the project 'Project 102-358, Route 7 and 15 Interchange Improvements, Norwalk, CT.':

The project entails the reconstruction and reconfiguration of the Route 7 and Route 15 (Merritt Parkway) Interchange at Interchange 39 as well as reconstruction and reconfiguration of Interchange 40 (Route 15 and Main Avenue.). The purpose of the project is to make full connections between Route 7 and Route 15 (Merritt Parkway) currently missing in certain directions. The work will include reconfiguration and construction of new highway ramps, local road network improvement, new bridges, existing bridges rehabilitation along with construction of new signalized intersections. Some of the new bridge construction and/or rehabilitations will span the Norwalk River.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.14179665,-73.42898840700116,14z>





## DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

## QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

**Note:** Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Do you have post-white nose syndrome occurrence data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed acoustic detections. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

**Note:** For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

Yes

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6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

Does your proposed action fall within the scope of this programmatic consultation?

**Note:** If you have previously consulted on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have not yet consulted with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer 'no' to this question if it is not.

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

**Note:** This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

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9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

**Note:** Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

No

10. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

11. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?  
(If unsure, answer "Yes.")

**Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags  $\geq 3$  inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

12. Will the action cause effects to a bridge?

Yes

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13. Has a site-specific bridge assessment following [USFWS guidelines](#) been completed?

**Note:** For information on conducting a bridge/structure assessment, see Appendix D of the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat and the associated Bridge/Structure Bat Assessment Form. Additional resources can be found at: <https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources> and a training video is located at: <https://www.youtube.com/watch?v=iuFwkT7q8Ws>.

No

14. Will the proposed action result in the cutting or other means of knocking down, bringing down, or trimming of any trees suitable for northern long-eared bat roosting?

**Note:** Suitable northern long-eared bat roost trees are live trees and/or snags  $\geq 3$  inches dbh that have exfoliating bark, cracks, crevices, and/or cavities.

Yes

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## PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

4.00

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the inactive (hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: <https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas>

2.00

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the active (non-hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: <https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas>

2.00

Will all potential northern long-eared bat (NLEB) roost trees (trees  $\geq 3$  inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

Yes

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

4.00

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

1.00

Will any snags (standing dead trees)  $\geq 3$  inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities be completed by April 1, 2024?

No

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## **IPAC USER CONTACT INFORMATION**

Agency: Connecticut Department of Transportation

Name: Andrew Davis

Address: 2800 Berlin Turnpike

City: Newington

State: CT

Zip: 06131

Email: andrew.h.davis@ct.gov

Phone: 8605942157

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Federal Highway Administration

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