

March 28, 2024

Jason Parker, AICP  
Principal Planner  
Town of South Kingstown Planning Department  
180 High Street  
Wakefield, RI 02879

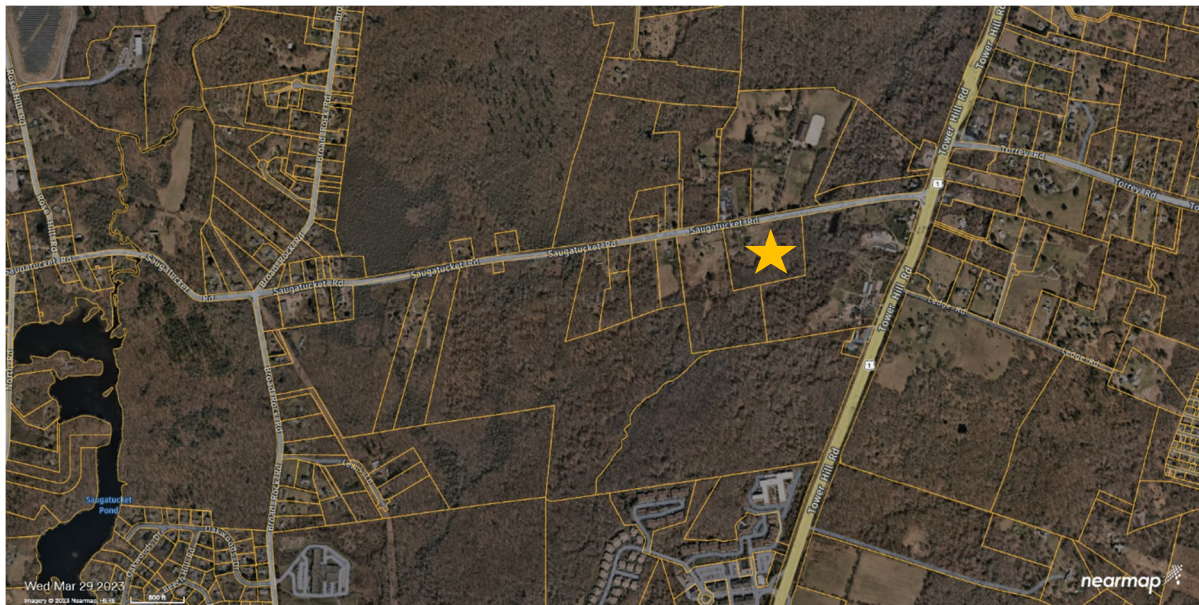
RE: Master Plan Narrative  
Saugatucket Acres  
Assessor's Plat 42 Lots 9  
South Kingstown, Rhode Island

Mr. Parker:

DiPrete Engineering (DE) has prepared the following development plan review master plan narrative for the above-referenced site consisting of the following items:

- Design constraints.
- Review of Site Design.

The subject site currently has a residential use and is located at 176 Saugatucket Road, accessed from the east via Tower Hill Road and from the west via Broad Rock Road. The Indian Run Brook crosses the southeast corner of the site. The Indian Run Brook is located in the river protection Region 2 and has a 150' buffer zone.



Refer to Sheet 2 of the plan set for the Aerial Photograph and USGS Map. The site boundary is delineated on the Existing Conditions Plan, sheet 3 of the plan set.

### Design Constraints

The following information was obtained by review of the ArcGIS Environmental Resource Map by the Rhode Island Department of Environmental Management (RIDEM) or field observation, where noted.

### Wetlands

See Appendix B for full Wetland Narrative.

### Soil Evaluation

Soil testing was performed by DiPrete Engineering and witnessed by RIDEM (application number 2232-1533).

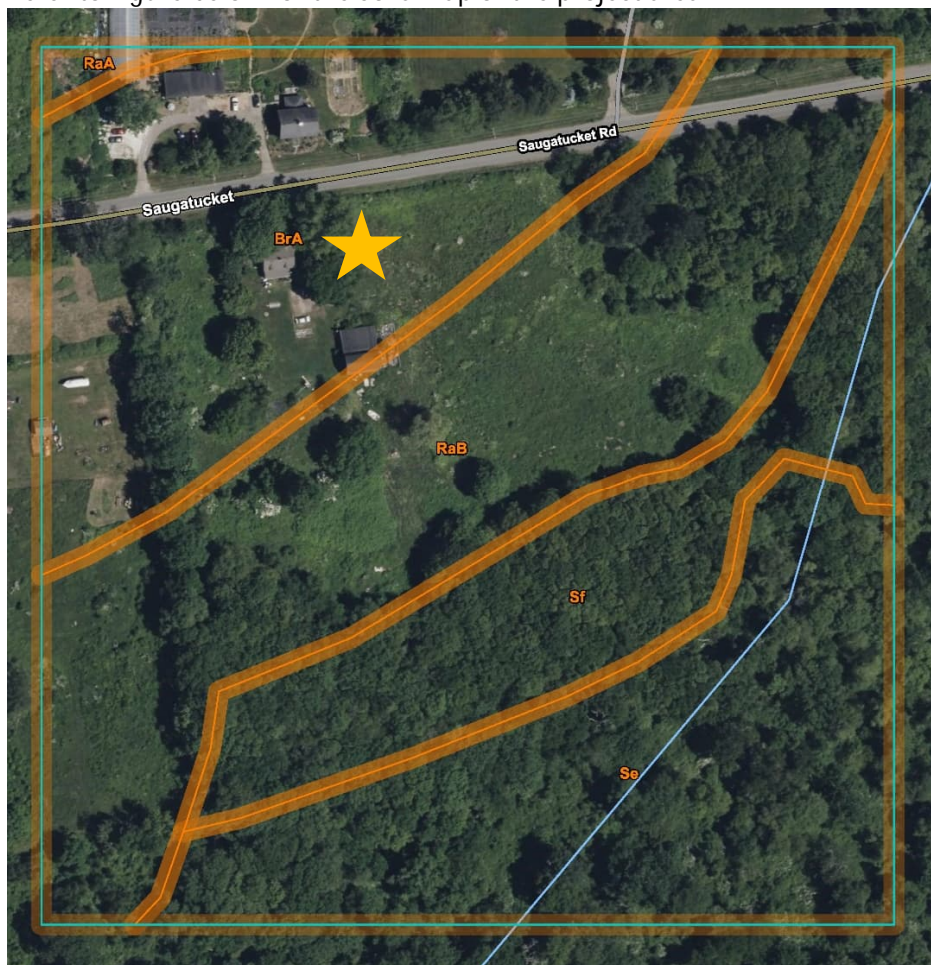
### Soils Research

DE found the following soils in the Project Area. The descriptions and properties were obtained from the RI Soils Handbook by Natural Resources Conservation Services (NRCS):

- BrA\* BROADBROOK SILT LOAM, 0 TO 3 PERCENT SLOPES  
Hydrologic Group "C"  
Water table 18 to 30 inches
  
- RaB\* RAINBOW SILT LOAM, 3 TO 8 PERCENT SLOPES  
Hydrologic Group "C"  
Water table 18 to 30 inches
  
- Se STISSING SILT LOAM  
Hydrologic Group "D"  
Water table 0 to 18 inches
  
- Sf STISSING VERY STONY SILT LOAM  
Hydrologic Group "D"  
Water table 0 to 18 inches

**\*PRIME FARMLAND**

Refer to Figure below for the Soils Map of the project area.



Conservation Areas

There is no designated State Conservation Land located on the subject parcel.

FEMA Flood Hazard Areas

The Site is located in FEMA Flood Zone X (unshaded).

Zone X (unshaded) are areas not subject to flooding during a 1% annual chance (100-year) storm event. Refer to the Flood Insurance Rate Map (FIRM) number 44009C0203K, effective on 4/3/2020 and 44009C0204K, effective on 4/3/2020.

Natural Heritage Area

The Site is fully within a Natural Heritage Area. See Appendix A for report.

Impaired Waters

Indian Run Brook is within a TMDL Coastal Watershed per RIDEM.

## Review of Conceptual Design

The client is proposing to remove the existing 1,962 square foot residential building and to subdivide the parcel using the Flexible Frontage regulation to create 5 new residential lots, associated utilities and stormwater drainage system. See Sheet 5 for the required Yield plan and Sheet 6 for the proposed Flexible Frontage Plan.

### Population:

According to the 2020 US Census estimates, there were 10,790 households with an average size of 2.45 persons per family household. It is anticipated that the average family household size of the proposed development will be similar to or less than that of the Town. This calculates to a total of 10 persons ( $2.45 \times 4$  dwelling units = 9.8) for the 4 additional single family residential lots proposed. Data obtained from: <https://www.census.gov/quickfacts/southkingstowntownwashingtoncountyrhodeisland>

### School-age children:

The current average school age children population per dwelling unit in the Town of South Kingstown is 0.24 per dwelling units. This is based on 2,608 students for the 2019-2020 school year and 10,790 households in 2020 ( $2608/10790=0.24$ ). This would equate to 1 school age children for the 4 additional units in the development ( $0.24 \times 4 = .96$ ). School population data obtained from: <https://nces.ed.gov>

### Traffic:

The development is expected to generate total of 48 daily trips with 4 trips during the morning hours and 5 trips during the evening hours. The trip generation was performed according to ITE (Institute of Transportation Engineers) generation rates (8<sup>th</sup> edition). The speed limit on Saugatucket Road is 35 MPH I the vicinity of the site.

Based upon review of the conceptual design and field walk of the area of the project, the construction of the civil/site aspects of the project are feasible as shown on the site plans. As noted above, there are no site constraints which are insurmountable from a construction or cost perspective.

If you have any questions regarding this development or throughout the design process, please do not hesitate to contact us.

Sincerely,  
DiPrete Engineering Associates, Inc.



Nicole Pattie, PE  
Project Engineer  
npattie@diprete-eng.com

Appendix A – Natural Heritage Report

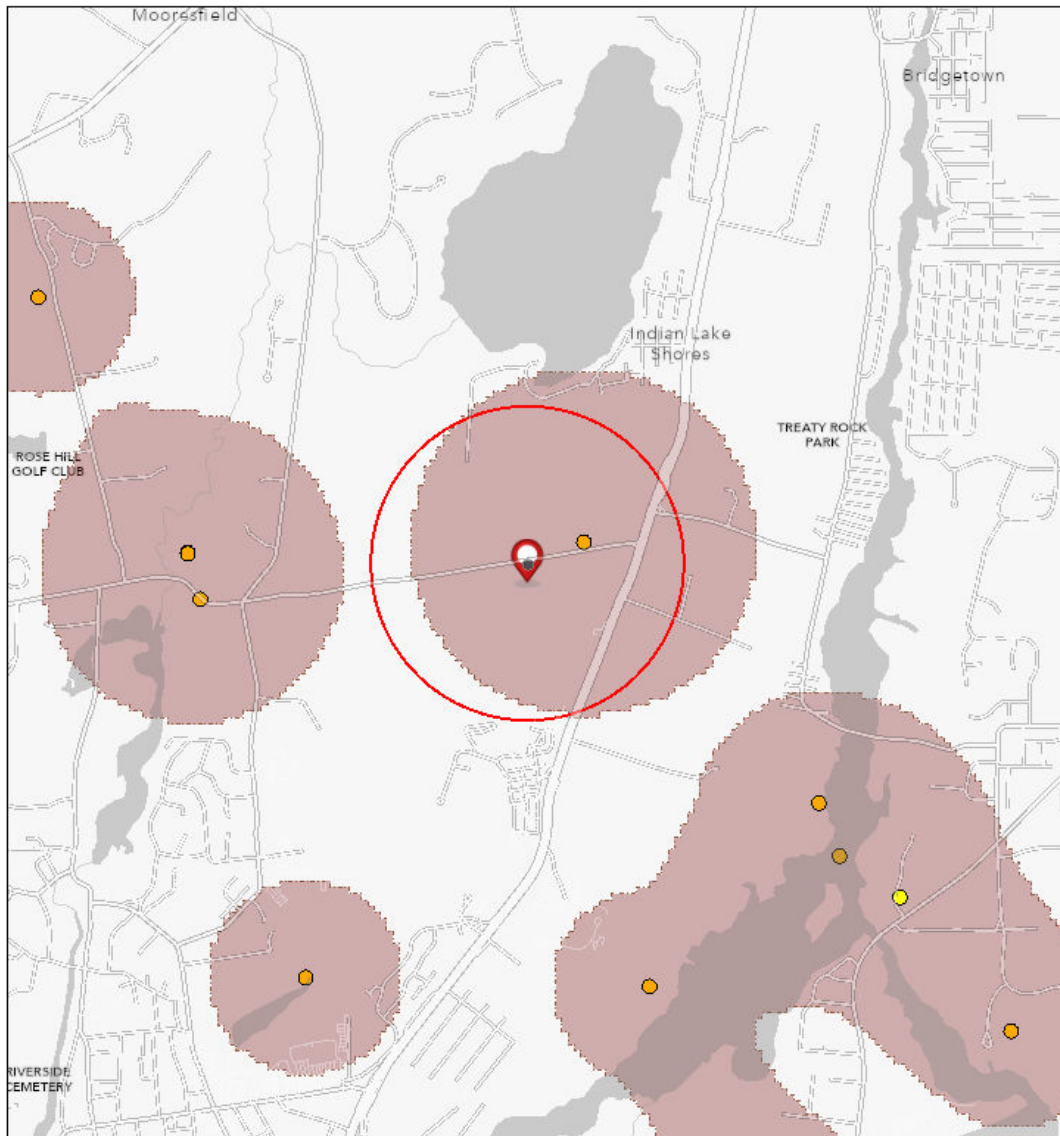


# Natural Heritage Screening 176 Saugatucket

## Area of Interest (AOI) Information

Area : 19,605,308.79 ft<sup>2</sup>

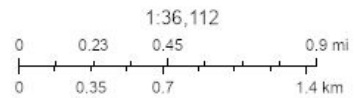
Dec 14 2023 7:30:48 Eastern Standard Time



RI Natural Heritage Observations Dec2023

- State Threatened
- State Concern

RI Natural Heritage Area Dec2023



University of Rhode Island, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METINASA, USGS, EPA, NPS, US Census Bureau, USDA

## Summary

Name	Count	Area(ft <sup>2</sup> )	Length(ft)
RI Natural Heritage Observations Dec2023	7	N/A	N/A

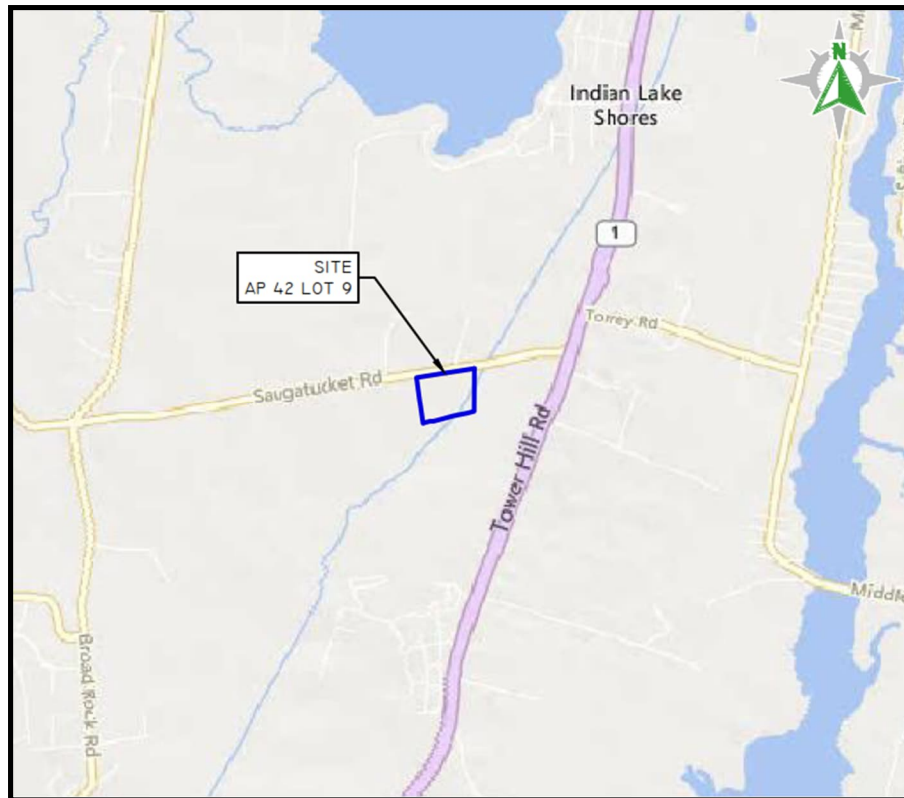
## RI Natural Heritage Observations Dec2023

#	Family	Genus	Species	COMNAME	LAST_OBS	RI_STAT	Count
1	Primulaceae	Hottonia	inflata	Featherfoil, Water-violet	1992	State Concern	7

Appendix B – Wetland Delineation Narrative and Supporting Material



## Wetland Delineation Narrative and Supporting Material



### 176 Saugatucket Road

Located in South Kingstown, RI

Applicant: Joseph Charpentier

and Anna Szeto

12-19-2023

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## Table of Contents

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## Introduction:

176 Saugatucket Road is an approximately 9.38 acre property located on AP 42, Lot 9 in South Kingstown, Rhode Island. A field visit and wetland delineation were performed by DiPrete Engineering on 12/07/2023. The purpose of this narrative is to document existing natural resources present on and surrounding the property.

## Soils:

The soils on the property have been mapped by the USDA Soil Conservation Service. They are:

**BrA - Broadbrook silt loam, 0 to 3 percent slopes:** Broadbrook soils are well drained soils formed in silty mantled lodgment till. These soils are found on till plains, hills, and drumlins. Saturated hydraulic conductivity is moderately high or high in the surface layer and subsoil, and low through moderately high in the dense substratum. Broadbrook soils are suitable for community development.



Area of Soil Map Units from the USDA NRCS Web Soil Survey

**RaB - Rainbow silt loam, 3 to 8 percent slopes:**

Rainbow soils are moderately well drained soils formed in silty eolian deposits overlying lodgment till. These soils are found on the crests and side slopes of drumlins and glacial till plains. Saturated hydraulic conductivity is moderately high or high in the surface layer and subsoil and low to moderately high in the dense substratum. Rainbow soils are suitable for community development but may be limited by the seasonal high water table.

**Sf - Stissing very stony silt loam:** Stissing soils are poorly drained soils formed in lodgment till derived from dark colored parent materials. These soils are found on glacial upland hills and drumlins in the southeastern part of the state. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the dense substratum. Stissing soils are poorly suited to community development and are typically regulated wetland resource areas. Agricultural activities are limited by the surface stones.

## Existing Upland Landuse and Vegetation:

176 Saugatucket Road is a single-family residential lot, located approximately 0.25 miles west of the intersection of Saugatucket Road and US Route 1. Structures on the property include a multistory dwelling and barn. The property appears to have been utilized for agricultural activities as recently as 1997. Since 1997, the former agricultural fields have been regularly mowed, maintaining open field habitat dominated by a variety of grass species throughout most of the property. The western portion of the property contains several ornamental trees and a section of former agricultural field that has been allowed to revegetate and is now dominated by blackberry (*Rubus allegheniensis*).

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Wooded upland portions of the property are dominated by red maple (*Acer rubrum*), yellow birch (*Betula alleghaniensis*), and big-tooth aspen (*Populus grandidentata*).

### **Existing Freshwater Wetlands and Associated Buffer Zones:**

The subject property is located within River Protection Region 2 according to the Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (250-RICR-150-15-3). Under these wetland regulations, the Rhode Island Department of Environmental Management (RIDEM) maintains a 100' jurisdictional area (JA) from the edge of all vegetated freshwater wetlands and a 200' JA from all streams and rivers. In addition, freshwater wetlands receive buffer zones depending on both their classification and size. An additional 25' buffer zone will be added to the buffer zone width when one or more differing freshwater wetland types or subtypes are present within 50' inward of the freshwater wetland edge. All buffer zones have a 20' primary structure and 5' accessory structure setback. Two freshwater wetlands were identified on or adjacent to the subject property and are described in greater detail below.

#### *Wetland Complex 1 -*

Wetland Complex 1 is a deciduous forested swamp greater than 10 acres in size. The wetland extends beyond the subject property to the south. This wetland was flagged with pink "Wetland Delineation" flagging tape and is denoted as the A Series. Please note that additional flags are present on site, including surveying flags and wetland delineation flagging that was completed by others for the parcel immediately to the west.

This deciduous forested swamp is dominated by red maple. Dominant shrubs in the understory include sweet pepperbush (*Clethra alnifolia*) and winterberry (*Ilex verticillata*). Observed herbaceous species include soft rush (*Juncus effusus*), bladder sedge (*Carex intumescens*), and cinnamon fern (*Osmundastrum cinnamomeum*). Small pools of water were observed throughout this wetland during field investigations.

The Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act specify a 75' buffer zone for the deciduous forested swamp.

#### *Wetland Complex 2 -*

Wetland Complex 2 is an approximately 0.25-acre deciduous forested swamp located in the northeastern corner of the property. Aerial photographs suggest that portions of this wetland have been periodically mowed and used for agriculture. Some areas of the mowed field were identified as having hydric soil and were flagged as wetland. This wetland was flagged with pink "Wetland Delineation" flagging tape and is denoted as the B Series.

The swamp is dominated by red maple and yellow birch. A stand of big-tooth aspen occupies a section of the upland/wetland boundary. Shrub species within the wetland include sweet pepperbush and highbush blueberry (*Vaccinium corymbosum*). Isolated individuals of European privet (*Ligustrum vulgare*) were observed within the wetland. This wetland will receive a 25-foot buffer zone.

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A summary of the wetland types and their associated buffer zones is shown below.

Wetland Complex	Wetland Classification	Buffer Zone
Wetland Complex 1	<ul style="list-style-type: none"><li>Deciduous forested swamp, &gt;10 acres</li></ul>	<ul style="list-style-type: none"><li>75'</li></ul>
Wetland Complex 2	<ul style="list-style-type: none"><li>Deciduous forested swamp, &lt;1 acre</li></ul>	<ul style="list-style-type: none"><li>25'</li></ul>

**Natural Heritage Areas:**

Mapping available from RIDEM indicates that the subject property is within a Natural Heritage Area. A Natural Heritage Area report obtained from RIDEM on 12/14/2023 indicates that American featherfoil (*Hottonia inflata*), a species of state concern, has been documented within the mapped area. The species was last observed in 1992 approximately 0.10 miles to the east. Potential projects are unlikely to affect this species, as it occurs within wetlands, typically in lakes or ponds.

**Drinking Water Supply Reservoir**

The subject property is not within a Drinking Water Supply Watershed.

**Summary:**

Two freshwater wetland resources are located within and immediately adjacent to the subject property. Both wetland resource areas are classified as deciduous forested swamps and have been designated buffer zones in accordance with the new Freshwater Wetland Rules. The project site is within a Natural Heritage Area, with a documented observation of American featherfoil made on nearby properties. However, no occurrence of this species has been documented on the subject property. The site is not within a public drinking water supply watershed.

Please do not hesitate to contact me with any questions.

DiPrete Engineering Associates, Inc.



Timothy Twohig  
Environmental Scientist  
ttwohig@DiPrete-eng.com

## Wetland Edge Delineation Data Form (UPLAND)

Applicant: \_\_\_\_\_

Wetland No. \_\_\_\_\_

Project Name: \_\_\_\_\_

Flag No. Sequence: \_\_\_\_\_

City/Town: \_\_\_\_\_

Delineation Date: \_\_\_\_\_

**Vegetation:** List the three dominant species in each vegetative strata along with their NWI status:

Tree	Indicator Status	Herbs	Indicator Status

Saplings/Shrubs	Indicator Status	Woody Vines	Indicator Status

List other vegetative species noted which may have affected determination of the wetland edge: \_\_\_\_\_

**Soil:** SCS Soil Survey Mapping Unit: \_\_\_\_\_

On Hydric Soils List?     YES     NO

Soil Profile (Note wetland flag no. nearest soil test pit): \_\_\_\_\_

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.): \_\_\_\_\_

Landscape position: \_\_\_\_\_

Altered/atypical situation? (describe): \_\_\_\_\_

Comments: \_\_\_\_\_

## Wetland Edge Delineation Data Form (WETLAND)

Applicant: \_\_\_\_\_

Wetland No. \_\_\_\_\_

Project Name: \_\_\_\_\_

Flag No. Sequence: \_\_\_\_\_

City/Town: \_\_\_\_\_

Delineation Date: \_\_\_\_\_

**Vegetation:** List the three dominant species in each vegetative strata along with their NWI status:

Tree	Indicator Status	Herbs	Indicator Status

Saplings/Shrubs	Indicator Status	Woody Vines	Indicator Status

List other vegetative species noted which may have affected determination of the wetland edge: \_\_\_\_\_

**Soil:** SCS Soil Survey Mapping Unit: \_\_\_\_\_

On Hydric Soils List?     YES     NO

Soil Profile (Note wetland flag no. nearest soil test pit): \_\_\_\_\_

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Other indicators exhibiting an absence of wetland hydrology (e.g. water marks, drainage patterns, root rhizospheres, etc.; see § 3.21.1 (D) of the Rules): \_\_\_\_\_

Landscape position: \_\_\_\_\_

Altered/atypical situation? (describe): \_\_\_\_\_

Comments: \_\_\_\_\_

## Wetland Edge Delineation Data Form (UPLAND)

Applicant: \_\_\_\_\_

Wetland No. \_\_\_\_\_

Project Name: \_\_\_\_\_

Flag No. Sequence: \_\_\_\_\_

City/Town: \_\_\_\_\_

Delineation Date: \_\_\_\_\_

**Vegetation:** List the three dominant species in each vegetative strata along with their NWI status:

Tree	Indicator Status	Herbs	Indicator Status

Saplings/Shrubs	Indicator Status	Woody Vines	Indicator Status

List other vegetative species noted which may have affected determination of the wetland edge: \_\_\_\_\_

**Soil:** SCS Soil Survey Mapping Unit: \_\_\_\_\_

On Hydric Soils List?     YES     NO

Soil Profile (Note wetland flag no. nearest soil test pit): \_\_\_\_\_

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.): \_\_\_\_\_

Landscape position: \_\_\_\_\_

Altered/atypical situation? (describe): \_\_\_\_\_

Comments: \_\_\_\_\_

## Wetland Edge Delineation Data Form (WETLAND)

Applicant: \_\_\_\_\_

Wetland No. \_\_\_\_\_

Project Name: \_\_\_\_\_

Flag No. Sequence: \_\_\_\_\_

City/Town: \_\_\_\_\_

Delineation Date: \_\_\_\_\_

**Vegetation:** List the three dominant species in each vegetative strata along with their NWI status:

Tree	Indicator Status	Herbs	Indicator Status

Saplings/Shrubs	Indicator Status	Woody Vines	Indicator Status

List other vegetative species noted which may have affected determination of the wetland edge: \_\_\_\_\_

**Soil:** SCS Soil Survey Mapping Unit: \_\_\_\_\_

On Hydric Soils List?     YES     NO

Soil Profile (Note wetland flag no. nearest soil test pit): \_\_\_\_\_

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water

Other indicators exhibiting an absence of wetland hydrology (e.g. water marks, drainage patterns, root rhizospheres, etc.; see § 3.21.1 (D) of the Rules): \_\_\_\_\_

Landscape position: \_\_\_\_\_

Altered/atypical situation? (describe): \_\_\_\_\_

Comments: \_\_\_\_\_